Catalog 2025

Products

- Temperature Compensation Attenuator
- 3dB 90° Hybrid Coupler
- 3dB 90° High Power & Wideband Hybrid Coupler
- 3dB 90° High Power & Wideband Drop-In Coupler
- 3dB 90° Wire-bonding High Power & Wideband Hybrid Coupler
- Directional Coupler
- Wideband & High Power Directional Coupler
- Wideband & High Power Bi-directional Directional Coupler
- PTFE Quadrifiler Coupler (PTFE Process)
- 2-way Power Divider (PTFE Process)
- 2-way Power Divider IC
- 3-way Power Divider IC
- 4-way Power Divider IC
- 3dB 90° Coupler IC
- Directional Coupler IC
- Variable Attenuator Die
- Fixed Attenuator IC
- Fixed Attenuator Die
- Gain Equalizers (Mini substitution)
- Wideband Directional Coupler Chip (GaAs Process)
- Wideband 3dB 90° Coupler Chip (GaAs Process)
- High Rejection SMD Filters
- LTCC Balun/Power Splitter/Diplexer/Triplexer
- LTCC 3dB 90° Hybrid Coupler/Antenna/Filter
- Microwave Wideband 2way/4way Power Divider
- Microwave Wideband 3dB 90° Hybrid Coupler
- Microwave Wideband Directional Coupler
- Diamond Attenuator (EMC substitution)
- Diamond Termination (EMC substitution)
- Termination Frequency Resistor
- NTC/PTC Thermistors Bias Tees (Marki substitution)
- Thin Film Microstrip Band-Pass Filters
- Fixed Attenuator Chip
- Fixed Attenuator
- 3dB 90° Wideband & High Power Coaxial Hybrid Coupler
- DIP Variable Attenuator (VAD Series,step)
- Drum/Rotary Variable Attenuator (VAX Series,step)
- Programmable Step Attenuator
- Non-abrupt Change Variable Attenuator(VAS Series,Step)

Yantel®

Key Patents Lead Microwave Tech

Advanced key patented technologies for

- RF & Microwave Passive Components
- High Precision RF Passive ICs

Certificates of International Invention Patents

RoHS

REACH COMPLIANT

AEC-Q200 Reliability Test Report

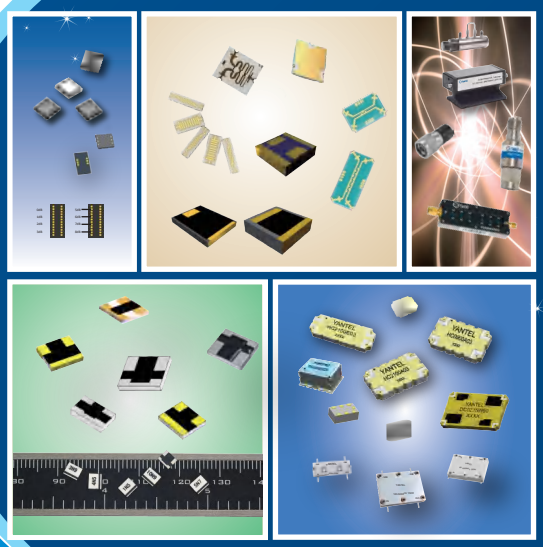
SGS

ISO IATF16949

GJB9001

ISO9001

ISO14001



Company Profile

Certificate:
- GJB 9001C-2017
- ISO 9001:2015
- ISO 14001
- OHSAS18001
- IATF16949

Yantel Corporation is a national high-tech enterprise founded by several RF and microwave experts returning from overseas, owns the core patents of passive microwave components and microwave semiconductor chips at the forefront of the world.
At present, Yantel has more than 100 patent applications and 70 authorized patents (including 42 authorized invention patents and 11 authorized integrated circuit layout-design patents). All the patent achievements reach the international leading level.
Integrating R&D, design, production and sales, Yantel has advanced production equipment for RF components,including four-channel network analyzers, high- and low-temperature incubators, ten-temperature zone lead-free reflow soldering equipment, wideband RF power tester and other advanced RF testing equipment.
Yantel has established 10 RF full-inspection automation lines via the investment of tens of millions of RMB, including RF specification testing, visual inspection, withstand voltage testing, integrated equipment of testing & tape reel,MES intelligent process control software and hardware system etc., thus ensuring the high quality of products and sufficient capacity reserve.
A number of patented products of Yantel have not only been approved as national, provincial and municipal science and technology projects by the National Technical Innovation Fund,Guangdong Industry-University-Research Collaboration Association (GDIUR) and Shenzhen Innovation Funds, but also passed the project acceptance.
Meanwhile,Yantel was as Shenzhen Intellectual Property Advantageous Enterprises 2008 and the first batch of Chinese High-Tech Enterprise. In addition, Yantel has gained the ISO9001:2008 Quality Management System Certificate, the ISO14000 Environmental Management System Certificate and GJB9001B-2009 Military Standard of Quality Management System Certificate.
Yantel has established long-term and stable cooperation with Huawei, Ericsson, ZTE, Nokia, Datang, Samsung, Comba, Fingu, Mobi, RFHIC, ACE and other famous communication enterprises at home and abroad. At the same time, Yantel's high-precision passive IC series products have been designed and used in large quantities by vehicle-mounted cell phone signal booster projects such as Audi and Volkswagen in Europe. Wideband power divider ICs are widely used in Beidou, GPS, GNSS and other high-precision satellite positioning and antenna application. The main clients include BDStar, ComNav, UniStrong, Huaxin etc.

深圳市研通高频技术股份有限公司是由数名海外归国的射频微波专家创办的国家级高新技术企业。本公司拥有居于国际前沿的微波无源器件及微波半导体芯片的核心专利技术。
目前公司保有多项国内、国际专利，这些专利成果都处于国际领先水平，在竞争激烈的国际射频元器件及半导体芯片领域中占领了中国企业自主知识产权的一席之地。

本公司集研发、设计、生产、销售于一体，拥有先进的射频元器件、芯片、组件的生产设备以及多台四通道网络分析仪，阻抗分析仪，高低温恒温箱，十温区无铅回流焊设备，宽带射频功率测试仪等高级射频测试设备。
研通斥资数千万元，建立了10条射频全检自动化线，包括射频全检，外观全检，耐压全检软硬件系统，测封一体化设备，全自动编带机，全自动裂片机，MES智能工序管控软硬件系统等,保证产品的高品质和充足的产能储备。

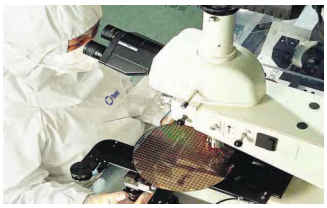
研通的多项专利产品被国家中小型创新基金，广东省产学研，深圳市科技型中小企业技术创新项目立项为国家、省、市的科技技术项目并合格通过项目验收，为我司的专利技术产业化进程，提供了强大的支持和推动。

同时,本公司也被深圳市知识产权局评为2008年度知识产权优势企业，中国首批国家级高新技术企业，并通过了ISO9001：2015质量管理体系，ISO14000环境管理体系认证以及GJB9001B-2009国军标质量管理体系认证。各类产品均具有中国及国际权威机构提供的可靠性及环保检验报告。

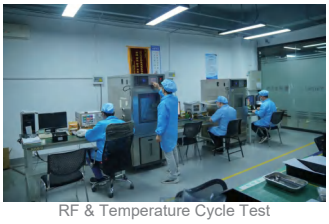
研通与爱立信，华为，中兴，诺基亚，大唐，三星，京信，凡谷，摩比，RFHIC,ACE等国内外著名通信企业建立了长期稳定的合作。同时，本公司的高精度无源IC系列化产品被欧洲的奥迪，大众等高档汽车车载手机信号增强器项目大批量采用。宽带耦合器/功分器产品广泛应用于北斗，GPS，GNSS高精度卫星定位，天线系统，主要客户包括北斗星通，司南，合众思壮，华信天线等。

Product Competitiveness

Yantel products are advanced on its innovative technologies, excellent RF characteristic with competitive cost. They are widely used in various wireless communication terminals and systems. Such as 4G,5G Repeater,Base Station, Small Cell, Pico,Bluetooth, WiFi, CATV, GPS, GNSS, Satellite, Beidou, Antenna, Power Amplifier, LNA,Automotive Electronics, RFID, Radar etc.
Our products are widely used in China and globally, application in 4G/5G base stations, 5G network coverage, Beidou navigation antenna, and high-precision navigation in vehicles (autonomous driving) antennas and other applications, their competitive advantages are miniaturization, low loss, broadband, high power density, high reliability, and high cost-effectiveness etc.


Research & Development

100% Visual Inspection and Withstand Voltage Test


RF & Temperature Cycle Test

Production Line

100% RF/Visual Inspection

Reflow Welding Test In 10 Temperature Zone

Certificates of Patent

Introduction of the key patented products & technologies

- Wideband temperature compensation attenuator,breaks the iceberg of international monopoly (Microstrip circuit configuration DC-6,12.4,18,20,16-36GHz)
  以微带电路取代传统π型电路，推出超宽带温度补偿衰减器,打破美国制作商全球垄断的局面
  (微带电路设计DC-6，12.4，18,20,16-36GHz)
- Ultra small size (5×3mm), high power density, SMD 3db coupler and directional coupler with patent. Pin and size internationally compatible,The unique patented technology design escorts China's 5G repeater station and base station communication projects.
  推出具有独立知识产权的5G超小型（5×3mm），高功率密度3db耦合器及定向耦合器贴片式产品。管脚和尺寸国际兼容，独特专利技术设计为我国的5G直放站和基站通信项目保驾护航。
- Using the world's most advanced wafer technology of Silicon & GaAs, simulate and design the ultra wideband 2 way Power Divider,4 way Power Divider,3dB coupler ,Directional Coupler, Quadrifilar, Varilable Attenuator, Fixed Attenuator, Phase Shifters etc. used to 4G, 5G Telecommunication,Satellite Navigation and Vehicle mounted Cell Phone Signal Booster,Active Module etc.
  采用国际前沿的硅晶圆技术和砷化镓晶圆技术，设计超宽带二路功分器，四路功分器，3db耦合器，定向耦合器，四相位移向器，可变衰减器，固定衰减器，移向器等系列化齐全的无源半导体芯片产品，为全球4G,5G通信项目,卫星导航,车载通信应用带来的无源芯片解决方案。
- World-first manual varilable attenuator DC-6GHz with Non-abrupt change performance（no need to power off in attenuation adjusting）
  世界首创无突变DC-6GHz手动可调衰减器
- Yantel has launched the world's first SMD coupler by the size of 0603 with PTFE process, and the SMD coupler by the size of 0805 has been produced on a large scale. Therefore, Yantel spares no effort to strive for the market share of 5G terminal application.
  全球推出0603封装的PTFE工艺制作的贴片式耦合器，同时0805封装的贴片式耦合器已经进入批量生产状态，全力以赴争取5G终端应用的市场份额。
- World-first technology to realize real time lossless & accurate temperature compensation within the chip of GaAs PA.
  世界先进技术，实现射频微波场效应管芯片内置的高频率，无损耗温度补偿电路。

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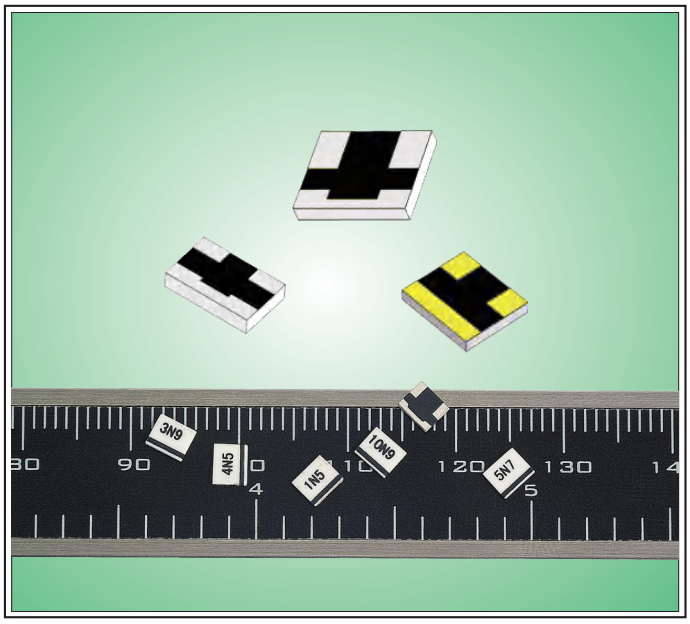
Temperature Compensation Attenuator

US Utility patents #US 7 ,990,230 B2 etc.

EU,China,Taiwan,patented

Yantel®

Key Patents Lead Microwave Tech



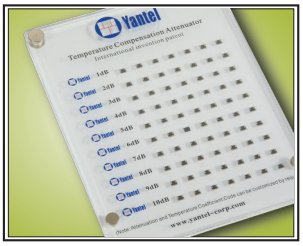
Features

- Frequency range:DC to 3 GHz, DC to 6 GHz, DC to 12.4 GHz, DC to 18 GHz,DC to 20 GHz,16 to 36 GHz.
- Power rating: 100mW, 200mW, 2W.
- Impedance:50Ω or 75Ω.
- Operating temperature:-55˚C to +150˚C.
- Adopting 100% laser trimming,high attenuation accuracy.
- High reliability.Adopting advanced thick film & thin film technology through firing at the high temperature of 850˚C.
- Zero distortion, and no phase changes and time delay caused by temperature variation.
- Temperature compensation and RF isolation,which are more suitable for multi-stage power amplifiers.
- No extra IP3 exists and suitable for linear power amplifier.
- Low cost and small size.It can be easily designed in Rf power amplifier to replace AGC loop circuit, which is easy for the regeneration of RF circuit.
- Tape and reel package is available, which is convenient for SMT.

RoHS

Applications

- Power Amplifier
- Low Noise Amplifier
- Gain Blocks
- Optical Transceiver Module
- MMIC Amplifiers
- WLAN(2.4GHz or 5.8GHz)
- WiMAX
- UWB
- Mixers
- Power Dividers
- Satellite Communication
- Directional Couplers
- Broadcast(TV & Radio)
- Radar



Part No. Description

TCA Series	** Frequency	** Attenuation	* * Temperature Coefficient Code	* * Metallization Options	* Terminal Plating Options
TCA, STCA, MTCA WTCA, KTCA BTCA, PTCA	03, 06 12, 18, 20 or 36	01 to 10 1dB to 10 dB	(N3 to N10) or (P3 to P8)	no code, W1, W3, WB1,WB2 or G	(no code)=Lead free or (S)=Lead(Pb)

Example: P/N STCA0603N9W3 is STCA series, frequency range DC to 6GHz, 3dB attenuation @25˚C, temperature coefficient of attenuation -0.009 dB/dB/˚C, triple wrap lead free terminal.

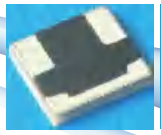
Material Specification

- Substrate: Alumina (Al_2O_3)
- Resistive material: Thick film
- Terminal material:
  Thick film, Nickel barrier with solder plate or gold.
- Protective Coating: Thick film (ethyl acetate)

Metallization & Plating Options

- Planar(no code): planar terminal.
- Single wrap(W1): metallization wrap ground terminal.
- Triple wrap(W3): metallization wrap input, output and ground terminal.
- Wire bond(WB1): metallization wrap ground terminal, input and output terminal have gold metallization for wire bonding.
- Lead(Pb) (S): Lead terminals improve solderability (available on planar, W3 & W1 options).
- Lead free(no code): Lead free terminals. (planar, W1 and W3 are available)
- Planar gold(G): planar terminal with gold metallization for wire bonding.

TCA Series
Specifications


Planar

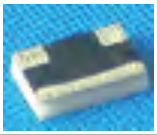
Triple wrap,W3

- Frequency range: DC ~ 6GHz
- Operating temperature: -55℃ to 150℃
- Power rating: 2W
- Size: 3.1×3.7×0.53(mm), type Ⅰ
- Impedance: 50Ω
- Thick film technology

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)①	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
TCA0601N*	1	N3~N9	-0.003~ -0.009	1.2	±0.5
TCA0602N*	2	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0603N*	3	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0604N*	4	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0605N*	5	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0606N*	6	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0607N*	7	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0608N*	8	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0609N*	9	N3~N10	-0.003~ -0.01	1.2	±0.5
TCA0610N*	10	N3~N10	-0.003~ -0.01	1.2	±0.5

① Note: For example 4N9, when temperature changes by 1℃, the attenuation variation equals 4dB x 0.009(temperature coefficient code) x 1℃ = 0.036dB. When temperature changes by 100℃, the attenuation variation equals 4dB x 0.009 x 100℃ =3.6dB.

STCA Series
Specifications



- Frequency range: DC ~ 6GHz
- Operating temperature: -55℃ to 150℃
- Power rating: 100mW
- Size: 1.25×2.0×0.45(mm), type Ⅲ
- Impedance: 50Ω
- Thick film technology

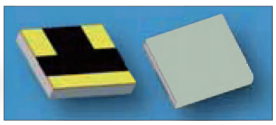
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
STCA0601N*	1	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0602N*	2	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0603N*	3	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0604N*	4	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0605N*	5	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0606N*	6	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0607N*	7	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0608N*	8	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0609N*	9	N3~N9	-0.003~ -0.009	1.2	±0.5
STCA0610N*	10	N3~N9	-0.003~ -0.009	1.2	±0.5

MTCA Series
Specifications

- Frequency range:
  1)Planar series DC-18GHz(N3~N5); DC-12.4GHz(N6~N9)
  2)W series DC-12.4GHz(All W1/W3/WB1 Series)
  - Single wrap(W1): metallization wrap ground terminal.
  - Triple wrap(W3): metallization wrap input, output and ground terminal.
  - Wire bond(WB1): metallization wrap ground terminal, input and output terminal have gold metallization for wire bonding.

Planar

Triple wrap,W3

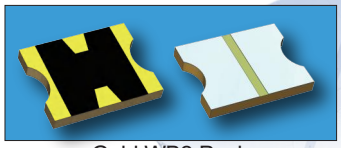

Gold,WB1 Package

- Operating temperature: -55℃ to 150℃
- Impedance: 50Ω
- Size1: 1.52×1.91×0.28(mm), 1.52×1.91×0.4(mm),type Ⅱ
- Size2: 1.52×1.91×0.23(mm), 1.52×1.91×0.4(mm),type Ⅱ
- Power rating: 200mW
- Thick film technology

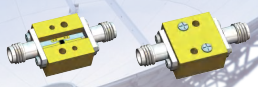
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
MTCA1801N*	1	N3~N7	-0.003~ -0.007	1.3	±0.5
MTCA1802N*	2	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1803N*	3	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1804N*	4	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1805N*	5	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1806N*	6	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1807N*	7	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1808N*	8	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1809N*	9	N3~N9	-0.003~ -0.009	1.3	±0.5
MTCA1810N*	10	N3~N9	-0.003~ -0.009	1.3	±0.5

WTCA-WB2 Series
Specifications

- Wide frequency range: DC to 20GHz
- Operating temperature: -55℃ to 150℃
- Size1: 1.52×1.81×0.38(mm)
- Size2: 1.52×1.81×0.28(mm)
- Power rating: 200mW
- Impedance: 50Ω
- Thick film technology



Gold,WB2 Package

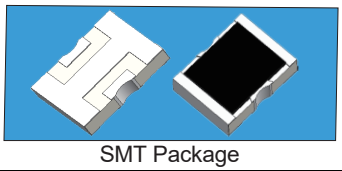


Test fixture

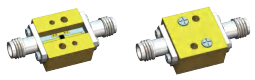
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
WTCA2002N*WB2	2	N3~N7	-0.003~ -0.007	1.30 Max DC-10GHz @25℃ 1.45 Max 10-18GHz @25℃ 1.65 Max 18-20GHz @25℃	±0.5
WTCA2003N*WB2	3	N3~N9	-0.003~ -0.009		±0.5
WTCA2004N*WB2	4	N3~N9	-0.003~ -0.009		±0.5
WTCA2005N*WB2	5	N3~N10	-0.003~ -0.010		±0.5
WTCA2006N*WB2	6	N3~N10	-0.003~ -0.010		±0.5
WTCA2007N*WB2	7	N3~N10	-0.003~ -0.010		±0.5

WTCA-SMT Series
Specifications

- Wide frequency range: DC to 20GHz
- Operating temperature: -55℃ to 150℃
- Size: 1.52×1.91×0.38(mm)
- Power rating: 200mW
- Impedance: 50Ω
- Thick film technology



SMT Package

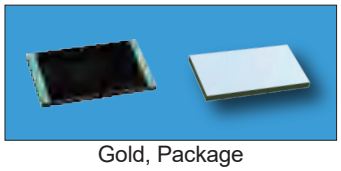


Test fixture

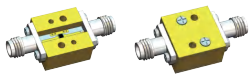
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
WTCA2002N*SMT	2	N3~N9	-0.003~ -0.009	1.30 Max DC-10GHz @25℃ 1.45 Max 10-20GHz @25℃	±0.5
WTCA2003N*SMT	3	N3~N9	-0.003~ -0.009		±0.5
WTCA2004N*SMT	4	N3~N9	-0.003~ -0.009		±0.5
WTCA2005N*SMT	5	N3~N9	-0.003~ -0.009		±0.5
WTCA2006N*SMT	6	N3~N9	-0.003~ -0.009		±0.5
WTCA2007N*SMT	7	N3~N9	-0.003~ -0.009		±0.5
WTCA2008N*SMT	8	N3~N9	-0.003~ -0.009		±0.5
WTCA2009N*SMT	9	N3~N9	-0.003~ -0.009		±0.5
WTCA2010N*SMT	10	N3~N9	-0.003~ -0.009		±0.5

KTCA Series
Specifications

- Wide frequency range: 16 to 36GHz
- Operating temperature: -55℃ to 150℃
- Gold wirebond
- Size: 3.05×1.65×0.28(mm)
- for wire-bonding
- Power rating: 100mW
- Impedance: 50Ω
- Thin film technology



Gold, Package

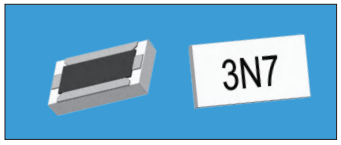


Test fixture

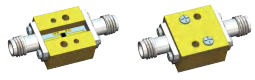
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
KTCA3602N**	2	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3603N**	3	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3604N**	4	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3605N**	5	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3606N**	6	N3~N7	-0.003~ -0.007	1.35	±0.5

KTCA-SMT Series
Specifications

- Wide frequency range: 16 to 36GHz
- Operating temperature: -55℃ to 150℃
- Size: 3.05×1.65×0.56(mm)
- For lead free reflow
- Power rating: 100mW
- Impedance: 50Ω
- Thin film technology



SMT Package



Test fixture

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
KTCA3602N**SMT	2	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3603N**SMT	3	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3604N**SMT	4	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3605N**SMT	5	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCA3606N**SMT	6	N3~N7	-0.003~ -0.007	1.35	±0.5

Yantel has developed the world's smallest and thinnest DC-20GHz and 16-40GHz ultra-wideband temperature compensation attenuator , with dimensions of 0.8×0.85(0.6)×0.25mm, which is 25% of the size of the traditional ones, and is the world's smallest passive temperature compensation attenuator, which can meet the applications requirements of the miniaturized multichannel phased-array SiP (System-integration/ System in package) . It has multiple compensation slopes to support microwave range of active systems.

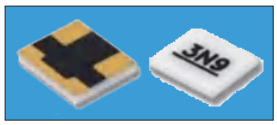
New Super-mini **MTCAU** Series (Gold Wire Bonding Packaging)

Features

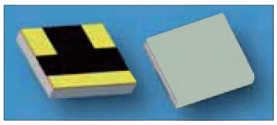
1. DC-20GHz ultra small ultra wideband
2. Size is 0.8*0.85*0.30mm, gold electrodes. The size and thickness are consistent with the active temperature compensation attenuation chip, making it easy to use.
3. Gold wire bonding, input and output terminal bonding pad size 0.24*0.34mm
4. N3~N10 , multiple slopes available
5. High reliability, no need additional -5V power supply
6. Improve impedance matching to reduce the return loss between adjacent power amplifiers, providing isolation and protection, and effectively preventing self-excitation.
7. Compared to active ones, passive temperature compensation attenuator have no distortion, phase shift, and time shift.
8. The system application is simple and flexible, with high reliability, which can reduce the hidden cost of system redesign.
9. When the power increases, compared to active one, passive temperature compensation attenuator has better and more stable temperature & frequency response characteristics, and higher reliability.

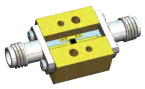
Specifications

- Wide frequency range: DC to 20GHz
- Operating temperature: -55℃ to 150℃
- Size: 0.8×0.85×0.15 & 0.25(mm)
- Power rating: 200mW
- Impedance: 50Ω
- Thick film technology



Gold, Planar Package


Gold, WB1 Package


Test fixture

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
MTCAU2001N*	1	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2002N*	2	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2003N*	3	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2004N*	4	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2005N*	5	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2006N*	6	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2007N*	7	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2008N*	8	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2009N*	9	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAU2010N*	10	N3~N10	-0.003~ -0.01	1.2	±0.5

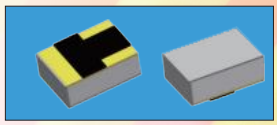
New Super-mini **MTCAS** Series (Gold Wire Bonding Packaging)

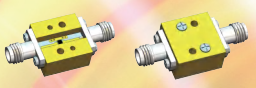
Features

1. DC-20GHz ultra small ultra wideband
2. Size is 0.8*0.6*0.25mm, gold electrodes. The size and thickness are consistent with the active temperature compensation attenuation chip, making it easy to use.
3. Gold wire bonding, input and output terminal bonding pad size 0.13*0.35mm
4. N3~N10 , multiple slopes available
5. High reliability, no need additional -5V power supply
6. Improve impedance matching to reduce the return loss between adjacent power amplifiers, providing isolation and protection, and effectively preventing self-excitation.
7. Compared to active ones, passive temperature compensation attenuator have no distortion, phase shift, and time shift.
8. The system application is simple and flexible, with high reliability, which can reduce the hidden cost of system redesign.
9. When the power increases, compared to active one, passive temperature compensation attenuator has better and more stable temperature & frequency response characteristics, and higher reliability.

Specifications

- Wide frequency range: DC to 20GHz
- Operating temperature: -55℃ to 150℃
- Size: 0.8×0.6×0.15 & 0.25(mm)
- Power rating: 200mW
- Impedance: 50Ω
- Thick film technology


Gold,WB1 Package


Test fixture

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
MTCAS2001N*	1	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2002N*	2	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2003N*	3	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2004N*	4	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2005N*	5	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2006N*	6	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2007N*	7	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2008N*	8	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2009N*	9	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAS2010N*	10	N3~N10	-0.003~ -0.01	1.2	±0.5

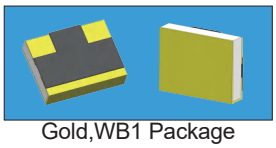
New Super-mini **MTCAT** Series (Gold Wire Bonding Packaging)

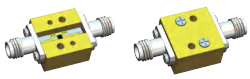
Features

1. DC-20GHz ultra small ultra wideband
2. Size is 0.6*0.8*0.15mm, gold electrodes. The size and thickness are consistent with the active temperature compensation attenuation chip, making it easy to use.
3. Gold wire bonding, input and output terminal bonding pad size 0.24*0.21mm
4. N3~N10 , multiple slopes available
5. High reliability, no need additional -5V power supply
6. Improve impedance matching to reduce the return loss between adjacent power amplifiers, providing isolation and protection, and effectively preventing self-excitation.
7. Compared to active ones, passive temperature compensation attenuator have no distortion, phase shift, and time shift.
8. The system application is simple and flexible, with high reliability, which can reduce the hidden cost of system redesign.
9. When the power increases, compared to active one, passive temperature compensation attenuator has better and more stable temperature & frequency esponse characteristics, and higher reliability.

Specifications

- Wide frequency range: DC to 20GHz
- Operating temperature: -55˚C to 150˚C
- Size: 0.6×0.8×0.15 (mm)
- Power rating: 200mW
- Impedance: 50Ω
- Thick film technology


Gold,WB1 Package

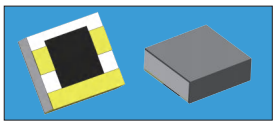

Test fixture

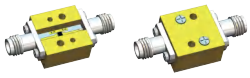
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
MTCAT2001N*	1	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2002N*	2	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2003N*	3	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2004N*	4	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2005N*	5	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2006N*	6	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2007N*	7	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2008N*	8	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2009N*	9	N3~N10	-0.003~ -0.01	1.2	±0.5
MTCAT2010N*	10	N3~N10	-0.003~ -0.01	1.2	±0.5

New Super-mini **KTCAU** Series (Gold Wire Bonding Packaging)

Specifications

- Power rating: 100mW
- Wide frequency range: DC ~ 40GHz
- Operating temperature: -55˚C to 150˚C
- for wire-bonding
- Size: 0.8×0.85×0.27(mm)
- Impedance: 50Ω
- Thick film technology


Gold,WB1 Package

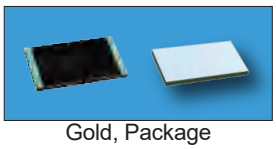

Test fixture

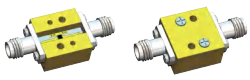
Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
KTCAU4002N*	2	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCAU4003N*	3	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCAU4004N*	4	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCAU4005N*	5	N3~N7	-0.003~ -0.007	1.35	±0.5
KTCAU4006N*	6	N3~N7	-0.003~ -0.007	1.35	±0.5

New **QTCA** Series

Specifications

- Power rating: 200mW
- Wide frequency range: 36 ~ 50GHz
- Operating temperature: -55˚C to 150˚C
- for wire-bonding
- Size: 3.05×1.65×0.25(mm)
- Impedance: 50Ω
- Thin film technology


Gold, Package

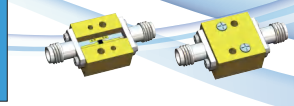

Test fixture

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
QTCA5002*	2	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5003*	3	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5004*	4	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5005*	5	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5006*	6	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5

New QTCA SMT Series
Specifications

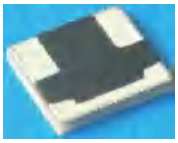
- Power rating: 200mW
- Wide frequency range: 36 ~ 50GHz
- Operating temperature: -55˚C ~ 150˚C
- For lead free reflow
- Size: 3.05×1.65×0.51(mm)
- Impedance: 50Ω
- Thin film technology

SMT Package


Test fixture

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
QTCA5002*SMT	2	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5003*SMT	3	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5004*SMT	4	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5005*SMT	5	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5
QTCA5006*SMT	6	N3,N5,N7	-0.003,-0.005,-0.007	1.2	±0.5

ETCA Series
Specifications

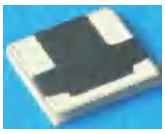


Wide frequency range: DC ~ 3GHz
Operating temperature: -55˚C ~ 150˚C

- Power rating: 2W
- Size: 4.06×3.68×0.51(mm), type Ⅰ
- Impedance: 50Ω or 75Ω
- Thin film technology

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
ETCA0303N*	3	N10~N16	-0.01~ -0.016	1.3	±0.5
ETCA0304N*	4	N10~N16	-0.01~ -0.016	1.3	±0.5
ETCA0305N*	5	N10~N16	-0.01~ -0.016	1.3	±0.5
ETCA0306N*	6	N10~N16	-0.01~ -0.016	1.3	±0.5

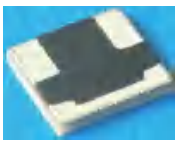
BTCA Series
Specifications



- Wide frequency range: DC ~ 3GHz
- Operating temperature: -55˚C ~ 150˚C
- Power rating: 2W
- Size: 3.1×3.70×0.53(mm), type Ⅰ
- Impedance: 75Ω
- Thin film technology

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
BTCA0601N*	1	N3~N9	-0.003~ -0.009	1.2	±0.5
BTCA0602N*	2	N3~N9	-0.003~ -0.009	1.2	±0.5
BTCA0603N*	3	N3~N9	-0.003~ -0.009	1.2	±0.5
BTCA0604N*	4	N3~N9	-0.003~ -0.009	1.2	±0.5
BTCA0605N*	5	N3~N9	-0.003~ -0.009	1.2	±0.5
BTCA0606N*	6	N3~N9	-0.003~ -0.009	1.2	±0.5

PTCA Series (Thermal compensation characteristics with positive coefficients)
Specifications

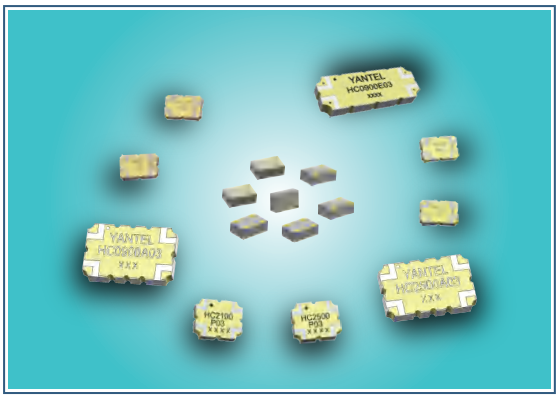


- Wide frequency range: DC ~ 6GHz
- Operating temperature: -55˚C ~ 150˚C
- Power rating: 2W
- Size: 3.1×3.70×0.53(mm), type Ⅰ
- Impedance: 50Ω or 75Ω
- Thin film technology

Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation(dB/dB/℃)	Max. VSWR(:1)@1GHz	Attenuation Accuracy(dB)
PTCA0301P*	1	P3~P9	+0.003~ +0.009	1.2	±0.5
PTCA0302P*	2	P3~P9	+0.003~ +0.009	1.2	±0.5
PTCA0303P*	3	P3~P9	+0.003~ +0.009	1.2	±0.5
PTCA0304P*	4	P3~P9	+0.003~ +0.009	1.2	±0.5
PTCA0305P*	5	P3~P9	+0.003~ +0.009	1.2	±0.5
PTCA0306P*	6	P3~P9	+0.003~ +0.009	1.2	±0.5

3dB 90° Hybrid Coupler

SMD Package



Features

- Very low loss
- Tight amplitude balance
- High isolation
- Low VSWR
- Good repeatability
- CTE compatible with FR4, G-10, RF-35, RO4350B and polyimide
- Immersion gold, prevent surface oxidation & scratch
- RoHS compliant
- Tape & reel package available

Applications

- Power amplifiers
- LNAs
- Variable attenuators
- Variable phase shifter

Part No. Description

**	****	*	**
Hybrid Coupler	Center Frequency(MHz)	Size(mm)	Coupling Value

Specifications

Standard Series for SMT

	Part No.	Freq.Range (GHz) f_L-f_U	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)
New	HC07T03	0.6-0.9	4	2.0×1.25	19	0.5	±0.7	90±7.0	20
New	HC09T03	0.8-1.0	4	2.0×1.25	20.8	0.4	±0.55	90±3.0	20
New	HC12T03	0.96-1.53	4	2.0×1.25	18	0.6	±0.5	90±6.0	18
New	HC13T03	1.0-1.5	4	2.0×1.25	20	0.4	±0.6	90±6.0	20
AEC-Q200	HC14T03	1.15-1.65	4	2.0×1.25	18	0.55	±0.5	90±5.0	20
New	HC16T03	1.5-1.7	4	2.0×1.25	19	0.25	±0.5	90±4.0	21
New	HC19T03	1.7-2.0	4	2.0×1.25	17.7	0.3	±0.4	90±5.0	20
New	HC20T03	1.7-2.3	4	2.0×1.25	17.7	0.4	±0.4	90±5.0	20
New	HC21T03	2.0-2.3	4	2.0×1.25	17.7	0.4	±0.4	90±5.0	20
New	HC25T03	2.3-2.7	4	2.0×1.25	16	0.35	±0.3	90±5.0	18
New	HC35T03H	3.2-3.7	5	2.0×1.25	18	0.3	±0.3	90±5.0	20
New	HC35T03	3.2-4.2	4	2.0×1.25	17.7	0.35	±0.3	90±5.0	20
	HC35T03R	3.2-4.2	4	2.0×1.25	16.5	0.45	±0.45	90±5.0	20
New	HC39T03	3.8-4.1	4	2.0×1.25	15.6	0.4	±0.83	90±5.0	18.5
New	HC55T03	4.4-6.0	4	2.0×1.25	18	0.35	±1.0	90±7.7	18
New	HC70T03	5.8-7.5	4	2.0×1.25	15.6	0.35	±0.7	90±7.0	14.5
	HC05H03	0.425-0.675	15	3.1×1.6	17.7	0.7	±0.75	90±6.0	19
	HC16H03	1.1-1.925	15	3.1×1.6	17.69	0.55	±0.55	90±8.5	21
AEC-Q200	HC14K03	1.15-1.65	4	2.5×2	18	0.55	±0.50	90±7.0	20
New	HC07F03	0.7-1.0	25	5.08×3.18	21	0.2	±0.70	90±2.0	23
New	HC09F03	0.8-1.0	25	5.08×3.18	21	0.2	±0.30	90±2.0	23
New	HC12F03	0.96-1.53	25	5.08×3.18	20	0.5	±0.4	90±4.0	22
AEC-Q200	HC14F03	1.2-1.7	25	5.08×3.18	21	0.3	±0.35	90±4.0	20
New	HC19F03	1.7-2.3	25	5.08×3.18	21	0.25	±0.25	90±3.0	21
New	HC19F03A	1.7-2.3	25	5.08×3.18	20	0.3	±0.35	90±3.0	20
New	HC25F03	2.1-2.7	20	5.08×3.18	20	0.3	±0.45	90±3.0	23
New	HC35F03	3.3-3.9	25	5.08×3.18	20	0.3	±0.30	90±4.0	20
New	HC35F03A	3.3-4.2	22	5.08×3.18	17.9	0.3	±0.50	90±5.0	20
New	HC55F03	4.9-6.3	25	5.08×3.18	13.1	0.49	±0.65	90±6.0	15
New	HC70F03	5.5-8.5	15	5.08×3.18	18	0.3	±0.40	90±4.0	20
	HC2100S03	1.7-2.3	20	6.00×3.00	21	0.3	±0.30	90±2.0	21
	HC2500S03	2.3-2.7	20	6.00×3.00	20.8	0.5	±0.25	90±3.5	20
	HC0510P03	0.48-0.55	60	6.35×5.08	20	0.2	±0.35	90±3.0	20
	HC0900P03S	0.7-1.0	60	6.35×5.08	24	0.2	±0.35	90±3.0	30
	HC0900P03H	0.7-1.0	100	6.35×5.08	19	0.3	±0.4	90±5.0	20
	HC0900P03	0.8-1.0	28	6.35×5.08	19.7	0.4	±0.25	90±4.0	20

AEC-Q200
New

Part No.	Freq.Range (GHz) fL-fu	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)
HC1400P03L	1.1-1.6	30	6.35×5.08	20.8	0.3	±0.50	90±2.0	20
HC1400P03S	1.15-1.63	30	6.35×5.08	20.8	0.3	±0.35	90±3.0	22
HC1400P03T	1.15-1.63	30	6.35×5.08	20.8	0.3	±0.35	90±3.0	22
HC1400P03	1.2-1.7	30	6.35×5.08	20.8	0.3	±0.35	90±4.0	20
HC1600P03	1.558-1.616	30	6.35×5.08	23	0.19	±0.35	90±3.0	25
HC1900P03	1.7-2.0	60	6.35×5.08	20.8	0.2	±0.30	90±3.5	25
HC1900P03H2	1.7-2.3	176	6.35×5.08	19	0.25	±0.40	90±2.5	19
HC2100P03H	1.7-2.3	90	6.35×5.08	20	0.25	±0.15	90±2.0	27
HC2100P03	1.8-2.3	60	6.35×5.08	20.8	0.25	±0.25	90±4.0	21
HC2500P03	2.3-2.7	60	6.35×5.08	20.8	0.3	±0.25	90±3.0	20
HC3500P03	3.3-3.8	25	6.35×5.08	18.2	0.3	±0.3	90±4.0	20
HC3500P03H	3.3-3.8	50	6.35×5.08	18.2	0.3	±0.3	90±4.0	20
HC3500M03	3.3-4.0	70	10.16×5.08	20.8	0.25	±0.25	90±3.0	21
HC5500M03	5.0-6.0	20	10.16×5.08	20	0.25	±0.40	90±3.0	20
HC8200M03	7.9-8.4	125	10.16×5.08	16.5	0.4	±0.35	90±5.0	17
HC0900E03	0.8-1.0	70	14.22×5.08	20.8	0.25	±0.30	90±3.0	20
HC1500E03H	1.4-1.6	250	14.22×5.08	21	0.2	±0.25	90±2.0	21
HC1900E03	1.7-2.0	120	14.22×5.08	24.9	0.15	±0.25	90±2.0	24
HC2200E03	1.7-2.7	160	14.22×5.08	23	0.15	±0.25	90±4.0	23
HC2200E03H	1.8-2.7	250	14.22×5.08	20.8	0.25	±0.30	90±4.0	22
HC2100E03	2.0-2.3	100	14.22×5.08	26.4	0.15	±0.25	90±2.0	26
HC2500E03	2.3-2.7	100	14.22×5.08	24.9	0.2	±0.15	90±2.0	26
HC3500E03	3.3-3.6	300	14.22×5.08	20	0.25	±0.3	90±3.0	20
HC0350A03	0.30-0.40	150	14.22×8.89	19.1	0.3	±0.30	90±4.0	18
HC0450A03	0.35-0.525	125	14.22×8.89	20.8	0.3	±0.45	90±3.0	20
HC0575A03	0.35-0.80	150	14.22×8.89	17.7	0.3	±0.80	90±4.0	19
HC0480A03	0.435-0.524	125	14.22×8.89	20.1	0.25	±0.20	90±3.0	20
HC0600A03	0.44-0.73	200	14.22×8.89	17.2	0.3	±0.40	90±2.5	17
HC0660A03	0.47-0.61	200	14.22×8.89	20.8	0.2	±0.35	90±3.0	20
HC0660A03A	0.47-0.61	200	14.22×8.89	20.8	0.15	±0.70	90±2.0	20
HC0650A03	0.47-0.86	200	14.22×8.89	17.2	0.3	±0.40	90±2.5	17
HC1700A03	0.69-2.7	50	14.22×8.89	13-29	0.62	±0.8	90±6.0	16
HC0700A03	0.7-0.8	225	14.22×8.89	20	0.25	±0.25	90±2.0	21
HC0900A03	0.8-1.0	175	14.22×8.89	20	0.2	±0.25	90±2.0	22
HC1500A03	1.0-2.0	60	14.22×8.89	17.69	0.45	±0.55	90±3.0	20
HC1400A03	1.2-1.7	150	14.22×8.89	20.8	0.2	±0.25	90±2.0	22
HC2035A03	1.575-2.575	80	14.22×8.89	21.7	0.25	±0.35	90±3.0	23
HC1900A03	1.7-2.0	150	14.22×8.89	20.8	0.15	±0.25	90±2.0	23
HC2100A03	2.0-2.3	105	14.22×8.89	20	0.15	±0.25	90±2.0	24
HC2500A03	2.3-2.7	200	14.22×8.89	20.8	0.17	±0.25	90±2.0	23
HC0450L03	0.38-0.52	200	16.51×12.19	20.8	0.3	±0.30	90±3.0	20
HC0465L03	0.40-0.53	200	16.51×12.19	20.8	0.25	±0.35	90±3.0	20
HC0650F03	0.47-0.86	100	16.51×12.19	16.5	0.4	±0.40	90±3.0	18
HC0750L03	0.5-1	100	16.51×12.19	20.8	0.35	±0.70	90±3.0	20
HC0900L03	0.8-1.0	225	16.51×12.19	20.8	0.25	±0.25	90±2.0	22
HC2100L03-V2	1.8-2.5	300	16.51×12.19	20.8	0.2	±0.25	90±3.0	20
HC0150B03	0.13-0.174	125	25.4×12.7	20.8	0.4	±0.25	90±3.5	20
HC0230B03	0.22-0.24	90	25.4×12.7	19.1	0.35	±0.30	90±2.0	20
HC0650B03H	0.44-0.73	400	25.4×12.7	19.1	0.25	±0.42	90±2.0	20
HC0650B03	0.47-0.86	300	25.4×12.7	19.1	0.25	±0.42	90±2.0	20
HC0900B03	0.8-1.0	300	25.4×12.7	20.8	0.15	±0.25	90±2.0	22
HC1900B03	1.7-2.0	300	25.4×12.7	19.1	0.2	±0.25	90±2.0	20
HC2100B03	2.0-2.3	300	25.4×12.7	19.1	0.3	±0.30	90±2.5	21
HC0650C03H	0.44-0.73	600	34×17	17.7	0.25	±0.4	90±2.0	20
HC0570C03	0.47-0.65	500	34×17	20.8	0.25	±0.35	90±2.0	22
HC0650C03	0.47-0.86	500	34×17	17.7	0.25	±0.4	90±2.0	20
HC0750C03	0.65-0.86	500	34×17	20.8	0.25	±0.4	90±2.0	25

3dB 90° High Power & Wide band Hybrid Coupler

SMD Package

Features

- High power density, high power output
- Wideband characteristics
- Very low loss
- Low VSWR
- Tight amplitude balance
- High isolation
- Good repeatability

Applications

- Radar
- Microwave transceiver module
- Microwave amplifier system
- 4G,5G,6G base station and network coverage

Wide band & High Power Series for SMT

	Part No.	Freq.Range (GHz) f_L-f_U	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Replacement IPP Part No.
	HC0059W03	0.03~0.088	200	50.8×19.05	16.5	0.53	±1.0	90±7.0	15.5	IPP-7068
New	HC0310W03	0.088~0.52	200	50.8×19.05	14-25	0.75	±0.8	90±7.0	13	IPP-7057
	HC0350W03	0.1~0.605	50	50.8×19.04	16.5	0.8	±1.1	90±7.0	15	Q1M010061
New	HC0600W03	0.2~1.0	150	50.8×19.05	20	0.35	±0.65	90±3.0	20	IPP-7012
	HC0337W03	0.225~0.45	200	32×12.7	19	0.25	±0.5	90±5.0	20	IPP-7054
New	HC1100W03	0.225~2.0	200	37.34×28.7	18	0.8	±1.0	90±5.0	17	IPP-7116
New	HC0450W03	0.295~0.605	300	25.4×12.7	16-25	0.3	±0.5	90±3.5	16.5	IPP-7022
	HC0750W03	0.5~1.1	200	16.51×12.19	19	0.25	±0.55	90±5.0	18	IPP-7046
	HC3250W03	0.5~6	100	45.72×12.7	12	1.1	±2.0	90±6.0	13	IPP-7164
New	HC3300W03	0.6~6	100	31.75×19.05	14	1	0.9	90±6.0	18	-
New	HC3350W03	0.7~6	150	21.7×16.8	11	0.7	±1.55	90±5.0	17	QH10541
New	HC1200W03	0.8~1.6	200	21.59×6.35	19.8	0.25	±0.55	90±5.0	19	IPP-7048
New	HC1505W03	0.5~2.5	100	45.72×12.7	15	0.7	±0.7	90±5.0	15.5	IPP-7017
	HC1650W03	0.8~2.5	150	14.22×8.89	19	0.25	±1.1	90±5.0	18	IPP-7077
New	HC1700W03	0.5~3.0	200	45.72×12.7	17-28	0.55	±1.0	90±3.0	17	IPP-7121
New	HC1700A03	0.69~2.7	50	14.22×8.89	13-29	0.62	±0.8	90±6.0	16	-
	HC3345W03	0.69~6.0	50	25.4×12.7	11.9	1.1	±1.1	90±11.0	14.5	IPP-7118
New	HC2300W03	0.8~3.8	100	45.72×10.16	17.7	0.5	±0.65	90±5.0	18	IPP-7063
New	HC1500W03	1.0~2.0	150	14.22×8.89	21	0.2	±0.55	90±2.0	21	IPP-7047
New	HC1750W03	1.0~2.5	150	14.22×8.89	19	0.25	±0.7	90±5.0	19	IPP-7055
New	HC2000W03	1.0~3.0	400	25.4×12.7	17.7	0.25	±1.0	90±4.0	17.5	IPP-7109
	HC2600W03	1.0~4.2	90	22.86×12.7	14.5	0.75	±0.85	90±5.0	15	IPP-7120
	HC2605W03	1.0~4.2	80	45.72×10.16	17.7	0.5	±0.6	90±5.0	18	IPP-7015
New	HC3500W03	1.0~6.0	50	41.91×5.08	15.5	0.75	±0.8	90±5.0	15	IPP-7026
New	HC2200W03	1.8~2.7	400	25.4×12.7	21	0.15	±0.3	90±4.0	23	-
New	HC3000W03	2.0~4.0	100	14.22×8.89	16.6	0.5	±0.85	90±5.0	18	IPP-7018
New	HC4000W03	2.0~6.0	250	14.22×8.89	12-35	0.25	±1.4	90±5.0	17	IPP-7111
New	HC4001W03	2.0~6.0	150	31.75×5.08	17.7	0.4	±0.4	90±6.0	17	IPP-7150
	HC4005W03	2.0~6.0	100	14.22×5.08	20-35	0.3	±1.0	90±4.0	20	IPP-7006
New	HC4400W03	2.0~6.8	100	14.22×5.08	19	0.3	±1.25	90±5.0	17	IPP-7043
New	HC4250W03	2.5~6.0	100	14.22×5.08	17.7	0.3	±0.75	90±5.0	18	IPP-7004
New	HC4350W03	2.6~6.1	100	14.22×5.08	17.7	0.3	±0.7	90±3.0	18	IPP-7031
New	HC3100W03	2.7~3.5	200	14.22×8.89	19	0.25	±0.2	90±5.0	20	IPP-7075
New	HC3105W03	2.7~3.5	300	25.4×12.7	17.7	0.3	±0.25	90±7.0	18	IPP-7074
New	HC4450W03	2.7~6.2	250	14.22×8.89	14.5	0.5	±1.3	90±3.0	18	-
	HC5000W03	4.0~5.0	75	14.22×5.08	17.7	0.25	±0.45	90±5.0	18	IPP-7133
New	HC6000W03	4.0~8.0	75	10.16×5.08	12-35	0.45	±0.9	90±8.0	14	IPP-7039
New	HC7500W03	5.0~10.0	20	6.35×5.08	17.7	0.35	±0.5	90±4.0	20	IPP-7020
New	HC7250W03	6.0~8.5	100	10.16×5.08	17.7	0.4	±0.35	90±6.0	17	IPP-7044
New	HC9000W03	6.0~12.0	50	6.35×5.08	15	0.35	±0.5	90±4.0	17.5	IPP-7114
	HC100HW03	8.0~12.0	50	6.35×5.08	16.5	0.3	±0.55	90±6.0	17	IPP-7112
New	HC1300HW03	10.7~14.5	30	6.35×5.08	15	0.5	±0.5	90±4.0	17	-
New										

New

3dB 90° High Power & Wideband Drop-In Coupler

Features

- Very low loss
- Low VSWR
- High isolation
- Tight amplitude balance
- In-situ replacement
- High reliability

Applications

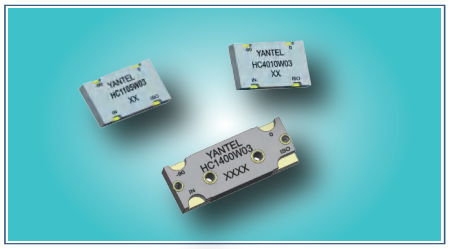
- Radar
- Microwave transceiver module
- Microwave amplifier system

Part No.	Freq.Range (GHz) fL-fu	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Replacement IPP Part No.
HC0270D03	20~520	200	55.88×76.2	17.7	0.8	±0.30	90±10.0	16	IPP-2255
HC0510D03	20~1000	150	55.88×76.2	17.7	0.9	±0.25	90±12.0	16	IPP-2247
HC0053D03	30~76	100	53.34×50.8	20.8	0.6	±0.75	90±6.0	21	-
HC0059D03	30~88	400	67.31×67.31	20	0.3	±0.55	90±4.0	20	IPP-2052
HC0290D03	90~500	800	63.5×152.4	17.7	0.35	±0.95	90±5.0	16	IPP-2133
HC0540D03	80~1000	250	50.8×76.2	16.5	0.75	±1.30	90±8.0	15	IPP-2269
HC0300D03	100~500	150	38.1×83.82	17.7	0.5	±0.75	90±6.0	16	IPP-2069
HC0305D03	120~500	800	127×63.5	18	0.55	±0.70	90±3.0	18	IPP-2012
HC0310D03	100~520	400	38.1×83.82	17.7	0.45	±0.75	90±5.0	17	IPP-2331
HC0350D03	100~605	400	38.1×75.0	16.5	0.7	±0.80	90±5.0	16	Q8T010061
HC0360D03	210~520	400	12.7×50.8	17.7	0.3	±0.75	90±3.0	18	IPP-2053
HC0312D03	225~400	250	14.22×41.15	20.8	0.25	±0.50	90±5.0	20	IPP-2058
HC0315D03	225~400	400	12.7×50.8	19	0.25	±0.50	90±5.0	20	Q4T022040
HC0372D03	225~520	200	12.7×50.8	19	0.25	±0.70	90±5.0	20	IPP-2037
HC0650D03	300~1000	400	12.7×50.8	18.2	0.25	±1.5	90±5.0	18	-
HC0875D03	350~1400	400	30×54	15.5	0.55	±0.7	90±5.0	16	-
HC0700D03	400~1000	800	67.31×67.31	20	0.25	±0.80	90±3.0	20	IPP-2102
HC0750D03	500~1000	200	12.7×34.29	20.82	0.25	±0.50	90±5.0	20	IPP-2006
HC0770D03	500~1000	400	50.8×12.7	19	0.25	±0.55	90±5.0	20	IPP-2061
HC1500D03	500~2500	200	20.32×55.88	17.2	0.5	±0.70	90±6.0	17	IPP-2335
HC1700D03	500~3000	200	20.32×55.88	17.2	0.5	±0.70	90±5.0	17	IPP-2072
HC1760D03	700~2700	200	33.02×55.88	17.7	0.75	±0.80	90±5.0	14	IPP-2281IT
HC1225D03	800~1650	400	12.7×34.29	17.7	0.2	±0.60	90±5.0	18	IPP-2167
HC1650D03	800~2500	400	22.86×81.28	17.7	0.4	±0.50	90±5.0	17	-
HC1750D03	800~2700	400	22.86×81.28	17.7	0.4	±0.60	90±5.0	18	IPP-2084
HC1000D03	960~1220	800	67.31×67.31	20	0.3	±0.35	90±3.0	20	-
HC1100D03	900~1300	400	12.7×34.29	19	0.2	±0.40	90±5.0	19	IPP-2029
HC1510D03	1000~2000	400	12.7×34.29	18	0.3	±0.4	90±3.0	19	IPP-2041/IPP-2007
HC1600D03	1000~2000	1000	60.96×25.4	16.5	0.3	±0.5	90±5.0	17.5	IPP-2042
HC1755D03	1000~2500	300	20.32×55.88	17.7	0.5	±0.90	90±5.0	14	IPP-4011
HC2000D03	1000~3000	150	12.7×34.29	17.7	0.3	±1.10	90±5.0	18	IPP-2062
HC1400D03	1300~1700	100	12.7×34.29	19	0.3	±0.35	90±2.5	20	-
HC2250D03	1500~3000	400	12.7×34.29	17.7	0.25	±0.50	90±5.0	18	IPP-2295
HC2100D03	1750~2400	400	12.7×34.29	19	0.2	±0.30	90±5.0	20	IPP-2108
HC3000D03	2000~4000	400	12.7×34.29	17.6	0.3	±0.50	90±5.0	18	IPP-2073
HC4000D03	2000~6000	100	6.35×33.02	17.7	0.3	±0.10	90±5.0	18	IPP-2277

New

3dB 90° High Power & Wideband Hybrid Coupler

Gold Wire Bonding Packaging



Features

- High power density, high power output
- Wideband characteristics
- Very low loss
- Low VSWR
- Tight amplitude balance
- High isolation
- Good repeatability

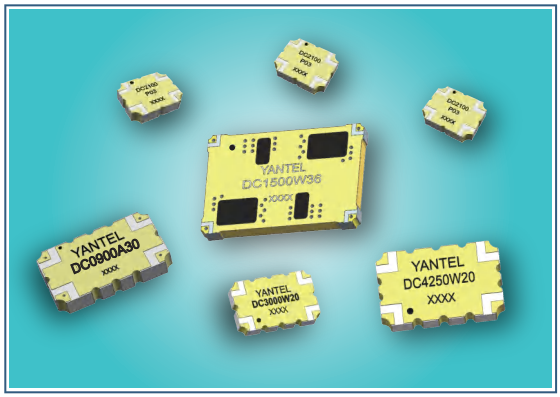
Applications

- Radar
- Microwave transceiver module
- Microwave amplifier system
- 4G,5G,6G base station and network coverage

Part No.	Freq.Range (GHz) fL-fu	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)
HC1105W03	0.225~2.0	200	21.07×11.07	12	1	±1.1	90±5.0	16
HC2600G03	1.0~4.0	900	17.05×10.3	20.8	1	±1.0	90±5.0	20
HC1400G03	1.1~1.7	400	34.42×12.70	18	0.3	±0.4	90±3.0	19
HC4010W03	2.0~6.0	350	21.07×11.07	14	0.5	±1.75	90±6.0	17
HC6000G03	4.0~8.0	75	10×5.4	14.5	0.45	±0.90	90±5.0	15.5

Directional Coupler

SMD Package



Features

- Very low loss
- High directivity
- Low VSWR
- Good repeatability
- CTE compatible with FR4, G-10, RF-35, RO4350B and polyimide
- Immersion gold, prevent surface oxidation & scratch
- RoHS compliant
- Tape & reel package available

Applications

- Feed-forward amplifiers
- Signal sampling
- 4G,5G,6G base station and network coverage

Part No. Description

**	****	*	**
Directional Coupler	Center Frequency(MHz)	Size(mm)	Coupling Value
DC	0450=410-480 0900=800 to 1000 1400=1200 to 1600 1900=1700 to 2000 2100=2000 to 2300 2500=2300 to 2700 3500=3300 to 3800	B=25.40×12.70 A=14.22×8.89 E=14.22×5.08 M=10.16×5.08 P=6.35×5.08 F=5.08×3.18 T=2×1.25	05=5 dB 10=10 dB 20=20 dB 30=30 dB

Specifications

Standard Series

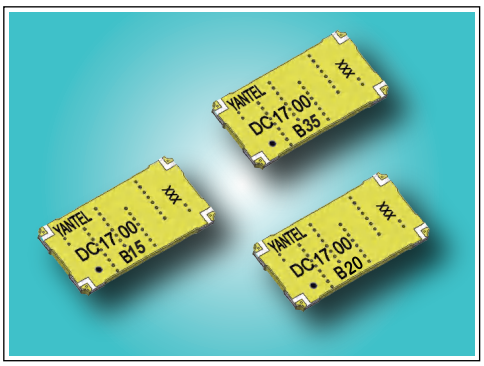
	Part No.	Freq.Range (GHz) f_L- f_U	Power (W)	Size L×W (mm)	Insertion Loss (dB)	Mean Coupling (dB)	Directivity (dB)	Return Loss (dB)
New	DC09T10	0.7 - 1.0	2	2×1.25	0.35	10.0±0.50	14.5	16.7
New	DC09T20	0.7 - 1.0	2	2×1.25	0.3	20.0±0.50	18	18
New	DC19T10	1.7 - 2.2	2	2×1.25	0.3	11.0±1.0	18.5	20.5
New	DC19T20	1.7 - 2.2	2	2×1.25	0.25	20.5±1.50	15	20
New	DC20T02	1.7 - 2.3	5	2×1.25	0.5	2±0.5	20	22
New	DC25T10	2.3 - 2.7	2	2×1.25	0.2	10.0±0.50	22	16
New	DC25T20	2.3 - 2.7	2	2×1.25	0.25	20.0±1.0	14	18
New	DC30T10	2.3 - 3.7	2	2×1.25	0.3	10.0±1.0	15	17
New	DC30T20	2.3 - 3.7	2	2×1.25	0.3	20.0±1.0	16	18
New	DC35T10	3.2 - 3.7	2	2×1.25	0.3	10.0±0.50	18	20
New	DC35T20	3.2 - 3.7	2	2×1.25	0.4	21.0±1.50	17	16
New	DC53T20	4.4 - 5.5	10	2×1.25	0.25	21.0±1.50	18	18
	DC40K20	3.3 - 5.1	25	3.18×2.54	0.08	20±1.00	19	19
New	DC07F02	0.69 - 1.0	25	5.08×3.18	0.3	2.1±0.2	17	19
New	DC09F05	0.7 - 1.0	25	5.08×3.18	0.25	5±0.3	16.5	19
New	DC09F20	0.7 - 1.0	25	5.08×3.18	0.075	19.5±1.0	19	18.2
New	DC14F02	1.2 -1.7	25	5.08×3.18	0.2	1.9±0.2	21	23.1
New	DC19F20	1.4 - 2.7	25	5.08×3.18	0.3	20±1.5	16	16.5
New	DC20F30	1.4 - 2.7	100	5.08×3.18	0.3	30.5±1.5	16	15.6
New	DC19F05	1.7 - 2.3	25	5.08×3.18	0.15	5±0.3	20	20
New	DC20F02	1.8 - 2.2	25	5.08×3.18	0.35	2±0.40	16.7	20
New	DC25F02	2.3 - 2.7	20	5.08×3.18	0.35	2±0.20	16	16
New	DC25F04	2.3 - 2.7	25	5.08×3.18	0.25	4±0.30	21	20
New	DC25F05	2.3 - 2.7	25	5.08×3.18	0.25	5±0.50	15	19
New	DC30F30	2.3 - 3.8	100	5.08×3.18	0.12	30±1.5	20	20
New	DC35F05	3.2 - 3.8	25	5.08×3.18	0.25	5±0.30	15	19

Directional Coupler SMD Package

Part No.	Freq.Range (GHz) f_L- f_U	Power (W)	Size L×W (mm)	Insertion Loss (dB)	Mean Coupling (dB)	Directivity (dB)	Return Loss (dB)
DC35F02	3.3 - 4.2	10	5.08×3.18	0.35	2±0.20	18	19
DC45F04	3.6 - 5.1	25	5.08×3.18	0.2	4±0.40	17	20.8
DC55F30	3.6 - 6.3	100	5.08×3.18	0.25	30±3.5	20	13.9
DC0900P30	0.7 - 1.0	225	6.35×5.08	0.1	30±1.5	17.5	20.8
DC0900P05	0.8 - 1.0	25	6.35×5.08	0.35	5.0±0.5	14	17
DC0900P10	0.8 - 1.0	25	6.35×5.08	0.38	10.2±1.0	14	15
DC1400P10	0.8 - 2.65	50	6.35×5.08	0.25	10±1.0	20	20.8
DC1400P20	1.2 - 1.4	75	6.35×5.08	0.3	20±1.0	15	17.7
DC1900P30	1.3 - 2.0	225	6.35×5.08	0.2	29±1.5	20	19.5
DC1900P04	1.5 - 2.0	70	6.35×5.08	0.15	4±0.3	20	20
DC1900P05	1.7 - 2.0	35	6.35×5.08	0.25	5±0.30	20	20
DC1900P05H	1.7 - 2.0	70	6.35×5.08	0.18	5±0.40	20	20.8
DC1900P10	1.7 - 2.0	20	6.35×5.08	0.25	10±0.50	18	20.8
DC1900P20	1.7 - 2.0	25	6.35×5.08	0.2	20±2.5	16	15.5
DC2500P07	1.71 - 3.6	60	6.35×5.08	0.3	7±0.40	20	20
DC2100P05	2.0 - 2.3	30	6.35×5.08	0.25	5±0.30	20	20
DC2100P05H	2.0 - 2.3	70	6.35×5.08	0.18	5±0.30	21	23.1
DC2100P10	2.0 - 2.3	20	6.35×5.08	0.25	10±1.0	19	19.1
DC2100P20	2.0 - 2.3	25	6.35×5.08	0.31	20±1.5	18	19.7
DC2500P02	2.3 - 2.7	60	6.35×5.08	0.35	2±0.50	20	17.7
DC2500P04	2.3 - 2.7	60	6.35×5.08	0.25	4.2±0.30	21	19
DC2500P05	2.3 - 2.7	60	6.35×5.08	0.35	5±0.40	19	20
DC2500P10	2.3 - 2.7	20	6.35×5.08	0.25	10±0.75	18	20.1
DC2500P20	2.3 - 2.7	25	6.35×5.08	0.16	20±1.5	16	22.1
DC2600P30	2.3 - 2.9	200	6.35×5.08	0.15	30.5±1.0	20	19
DC3500P20	3.3 - 3.8	45	6.35×5.08	0.2	20±1.00	20	20.8
DC0350M20	0.35 - 0.47	20	10.16×5.08	0.1	19.8±2.0	19	24
DC0850M20	0.7 - 1.0	20	10.16×5.08	0.1	19.8±2.0	19	24
DC0900M30	0.8 - 1.0	20	10.16×5.08	0.1	26.5±0.4	15	16.5
DC3500M10	3.3 - 3.7	22	10.16×5.08	0.25	10.5±0.80	20	20.8
DC3500M20	3.3 - 3.8	80	10.16×5.08	0.2	20±1.00	21	20.8
DC5500M10	5 - 6	15	10.16×5.08	0.3	10±0.75	18	17
DC0450E20	0.35- 0.52	100	14.22×5.08	0.2	20.0±1.0	18	17.7
DC0900E20	0.8 - 1.0	200	14.22×5.08	0.1	20±1.0	22	21
DC1900E10	1.7 - 2.0	190	14.22×5.08	0.12	10.1±0.50	23	23.1
DC2500E10	2.3 - 2.7	145	14.22×5.08	0.14	10±0.50	20	21.2
DC0600A05	0.58 - 0.62	250	14.22×8.89	0.21	5.0±0.35	23	24.9
DC0900A05	0.8 - 1.0	250	14.22×8.89	0.19	5.0±0.35	21	21.2
DC0900A10	0.8 - 1.0	225	14.22×8.89	0.18	10.0±0.50	20	20.8
DC0900A20	0.8 - 1.0	150	14.22×8.89	0.18	20.0±0.70	20	20
DC0900A30	0.8 - 1.0	150	14.22×8.89	0.18	30.0±1.50	20	20.8
DC1500A10	1.0 - 2.0	60	14.22×8.89	0.15	10±1.0	20	20.8
DC1500A20	1.0 - 2.0	160	14.22×8.89	0.15	20±1.50	20	20.8
DC1500A30	1.0 - 2.0	120	14.22×8.89	0.16	30±2.4	12	20.8
DC1900A05	1.7 - 2.0	200	14.22×8.89	0.19	5.0±0.25	22	23.1
DC1900A10	1.7 - 2.0	175	14.22×8.89	0.15	10±0.40	20	20.8
DC1900A20	1.7 - 2.0	150	14.22×8.89	0.15	20.0±0.80	20	23.1
DC1900A30	1.7 - 2.0	120	14.22×8.89	0.21	30.0±1.50	18	20.8
DC2100A05	2.0 - 2.3	125	14.22×8.89	0.18	5.0±0.25	20	19.7
DC2100A10	2.0 - 2.3	175	14.22×8.89	0.2	10±0.20	25	23
DC2100A20	2.0 - 2.3	120	14.22×8.89	0.15	20.0±0.60	22	20.8
DC2100A30	2.0 - 2.3	120	14.22×8.89	0.13	30±1.0	17	20.8
DC0300L20	0.19 - 0.4	100	16.51×12.19	0.3	22.7±1.0	10	23.1
DC0900B30	0.8 - 1.0	355	25.4×12.19	0.12	29.8±1.00	25	23.1

Wideband & High Power Directional Coupler

SMD Package



Features

- Very low loss
- Low VSWR
- High directivity
- Ultra-low loss small standing wave
- In-situ replacement
- High reliability
- RoHS compliant

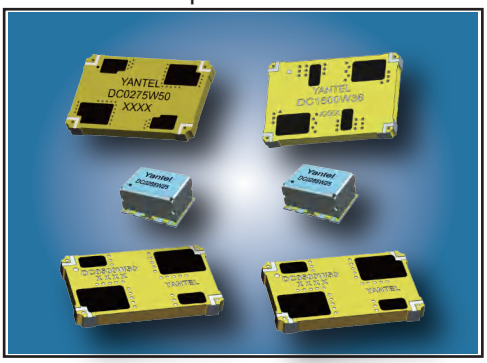
Applications

- Radar
- Communications
- Test

Part No.	Freq.Range (MHz) fL- fu	Power (W)	Size L×W (mm)	Insertion Loss (dB)	Mean Coupling (dB)	Directivity (dB)	Return Loss (dB)	Replacement IPP/MINI Part No.
DC0600W40	200~1000	300	38.1×25.4	0.35	40±1.0	20	19	IPP-8025
DC0550W40	475~620	600	18.5×17.4	0.2	40±2.0	15	19	-
DC1750B10	500~3000	100	25.4×12.7	0.4	10±1.5	20	18.5	-
DC1750B15	500~3000	100	25.4×12.7	0.4	15±1.2	19	19	BDCH-15-33+
DC1700B15	700~2700	150	25.4×12.7	0.35	15±1.2	20	20.8	BDCH-15-272
DC1700B20	700~2700	150	25.4×12.7	0.35	20±1.2	20	20.8	BDCH-20-272
DC1700B35	700~2700	150	25.4×12.7	0.25	35.5±1.5	10	17.7	BDCH-35-272
DC1700B25	800~3000	150	25.4×12.7	0.2	25±1.0	21	22.1	BDCH-25-272+
DC1650W20	800~2500	150	25.4×12.7	0.25	20±1.5	20	19	IPP-8029
DC1500W20	1000~2000	200	14.22×8.89	0.2	20±1.0	20	19	IPP-8004
DC3000W20	2000~4000	100	14.22×8.89	0.25	20±1.0	20	17.5	IPP-8038
DC4000W10	2000~6000	100	14.22×5.08	0.4	10.5±2.5	18	17.7	IPP-8000
DC4000W20	2000~6000	100	14.22×5.08	0.25	20±1.0	16	17.7	IPP-8039
DC4000B20	2000~6000	180	25.4×12.7	0.3	19.5±1.0	15.5	12.9	BDCH-20-63+
DC4250W20	2500~6000	100	14.22×8.89	0.25	20±2.0	15	15	IPP-8001
DC4255W10	2500~6000	100	25.41×8.89	0.4	20±0.5	15	16.5	IPP-8048

Wide band & High Power Series

Bi-directional coupler and DUAL directional coupler



Features

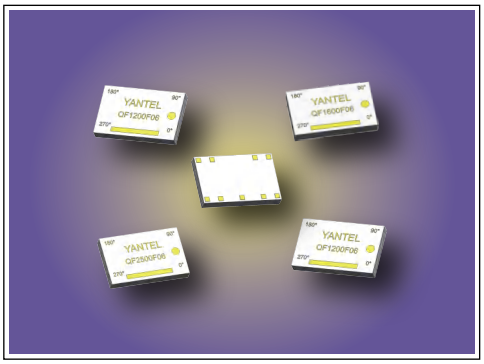
- Very low loss
- Low VSWR
- High directivity
- Ultra-low loss small standing wave
- In-situ replacement
- High reliability
- RoHS compliant

Applications

- Radar
- First/second generation radio
- Test systems

Part No.	Freq.Range (MHz) fL- fu	Power (W)	Size L×W (mm)	Insertion Loss (dB)	Mean Coupling (dB)	Directivity (dB)	Return Loss (dB)	Replacement IPP Part No.
DC0270W50	20~520	300	38.1×25.4	0.25	50±1.0	20	19	IPP-8044
DC0500W50	20~1000	150	31.75×19.05	0.35	50±1.0	20	13.5	IPP-8070
DC0510W50	20~1000	300	38.1×25.4	0.3	50±1.0	14	20	IPP-8036
DC0275W50	30~520	300	38.1×25.4	0.2	50±1.0	21	20	IPP-8045
DC0285W25	30~540	100	17.57×8.6	0.45	25±2.0	17	12	-
DC0300W40	100~500	300	38.1×25.4	0.25	40±1.0	18.5	19	IPP-8046
DC1500W33	500~2500	150	25.4×12.7	0.3	33±2.0	20	19	IPP-8057
DC1500W36	500~2700	200	38.1×25.4	0.4	36±1.5	18	18	IPP-8041
DC2500W32	800~4200	150	25.4×12.7	0.55	32±2.5	14.5	10	IPP-8078

PTFE Quadrifiler Coupler/Quadrifiler Phase Shifter/ Four-arm Spiral Antenna (PTFE Process)



Features

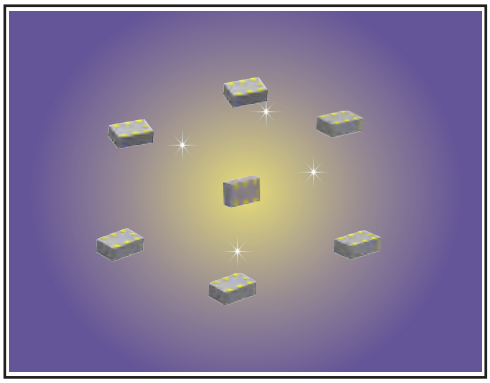
- Small size: 5.08x3.18(mm)
- Excellent phase and amplitude balance
- Good repeatability
- Passive RF IC, no need external DC power supply
- With internal 50Ω termination (no need to add outer load)
- Built with leading edge RFIC design technology
- One input port and four difference phase output ports： -6dB-(0°/90°/180°/270°)
- Quadrifilar Coupler

Applications

- Vehicle-mounted antenna
- GNSS navigation&positioning antenna
- Phase shifter network
- Drone
- Satellite antenna etc.

	Part No.	Freq.Range (MHz)	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (degrees)	Isolation (dB)
New	QF0900F06A	800~1000	5	5.08×4.0	15	1.1	±1.6	90±7.0	15
New	QF0900F06B	800~1000	5	5.08×4.0	15	1.1	±1.6	90±7.0	15
New	QF1200F06A	1165~1300	5	5.08×3.18	16.9	0.5	±0.6	90±8.0	15
New	QF1200F06B	1165~1300	5	5.08×3.18	16.9	0.5	±0.6	90±8.0	15
AEC-Q200	QF1600F06A	1520~1660	5	5.08×3.18	17.7	0.5	±0.5	90±8.0	18
New	QF1600F06B	1520~1660	5	5.08×3.18	17.7	0.5	±0.5	90±8.0	18
New	QF2100F06A	1980~2200	5	5.08×3.18	18	0.5	±0.6	90±8.0	22
New	QF2100F06B	1980~2200	5	5.08×3.18	18	0.5	±0.6	90±8.0	22
New	QF2500F06A	2400~2600	5	5.08×3.18	17.7	0.5	±0.5	90±10.0	22
New	QF2500F06B	2400~2600	5	5.08×3.18	17.7	0.5	±0.5	90±10.0	22
New	QF1400W06B	1165~1300	5	9.8×7.9	16	1.0	±0.5	90±10.0	21
		1520~1660			14.5	0.7	±0.55	90±9.0	20

2-way Power Divider (PTFE Process)



Features

- Passive RF IC, no need external DC power supply
- Low loss & low VSWR
- High isolation
- Excellent amplitude & phase balance
- Ultra small size:2.0×1.25 mm
- Excellent repeatability
- Tape & Reel
- Power handling: 2 Watts as a divider, 1 Watts as a combiner

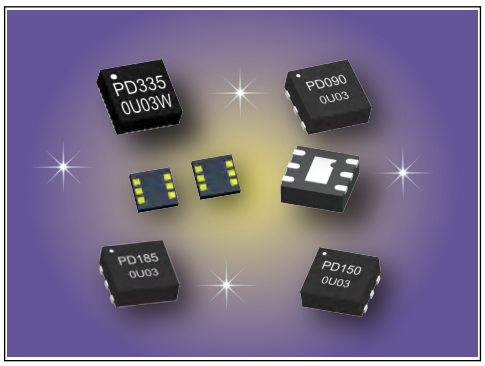
Applications

- Vehicle-mounted antenna
- GNSS navigation & positioning antenna
- GNSS receiver,GNSS boards
- Drone
- Antenna Module

	Part No.	Freq. Range (MHz)	Power (W)	Size LxW (mm)	VSWR (:1)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Isolation (dB)
	PD05T03	400~900	2	2.0×1.25	1.8	0.7	±0.5	90±4.0	9
	PD07T03	600~800	2	2.0×1.25	2.0	0.9	±0.5	90±3.0	12
	PD09T03	800~1000	2	2.0×1.25	1.5	0.6	±0.6	90±4.0	17
AEC-Q200	PD15T03	950~2150	2	2.0×1.25	1.78	0.8	±0.3	90±3.0	9
	PD19T03	1700~2200	2	2.0×1.25	1.9	0.8	±0.3	90±4.0	15
	PD25T03	2300~2800	2	2.0×1.25	1.45	0.5	±0.3	90±3.0	17
	PD24T03	2400~2500	2	2.0×1.25	1.3	0.4	±0.2	90±3.0	22
	PD30T03	2922~3222	1	2.0×1.25	1.2	0.4	±0.5	90±4.0	24
	PD40T03	3100~5000	2	2.0×1.25	2.8	1.3	±0.4	90±4.0	13
	PD53T03	4800~5900	2	2.0×1.25	2.3	1.0	±0.3	90±4.0	14
	PD51T03	4905~5455	1	2.0×1.25	1.2	0.3	±0.2	90±3.0	21

2-way Power Divider IC

Integrated Circuit Layout Design Intellectual Property



Features

- Built with leading edge RF IC design technology
- Passive RF IC, no need external DC power supply
- No need external 100 ohm resistor
- Low loss & low VSWR
- High isolation
- Excellent amplitude & phase balance
- Ultra small size:2.0 x 2.0 mm
- Excellent repeatability
- Power handling: 2 Watts as a divider, 1 Watts as a combiner
- Tape & Ree

Applications

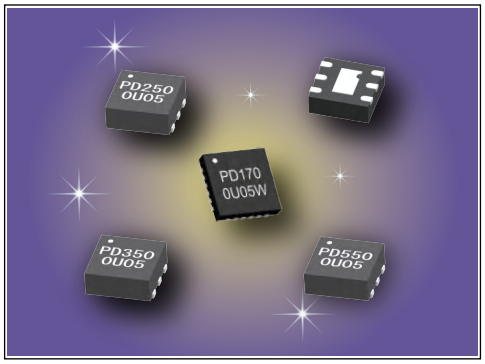
- Onboard information system (Blue link, E-call Box)
- Vehicle Cell Phone Signal Booster
- Real Time Location System
- RFID reader, active tag, antenna
- Small & mini repeater, LTE home repeater
- Wireless communications
- Satellite Communications
- GNSS receiver, GNSS boards

Part No.	Freq. Range (MHz)	Power (W) as a divider	Power (W) as a combiner	Package Size L×W(mm)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
2-way Power Divider										
PD0500U03-210	260~530	2	1	DFN2×2	0.55	±0.1	±0.5	10	1.4	1.2
PD0900U03-070	800~1000	2	1	DFN2×2	0.5	±0.1	2	17	1.35	1.25
PD0900U03S	640~1100	1.5	0.75	3.02×2.95	0.4	±0.05	1.5	20	1.15	1.15
PD1500U03-140	1000~2000	2	1	DFN2×2	0.7	±0.1	±0.5	10	1.5	1.45
PD1500U03W	1000~2000	2	1	DFN2×2	0.7	±0.1	±0.5	10	1.5	1.45
PD1700U03W	600~2900	2	1	QFN3×3	0.85	±0.15	3.5	10	1.8	1.8
PD1850U03-080	1650~2050	2	1	DFN2×2	0.45	0.15	2	16	1.4	1.25
PD2150U03-090	1900~2350	2	1	DFN2×2	0.5	±0.15	2	10	1.5	1.25
PD2450U03-100	2200~2650	2	1	DFN2×2	0.5	±0.15	3	15	1.5	1.35
PD3550U03-110	3300~3800	2	1	DFN2×2	0.5	±0.2	2	17	1.55	1.2
Wide band 2-way Power Divider (QFN or Die)										
PD0715U03W	1800~12500	2.5	1.25	Die or QFN4×4	2	±0.4	5	10	1.45	1.45
PD1425U03W	2000~26500	2.5	1.25	Die or QFN4×4	1.5	±0.4	5	10	1.65	1.55
PD3350U03W	700~6000	2.5	1.25	Die or QFN5×5	1.5	±0.3	5	10	1.65	1.3
PD2550U03W	500~4500	2	0.5	QFN3×3	1.3	±0.3	0.23	6	1.92	1.92
PD4350U03W	2700~6000	2	1	QFN3×3	2	±0.3	0.23	15	1.92	1.92
PD2275U03W	10000~43500	2.5	1.25	Die or QFN3×3	1.5	±0.3	0.23	10	1.92	1.92

New

3-way Power Divider IC

Integrated Circuit Layout Design Intellectual Property



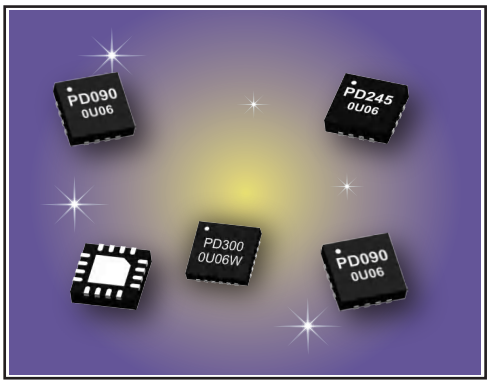
Features

- Built with leading edge RF IC design technology
- Passive RF IC, no need external DC power supply
- No need external 100 ohm resistor
- Small size (2×2 mm)
- Very low loss
- Tight amplitude balance
- High isolation
- Low VSWR
- Good repeatability
- Tape & Reel
- Power handling: 2.5 Watts as a divider, 0.8 Watts as a combiner

Part No.	Freq. Range (MHz)	Power (W) as a divider	Power (W) as a combiner	Package Size L×W(mm)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD2500U05	1700~3600	2.5	0.8	Die or DFN2×2	0.8	±0.2	±5	16	1.4	1.4
PD3500U05	3200~3700	2.5	0.8	Die or DFN2×2	0.7	±0.2	±5	15.5	1.5	1.5
PD5500U05	4400~6000	2.5	0.8	Die or DFN2×2	1.2	±0.2	1.5±5	16	1.78	1.4

4-way Power Divider IC

Integrated Circuit Layout Design Intellectual Property



Features

- Built with leading edge RF IC design technology
- Passive RF IC, no need external DC power supply
- No need external 100 ohm resistor
- Small size (3×3 mm QFN package)
- Very low loss
- Tight amplitude balance
- Low VSWR
- High isolation
- Good repeatability
- Tape & Reel
- Power handling: 2 Watts as a divider, 0.5 Watts as a combiner

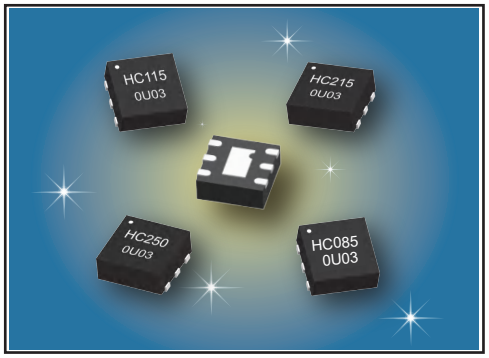
Applications

- Vehicle cell phone signal booster
- Satellite communications
- GNSS receiver,GNSS boards

Part No.	Freq. Range (MHz)	Power (W) as a divider	Power (W) as a combiner	Package L×W(mm)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD0900U06-150	820~960	2	0.5	QNF3X3	0.8	±0.2	±1.5	22	1.3	1.2
PD1400U06-524	1200~1650	2	0.5	QNF3X3	0.45-0.7	±0.20	±1.5	13~47	1.6	1.4
PD1850U06-160	1700~2000	2	0.5	QNF3X3	0.6	0.35	2	16	1.4	1.5
PD2200U06-170	1700~2700	2	0.5	QNF3X3	0.6-1.1	±0.35	±2.0	12~35	1.8	1.6
PD2450U06-180	2300~2700	2	0.5	QNF3X3	0.7	±0.4	±2.0	18	1.35	1.25

3dB 90° Coupler IC

Integrated Circuit Layout Design Intellectual Property



Features

- Built with leading edge RF IC design technology
- Passive RF IC, no need external DC power supply
- Low loss & low VSWR
- High isolation
- Excellent amplitude & phase balance
- Ultra small size:2.0 x 2.0 mm
- Excellent repeatability
- Tape & Reel

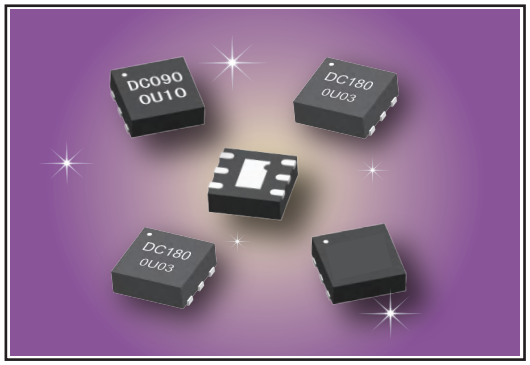
Applications

- GPS antenna, beidou antenna, satellite antenna, aviation antenna, measuring antenna
- RFID reader, active tag, antenna
- Small & mini repeater, LTE home repeater
- Phase shifter / attenuator
- Balanced amplifier / LNA configurations
- Modulators
- Mixers
- Power combining /dividing

Part No.	Freq.Range (MHz)	Power (W)	Package Size L×W(mm)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Return Loss (dB)
HC26IC03Q	2000-6000	4	QNF3×3	1.4	±1.8	±9.0	12	13
HC1300U03	10700-14500	4	DNF2×2	1	±3.2	±7.0	12.5	11.7
HC1300U03W	6000-18000	4	QNF3×3	1	±2.6	±7.0	14.5	13.9
HC0850U03-010	820-900	4	DNF2×2	0.3	±0.45	±1.0	25	25
HC0925U03-020	880-960	4	DNF2×2	0.3	±0.3	±1.5	27	29
HC1150U03-190	1120-1260	4	DNF2×2	0.35	±0.7	±1.0	30	30
HC1650U03-200	1550-1750	4	DNF2×2	0.35	±0.6	±1.0	35	28
HC1850U03-030	1750-1950	4	DNF2×2	0.25	±0.5	±1.0	25	32
HC2150U03-040	2050-2250	4	DNF2×2	0.25	±0.5	±1.0	30	28
HC2500U03-050	2300-2650	4	DNF2×2	0.35	±0.5	±1.0	24	22
HC2500U03-055	2300-2650	4	DNF2×2	0.35	±0.5	±1.0	30	25
HC3550U03-060	3300-3800	4	DNF2×2	0.4	±0.4	±6.0	20	18

Directional Coupler IC

Integrated Circuit Layout Design Intellectual Property



Features

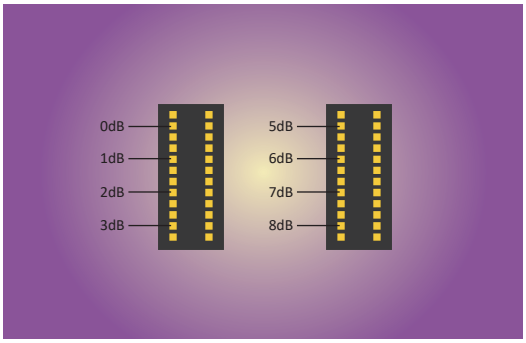
- Built with leading edge RF IC design technology
- Passive RF IC, no need exvternal DC power supply
- Wide Freq range 350-4000MHz
- Very Low Loss & Low VSWR
- Excellent directivity
- Broad frequency coverage
- High isolation
- Good repeatability
- Power handling : 4 or 5 watts
- Small size (2×2mm)
- Tape & Reel

Part No.	Freq.Range (MHz)	Power (W)	Package Size L×W(mm)	Coupling (dB)	Insertion Loss (dB)	VSWR (:1)	Directivity (dB)
DC420IC21Q	4000-20000	0.89	QNF4×4	21±1	0.9	1.38	14
DC626IC10Q	6000-18000	0.31	QNF4×4	10±1.5	2.3	1.43	8.5
DC0410U20-060	350-410	5	DNF2×2	18.3-19.5	0.11	1.06	20.2
	410-470			17-18.3	0.11	1.06	19.7
DC0850U20-122	750-800	5	DNF2×2	20.7-20.9	0.06	1.06	10.9
	800-850			20.2-20.6	0.09	1.06	10.9
	850-900			19.8-20.1	0.11	1.06	10.8
	900-950			19.1-19.6	0.09	1.06	10.7
DC0900U05	830-880	5	DNF2×2	4.7-4.8	0.25	1.03	25.2
	880-930			4.5-4.6	0.25	1.03	24.8
DC0900U10-053	750-850	5	DNF2×2	10-10.9	0.17	1.05	18.7
	850-950			9.2-10	0.16	1.05	19
	950-1050			8.4-9.2	0.18	1.05	19.3
DC1800U05-050	1700-1850	5	DNF2×2	4.6-5.1	0.22	1.12	18.5
	1850-2050			4.2-4.6	0.18-0.21	1.14	19.4
	2050-2200			3.8-4.2	0.18	1.15	20.1
DC1800U10-123	1700-1850	4	DNF2×2	10.7	0.25	1.04	20
	1850-2050			10-10.4	0.26	1.04	22
	2050-2200			9.5	0.29	1.03	24
DC4000U10-120	700-2700	4	DNF2×2	15.3~26.2	0.46	1.09	19
	2700-4000			12.3	0.85	1.43	13.8

New

Variable Attenuator Die

Integrated Circuit Layout Design Intellectual Property



Features

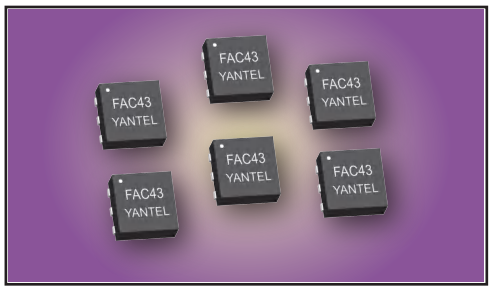
- Adopting advance GaAs technology
- Excellent attenuation accuracy & phase balance
- High ESD level
- Low VSWR
- Die Package

Part No.	Attenuation (dB)	Freq. Range (GHz) f_L - f_U	Attenuation Accuracy(dB)			Input Return Loss(dB)			Output Return Loss(dB)		
			Min.	typical	Max.	Min.	typical	Max.	Min.	typical	Max.
FAC1368C-150N	0/1/2/3	DC-26.5	0	0.2	0.3		-30	25		-30	25
		26.5-43.5	0.3	0.35	0.4		-25	20		-25	20
FAC1368C-150P	5/6/7/8	DC-26.5	0	0.2	0.3		-25	20		-25	20
		26.5-43.5	0	0.2	0.3		-20	17		-20	17

New

Fixed Attenuator IC

Integrated Circuit Layout Design Intellectual Property



Features

- Small Size (2×2mm DFN package)
- Super Wide bandwidth,DC-26GHz
- Excellent VSWR,1.3:1 typ.
- High Power Handling,2W

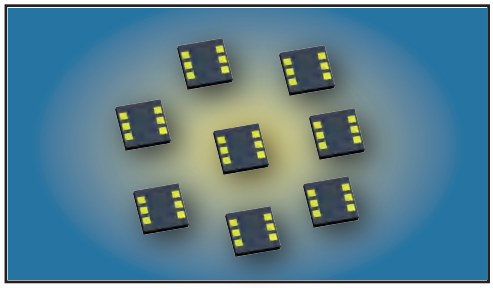
DC to 26 GHz, Up to 2W,50Ω， DFN 2*2-6L Package, Excellent attenuation accuracy, GaAs

Part No.	Attenuation (dB)	Attenuation Accuracy(typical) (dB)		VSWR:1(typical)	
		DC~18GHz	18~26GHz	DC~18GHz	18~26GHz
FAC4300	0	±0.10	0.13	1.2	1.2
FAC4301	1	±0.10	0.15	1.2	1.2
FAC4302	2	±0.10	0.2	1.2	1.2
FAC4303	3	±0.10	0.2	1.2	1.2
FAC4304	4	±0.10	0.2	1.2	1.2
FAC4305	5	±0.10	0.15	1.2	1.2
FAC4306	6	±0.10	0.15	1.25	1.3
FAC4307	7	±0.15	0.2	1.25	1.35
FAC4308	8	±0.10	0.15	1.25	1.35
FAC4309	9	±0.10	0.15	1.3	1.35
FAC4310	10	±0.25	0.25	1.3	1.35
FAC4312	12	±0.15	0.15	1.2	1.3
FAC4315	15	±0.20	0.2	1.25	1.3
FAC4320	20	±0.20	0.3	1.1	1.2
FAC4325	25	±0.45	0.2	1.1	1.2
FAC4330	30	±0.15	0.15	1.15	1.2

New

Fixed Attenuator Die

Integrated Circuit Layout Design Intellectual Property



Features

- Adopting advance GaAs technology
- Excellent attenuation accuracy & phase balance
- High ESD level
- Low VSWR
- Die Package
- DC to 43.5GHz

DC to 43.5GHz, 0.8~2W, 50Ω, size(mm) : 0.6×0.6×0.1

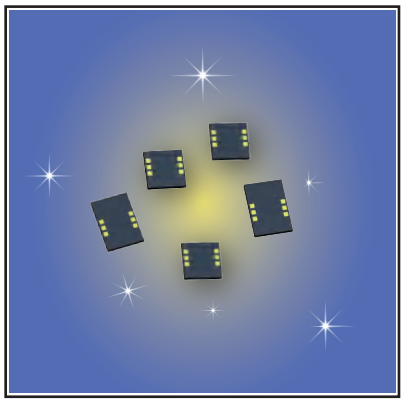
Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~18GHz	18~26.5GHz	26.5~43.5GHz	DC~18GHz	18~26.5GHz	26.5~43.5GHz
FAC4300D	0	±0.25	0.35	0.5	1.2	1.2	1.2
FAC4301D	1	±0.20	0.35	0.45	1.2	1.2	1.3
FAC4302D	2	±0.15	0.3	0.4	1.2	1.2	1.2
FAC4303D	3	±0.15	0.3	0.4	1.2	1.2	1.25
FAC4304D	4	±0.20	0.35	0.3	1.2	1.2	1.2
FAC4305D	5	±0.20	0.35	0.25	1.2	1.2	1.3
FAC4306D	6	±0.15	0.25	0.25	1.25	1.3	1.3
FAC4307D	7	±0.15	0.25	0.25	1.25	1.35	1.35
FAC4308D	8	±0.15	0.25	0.25	1.25	1.35	1.35
FAC4309D	9	±0.15	0.2	0.15	1.3	1.35	1.4
FAC4310D	10	±0.35	0.45	0.65	1.3	1.35	1.4
FAC4312D	12	±0.25	0.35	0.55	1.2	1.3	1.3
FAC4315D	15	±0.40	0.5	0.7	1.25	1.3	1.3
FAC4320D	20	±0.25	0.45	0.4	1.1	1.2	1.45
FAC4325D	25	±0.85	1	0.6	1.1	1.2	1.45
FAC4330D	30	±0.30	0.35	1	1.15	1.2	1.4

Gain Equalizers (Mini substitution)

Integrated Circuit Layout Design Intellectual Property

Yantel®

Key Patents Lead Microwave Tech



Features

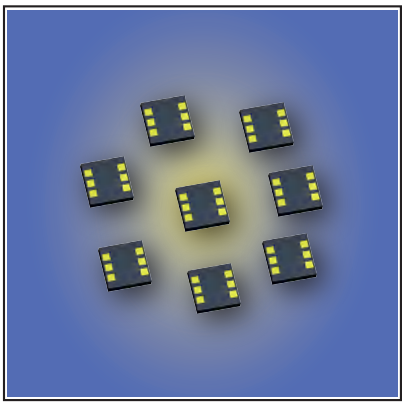
- Adopting International advanced GaAs technology
- Low VSWR
- Large range of equilibrium
- Die Package

Applications

- Broadband Microwave Modules
- Radar
- EW, ECM, ECCM
- T/R Components
- Equalizer is utilized as a compensation circuit to correct for a loss sloped by other elements within a circuit such as in amplifier stages

Part No.	Freq.Range (GHz) f_L- f_U	Equilibrium quantity (dB)	Input Power (W)	Insertion Loss (dB)	Input VSWR (:1)	Output VSWR (:1)	impedance (ohm)
E6003C-1323	1.3~2.3	3.3	1	0.2 @2.3GHz	1.2	1.2	50
E6008C-1418A	14~18	2	1	0.65 @18GHz	1.2	1.2	50
E6014C-218	2~18	4	1	0.7 @18GHz	1.3	1.3	50
E6018C-212	2~12	4	1	0.5 @12GHz	1.35	1.35	50
EQYT-10-24-D	DC~20	10	2	1.1	1.28	1.28	50
EQYT-10-453-D	DC~45	10.2	0.63	1.8	1.22	1.22	50
EQYT-10-63-D	DC~6	10.2	1.26	1	1.12	1.12	50
EQYT-12-24-D	DC~20	11.9	1	1.5	1.17	1.17	50
EQYT-15-24-D	6~20	15.7	1.26	1.3	1.2	1.2	50
EQYT-1-63-D	DC~6	1.2	1.26	0.4	1.24	1.24	50
EQYT-18-24-D	6~18	18	2	2.2	1.22	1.22	50
EQYT-2-24-D	DC~20	2.1	1.26	0.9	1.26	1.26	50
EQYT-2-63-D	DC~6	2.1	1.26	0.4	1.29	1.29	50
EQYT-3-24-D	DC~20	3	2.55	0.8	1.24	1.24	50
EQYT-3-283-D	DC~28	3.4	1.26	0.6	1.15	1.15	50
EQYT-3-453-D	DC~45	3.5	1	1.1	1.22	1.22	50
EQYT-3-63-D	DC~6	3.2	1.26	0.6	1.29	1.29	50
EQYT-4-283-D	DC~28	4.3	1	0.6	1.14	1.14	50
EQYT-4-453-D	DC~45	4.5	0.79	1.1	1.23	1.23	50
EQYT-4-63-D	DC~6	4.2	1.26	0.6	1.25	1.25	50
EQYT-5-24-D	DC~20	4.9	2.55	0.8	1.34	1.34	50
EQYT-5-283-D	DC~28	5.9	1	0.6	1.12	1.12	50
EQYT-5-453-D	DC~45	5.5	0.63	1.1	1.26	1.26	50
EQYT-5-63-D	DC~6	5	1.26	1	1.24	1.24	50
EQYT-6-24-D	DC~20	6.1	1.26	0.7	1.3	1.3	50
EQYT-6-283-D	DC~28	6.6	1	0.6	1.15	1.15	50
EQYT-6-453-D	DC~45	6.5	0.63	1.1	1.25	1.25	50
EQYT-6-63-D	DC~6	6.5	1.59	0.5	1.2	1.2	50
EQYT-7-453-D	DC~45	7.4	0.5	1.3	1.26	1.26	50
EQYT-8-24-D	DC~20	8	2.55	1.1	1.31	1.31	50
EQYT-8-453-D	DC~45	8.2	0.5	1.2	1.14	1.14	50
EQYT-8-63-D	DC~6	8.2	1.26	0.5	1.21	1.21	50
EQYT-9-453-D	DC~45	9	0.63	1.6	1.21	1.21	50

Wideband Directional Coupler Chip (GaAs technology)



Features

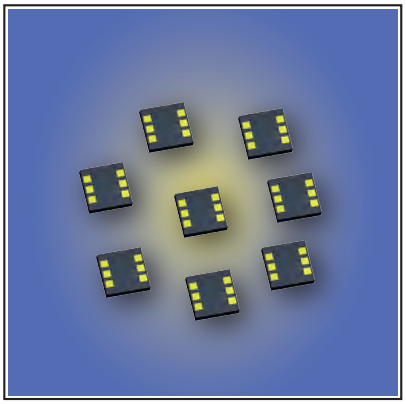
- Made by international advanced GaAs technology
- Low VSWR
- Low loss
- Good directivity

Applications

- Broadband microwave modules
- Radar
- T/R components
- Satellite communications

Part No.	Freq.Range (GHz)	VSWR (:1),Typ.	Directivity (dB)	Insertion Loss (dB)	Mean Coupling (dB)	Size (mm)
DC26IC10	2-6	<1.4	12	<1	10±1	4.0×1.3
DC618IC10	6-18	<1.4	12	<1	10±1	2.0×1.3
DC1840IC10	18-40	<1.4	10	<1	10±1	2.0×1.3
DC26IC15	2-6	<1.4	12	<0.6	15±1.5	4.0×1.3
DC618IC15	6-18	<1.4	12	<0.6	15±1.5	2.0×1.3
DC1840IC15	18-40	<1.4	10	<0.6	15±1.5	2.0×1.3
DC26IC20	2-6	<1.4	12	<0.6	20±2	4.0×1.3
DC618IC20	6-18	<1.4	14	<0.9	20±2	2.02×2.65
DC1840IC20	18-40	<1.4	10	<0.6	20±2	2.0×1.3

Wideband 3dB 90° Coupler Chip (GaAs technology)



Features

- Made by international advanced GaAs technology
- Low VSWR
- Low loss
- Small amplitude imbalance

Applications

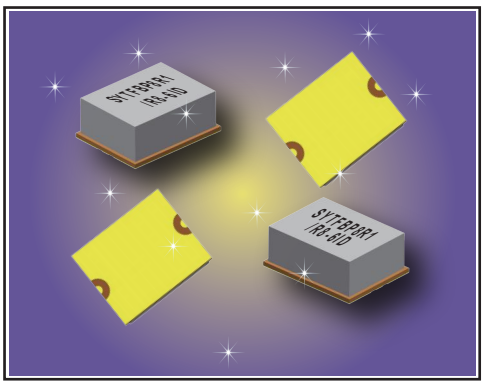
- Broadband microwave modules
- Radar
- T /R components
- Phase shifter networks

Part No.	Freq.Range (GHz)	VSWR (:1),Typ.	Isolation (dB)	Insertion Loss (dB)	Amplitude Balance(dB)	Size (mm)
HC26IC03	2-6	<1.5	12	<1.34	<1.8	1.42×1.78
HC618IC03	6-18	<1.4	15	<0.35	<0.5	2.6×1.3
HC1300U03WD	6-18	<1.2	14.5	<1.0	<2.6	1.35×1.01
HC1840IC03	18-40	<1.4	15	<0.35	<0.5	2.2×1.3

Attention to the use of bare die:

- Assembly in a clean environment.
- GaAs material is very brittle and the surface of the chip is easily damaged (do not touch the surface), so care must be taken when using it.
- Use 2 bonding wires (25um diameter gold wire) for input and output, keep the bonding wires as short as possible, not longer than 300um.
- Use 80/20 gold tin sintering, sintering temperature should not exceed 300 ℃, sintering time should be as short as possible, not more than 30 seconds.
- This product is a static sensitive device, anti-static should be noticed when storing and using.
- Store in a dry, nitrogen environment.
- Do not attempt to clean the chip surface with dry or wet chemical methods.
- Contact the supplier if you have questions.

High Rejection SMD Band Pass Filter



Features

- Small size
- Low loss, high suppression
- With shielding cover
- SMD Surface mounted
- Moisture sensitivity level: MSL1
- Operating temp:-55℃ ~ +125℃
- Characteristic impedance:50Ω
- Tape packaging
- It adopts the high-precision thick film process, with competitive cost,suitable for mass use, and the price is overall only 20% of the thin film SMD filter. Its performance such as insertion loss, rejection, return loss, etc. which is same as thin film filters' performance.

Application

- Communication
- Microwave transceiver module
- Digital transmission
- Radar
- WiFi

Part No.	Insertion Loss (dB)	Freq.Range (GHz)	Rejection		Return Loss (dB)	Size(mm)
SYTFBP6R5/R6-9SA	3.3	6.2-6.8	≥25dBc@DC-5.8GHz		12	8.0×6.0×2.7
SYTFBP7R2/1R2-8JA	2	6.6-7.8	≥30dBc@DC-5.8GHz		12	6.5×5.0×2.5
SYTFBP8R1/R8-6ID	2	7.7-8.5	≥30dBc@DC-5.8GHz		12	6.5×5.0×2.5
SYTFBP8R35/1R3-6ID	2.2	7.7-9.0	≥30dBc@DC-5.8GHz		12	6.5×5.0×2.5
SYTFBP9R4/R35-7UA	3	9.25-9.6	≥40dBc@DC-8.6GHz	≥30dBc@>10.2GHz	12	8.0x5.0x2.7
SYTFBP14R125/R75-7SA	2.3	13.75-14.5	≥25dBc@11-12.8GHz	≥30dBc@16-20GHz	12	6.0×3.5×2.3
SYTFBP14R15/R7-10JA	4	13.8-14.5	≥40dBc@12.8GHz	≥25dBc@15.7GHz	12	8.0×4.0×2.7
SYTFBP11R625/2R25	3	10.5-12.75	≥40dBc@DC-9.75GHz	≥40dBc@14.25-23GHz	12	8.0×5.0×2.7
SYTFBP25R8/3R2-9CP	2.5	24.25-27.5	≥50dBc@DC-22GHz	≥50dBc@30-40GHz	12	10.0×3.0×2.5
SYTFB012MD5S	2.75	1.22-1.23	≥40dB@DC-0.925GHz	≥40dB@1.875-3.0GHz	10	11.68×11.68×2.87
SYTFB016MD6S	2.75	1.57-1.58	≥40dB@DC-1.175GHz	≥40dB@1.875-3.0GHz	10	11.68×11.68×2.87
SYTFB020JC6S	3.5	1.95-2.05	≥40dB@DC-1.7GHz	≥40dB@2.23-5.0GHz	10	8.9×5.3×2.5
SYTFB021MC8S	3	2-2.105	≥40dB@DC–1.75GHz	≥40dB@2.45-6.50GHz	10	15.24×7.62×3.25
SYTFB023RH7S	2.5	1.33-4	≥40dB@DC-0.25GHz	≥40dB@4.8-11.6GHz	10	16.5×8.4×2.5
SYTFB024RF2S	2	1.97-3.05	≥40dB@DC-1.1GHz	≥40dB@3.8-4.75GHz	10	12.7×6.35×2.87
SYTFB028LB7S	1.7	2.7-2.9	≥35dB@DC-2.54GHz	≥35dB3.06-6.0GHz	15	30.48×8.89×4.32
SYTFB028RF2S	2.5	2-4	≥40dB@DC-1.25GHz	≥35dB@4.75-6.0GHz	10	11.43×10.41×2.87
SYTFB031ND5S	2.5	2.9-3.33	≥40dB@DC-2.4GHz	≥40dB@3.85-7.0GHz	9.5	12.70×6.35×2.87
SYTFB032ND5S	3	2.95-3.55	≥40dB@DC-2.3GHz	≥40dB@4.1-7.0GHz	10	12.70×6.35×2.87
SYTFB032OD5S	3	2.75-3.75	≥40dB@DC–1.875GHz	≥40dB@4.125-6.0GHz	10	9.15×6.60×2.49
SYTFB033ND5S	2	3.1-3.5	≥30dB@DC-2.25GHz	≥40dB@4.0-6.0GHz	9.5	9.88×8.97×3.25
SYTFB038MC9S	4	3.619-4	≥40dB@DC–3.25GHz	≥40dB@4.45-12.00GHz	10	12.70×6.35×2.49
SYTFB038NC4S	2	3.4-4.2	≥40dB@DC-2.9GHz	≥40dB@4.7-9.0GHz	10	13.97×5.59×2.74
SYTFB039NC5S	2.5	3.7-4.2	≥40dB@DC-3.0GHz	≥40dB@4.8-8.0GHz	9.5	12.7×6.35×3.12
SYTFB040JC6S	3.5	3.95-4.05	≥40dB@DC-3.4GHz	≥40dB@4.4-10.0GHz	10	8.9×5.3×2.5
SYTFB040MB5S	2.5	3.78-4.22	≥40dB@DC-3.4GHz	≥40dB@4.6-10.0GHz	12	12.7×6.35×2.62
SYTFB040RG9S	2.5	2-6	≥40dB@DC-0.4GHz	≥40dB@7.5-18.0GHz	12	15.75×7.11×2.36
SYTFB042OD4S	2.5	3.75-4.75	≥40dB@DC-3.0GHz	≥40dB@5.6-10.0GHz	12	12.7×6.35×2.79

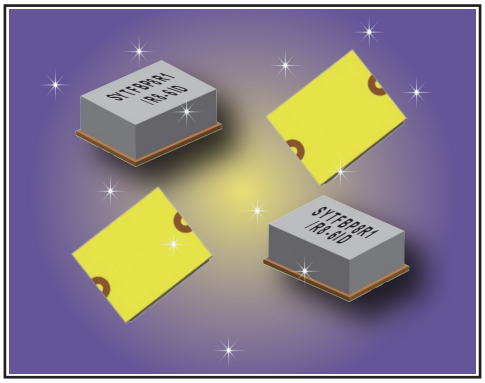
High Rejection SMD Band Pass Filter

Part No.	Insertion Loss (dB)	Freq.Range (GHz)	Rejection		Return Loss (dB)	Size(mm)
SYTFB042RC3S	6.5	3.3-5.7	≥40dB@DC-2.875GHz	≥40dB@6.25-11.0GHz	10	22.86×8.13×4.01
SYTFB043QB4S	6.5	3.4-5.6	≥70dB@DC-2.6GHz	≥60dB@6.4-11.0GHz	10	19.69×8.13×2.49
SYTFB047MC5S	2	4.4-5	≥40dB@DC-3.8GHz	≥40dB@5.5-11.0GHz	9.5	12.7×6.35×2.41
SYTFB050ND4S	2	4.5-5.5	≥40dB@DC-3.65GHz	≥40dB@6.15-12.0GHz	10	8.89×5.08×2.29
SYTFB052NC5S	2.25	4.8-5.6	≥40dB@DC-3.5GHz	≥40dB@6.2-12.5GHz	10	2.89×5.08×2.29
SYTFB055NC5S	2	5-6	≥40dB@DC-4.2GHz	≥40dB@6.75-12.0GHz	12	2.89×5.08×2.29
SYTFB056MB5S	2	5.4-5.9	≥40dB@DC-4.8GHz	≥40dB@6.5-12.5GHz	10	11.17×6.10×2.50
SYTFB056RC4S	2.5	4-8	≥40dB@DC-3.0GHz	≥40dB@9.5-12GHz	14	11.43×5.84×2.62
SYTFB057MC5S	2	5.45-5.95	≥40dB@DC-4.7GHz	≥40dB@6.6-14.25GHz	12	8.89×5.08×2.29
SYTFB058MD7S	2.3	5.5-6.1	≥60dB@DC-2.25GHz	≥50dB@8.0-13.0GHz	10	12.07×6.99×2.62
SYTFB060NC5S	2	5.5-6.5	≥30dB@DC-4.9GHz	≥30dB@7.1-14.0GHz	10	12.7×5.08×2.62
SYTFB061MB6S	2.5	5.85-6.425	≥40dB@DC-5.3GHz	≥40dB@7.0-14.0GHz	10	11.43×5.08×2.48
SYTFB062MC5S	2.5	5.9-6.7	≥40dB@DC-5.0GHz	≥40dB@7.5-15.0GHz	10	12.7×6.35×2.49
SYTFB065NC5S	2.5	6-7	≥40dB@DC-5.0GHz	≥40dB@7.9-15.0GHz	12	12.7×6.35×2.49
SYTFB070MB6S	2.5	6.7-7.25	≥40dB@DC-6.16GHz	≥40dB@7.82-16.0GHz	10	12.7×5.08×3.12
SYTFB070NC5S	2	6.37-7.63	≥40dB@DC-5.8GHz	≥40dB@8.2-17.0GHz	10	12.70×5.08×2.41
SYTFB076MB6S	2.5	7.24-7.96	≥40dB@DC-6.62GHz	≥40dB@8.52-19.0GHz	10	12.7×5.08×2.41
SYTFB080KF4S	2	7.96-8.04	≥40dB@DC-5.0GHz	≥40dB@9.0-21.0GHz	10	6.35×4.06×2.49
SYTFB080JB4S	4	7.95-8.05	≥40dB@DC-7.4GHz	≥40dB@8.4-16.5GHz	10	6.35×4.0×2.5
SYTFB080MB5S	2	7.5-8.5	≥30dB@DC-6.8GHz	≥30dB@9.2-18.0GHz	10	12.7×4.57×2.62
SYTFB081RC0S	3.4	6-11	≥23dB@DC-5.5	≥28dB@12.0-33.0	13	4.83×2.54×2.29
SYTFB083LB6S	1.75	8-8.5	≥40dB@DC-7.0GHz	≥40dB@9.5-20.0GHz	10	11.43×5.0×2.6
SYTFB084LF3S	2	8-8.42	≥40dB@DC-7GHz	≥40dB@10.3-16GHz	10	6.35×4.06×2.49
SYTFB084MC6S	4	8-8.8421	≥40dB@DC–7GHz	≥40dB@9.75-21.0GHz	10	15.24×7.62×2.37
SYTFB089NC4S	2.5	8.1-10.1	≥40dB@DC-6.8GHz	≥40dB@11.25-20.0GHz	10	10.6×3.81×2.61
SYTFB094LA2S	2.75	9.25-9.6	≥40dB@DC-8.6GHz	≥40dB@10.2-16.0GHz	10	11.43×5.0×2.5
SYTFB095MB1S	1.75	8.9-10	≥40dB@DC-8.0GHz	≥40dB@11.5–20.0GHz	10	10.16×3.80×2.61
SYTFB096QC2S	2.5	8-12	≥40dB@DC-6.0GHz	≥40dB@14.0-18.0GHz	10	10.16×4.57×2.62
SYTFB097MB0S	2.5	9.3-10.1	≥40dB@DC-8.1GHz	≥40dB@11.35-23.0GHz	10	10.16×3.80×2.62
SYTFB097QF0S	0.75	8-12	≥20dB@2.0-6.0GHz	≥20dB@16.0-20.0GHz	10	9.53×5.72×2.24
SYTFB098QC5S	3	8-12	≥40dB@2.0-6.5GHz	≥40dB@13.50-20.0GHz	10	11.43×4.57×3.63
SYTFB099NC4S	2.25	9-11.25	≥40dB@DC-7.35GHz	≥40dB@13.0-23.0GHz	10	10.16×3.80×2.62
SYTFB099QF3S	2	8-12	≥40dB@DC-5.2GHz	≥40dB@14.7-26.0GHz	10	4.32×3.56×2.36
SYTFB100JB5S	3.4	9.99-10.01	≥40dB@DC-9.3GHz	≥40dB@10.5-19.0GHz	10	6.35×4.06×2.49
SYTFB100KB4S	2.6	9.95-10.05	≥40dB@DC-9.2GHz	≥40dB@10.7-20.0GHz	10	6.35×4.06×2.49
SYTFB100MC5S	2	9.5-10.5	≥40dB@DC-8.25GHz	≥40dB@11.75-20.0GHz	10	10.16×3.81×2.5

High Rejection SMD Band Pass Filter

Part No.	Insertion Loss (dB)	Freq.Range (GHz)	Rejection		Return Loss (dB)	Size(mm)
SYTFB100MD2S	1	9.5-10.5	≥40dB@DC-8.25GHz	≥40dB@12.6-19.0GHz	10	6.35×4.06×2.49
SYTFB100RH4S	2	2-18	≥25dB@DC-1.0GHz	≥20dB@21.5-35.0GHz	10	8.64×4.32×2.16
SYTFB102MC1S	2.25	9.95-10.45	≥40dB@DC-8.85GHz	≥40dB@11.35-16.5GHz	10	11.43×5.08×2.61
SYTFB105MB5S	1.75	10-11.2	≥45dB@DC-8.0GHz	≥40dB@13.0-23.5GHz	10	11.43×5.08×2.61
SYTFB111NC4S	2.25	10.2-12.2	≥40dB@DC-8.3GHz	≥40dB@14.35-24.25GHz	10	10.16×3.81×2.61
SYTFB112MB1S	2.5	10.75-11.75	≥40dB@DC-9.4GHz	≥40dB@13.25-20.0GHz	9.5	10.16×3.81×2.286
SYTFB114MB1S	3.5	10.86-12	≥40dB@DC–10GHz	≥40dB@12.9-19.0GHz	10	10.16×5.08×2.37
SYTFB114MD2S	1	10.85-12	≥40dB@DC-9.6GHz	≥40dB@14.3-20GHz	10	6.35×4.0×2.5
SYTFB115NB4S	2.25	10.5-12.75	≥40dB@DC-9.75GHz	≥40dB@14.25-23.0GHz	10	14.61×5.08×2.36
SYTFB116NC5S	2.25	10.25-12.5	≥40dB@DC-8.5GHz	≥40dB@14.5-23.5GHz	10	10.16×3.81×2.62
SYTFB118LB4S	1.75	11.6-12.1	≥40dB@DC-10.25GHz	≥40dB@12.5-13.25GHz	10	11.43×5.08×2.61
SYTFB119LB1S	2.5	11.7-12.2	≥40dB@DC-10.9GHz	≥40dB@13-18GHz	10	11.43×5.08×2.49
SYTFB119MB1S	3	10.95-12.75	≥40dB@DC-9.8GHz	≥40dB@13.75-20.0GHz	10	11.43×5.0×2.49
SYTFB120JA3S	4.4	11.95-12.05	≥40dB@DC-11.4GHz	≥40dB@12.6-20GHz	10	6.35×4.0×2.5
SYTFB120MB1S	2	11.5-12.5	≥30dB@DC-10.6GHz	≥30dB@13.2-19.5GHz	10	13.34×5.72×2.62
SYTFB120RF0S	2.5	6-18	≥40dB@DC-3.3GHz	≥40dB@19.75-22.5GHz	12	11.43×5.08×2.61
SYTFB121KB3S	2	11.94-12.06	≥40dB@DC-9.0GHz	≥40dB@15.0-20.0GHz	10	6.35×4.06×2.49
SYTFB121MB4S	1.75	11.25-12.75	≥40dB@DC-9.5GHz	≥40dB@14.5-24.0GHz	10	10.16×3.81×2.62
SYTFB127MB2S	2.75	12.25-13.25	≥40dB@DC-10.75GHz	≥40dB@14.25-19.75GHz	12	10.16×5.0×2.51
SYTFB138LA2S	2.75	13.5-14	≥40dB@DC-12.5GHz	≥40dB@14.75-22.0GHz	12	11.43×4.57×2.51
SYTFB138MB1S	2.75	13.25-14.25	≥40dB@DC-11.75GHz	≥40dB@15.25-21.0GHz	12	10.16×5.0×2.51
SYTFB142LA2S	4	14-14.5	≥40dB@DC-13.4GHz	≥40dB@15.25-23.5GHz	10	11.43×3.56×2.24
SYTFB144MB1S	2.4	14-15	≥40dB@DC-12.25GHz	≥40dB@16.25-22.0GHz	12	10.16×5.0×2.5
SYTFB145LB1S	3.5	14.1-14.9	≥60dB@DC-11.75GHz	≥60dB@16.5-19.5GHz	10	13.97×5.84×2.36
SYTFB145RE0S	1.5	12-18	≥40dB@DC-8.0GHz	≥40dB@22.5-26GHz	10	10.16×4.57×2.62
SYTFB148LA2S	3.25	14.5-15	≥40dB@DC-13.25GHz	≥40dB@16.0-21.0GHz	12	11.43×4.57×2.5
SYTFB148QF0S	2.75	12-18	≥40dB@DC-8.0GHz	≥40dB@22.75-25.0GHz	10	13.97×3.81×2.49
SYTFB149MC1S	2.25	14-16	≥40dB@DC-11.0GHz	≥40dB@18.5-23.0GHz	12	8.9×5.0×2.49
SYTFB150OG0S	2.25	13-16	≥40dB@DC-10.5GHz	≥40dB@18.0-25.0GHz	12	9.53×3.56×2.24
SYTFB160KA1S	2.75	15.75-16.25	≥40dB@DC-14.25GHz	≥40dB@17.75-20.5GHz	12	10.16×5.08×2.5
SYTFB161LA0S	3.25	15.5-16.5	≥40dB@DC-14.7GHz	≥40dB@17.2-22.0GHz	10	17.65×6.35×2.36
SYTFB165LA1S	2.75	16-17	≥40dB@DC-14.5GHz	≥40dB@18.0-25.0GHz	12	10.16×5.0×2.5
SYTFB168MB1S	2.5	15.75-17.75	≥40dB@DC-13.5GHz	≥40dB@19.25-24.0GHz	12	8.89×5.08×2.49
SYTFB180MA1S	3	17.5-18.5	≥40dB@DC-16.0GHz	≥40dB@19.7-27.5GHz	10	11.43×4.445×2.36
SYTFB190MB1S	3	18.5-19.5	≥40dB@DC-17.0GHz	≥40dB@20.7-28.0GHz	10	11.43×4.45×2.36
SYTFB191KA1S	4	18.8-19.3	≥40dB@DC-18.0GHz	≥40dB@20.0-26.0GHz	12	14.61×3.56×2.24

High Rejection SMD Low Pass Filter



Features

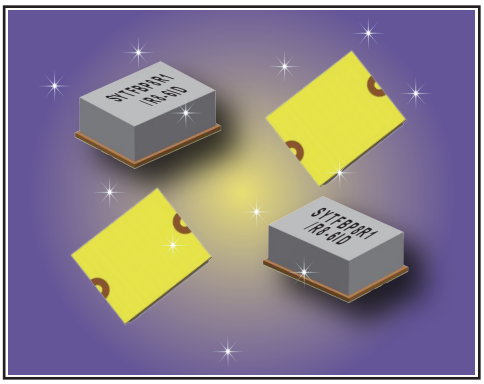
- Small size
- Low loss, high suppression
- With shielding cover
- SMD Surface mounted
- Moisture sensitivity level: MSL1
- Operating temp:-55℃ ~ +125℃
- Characteristic impedance:50Ω
- Tape packaging
- It adopts the high-precision thick film process, with competitive cost,suitable for mass use, and the price is overall only 20% of the thin film SMD filter. Its performance such as insertion loss, rejection, return loss, etc. which is same as thin film filters' performance.

Application

- Communication
- Microwave transceiver module
- Digital transmission
- Radar
- WiFi

Part No.	Insertion Loss (dB)	Freq.Range (GHz)	Rejection	Return Loss (dB)	Size(mm)
SYTFL050×F9S	1	DC-4	≥35dB@6.0-16.0GHz	15	5.59×4.57×3.00
SYTFL065×G9S	1.3	DC-6	≥35dB@7.9-20.0GHz	10	5.59×4.57×3.00
SYTFL090×E6S	1.5	DC-9	≥55dB@11.0-20.0GHz	15	9.14×3.05×2.90
SYTFL095×G4S	1	DC-9	≥20dB@11.0-20.0GHz	10	5.08×4.45×2.87
SYTFL095×G9S	1.3	DC-9	≥30dB@11.5-32.0GHz	15	5.59×3.56×3.00
SYTFL117×H4S	1	DC-11	≥40dB@17.6-27.8GHz	17	5.59×3.56×3.00
SYTFL128×H4S	1.2	DC-12	≥40dB@18.8-31.2GHz	17	5.59×3.56×3.00
SYTFL157×G3S	2.2	DC-15	≥40dB@19.9-32.2GHz	10	5.59×3.56×3.00
SYTFL185×F4S	2.2	DC-18	≥25dB@20.5-40GHz	14	5.59×3.56×2.36
SYTFL204×F4S	1.8	DC-20	≥30dB@23.0-42.0GHz	15	5.59×3.56×2.36
SYTFL220×H5S	1	DC-22	≥40dB@26.75-50.0GHz	10	5.59×3.05×2.28
SYTFL254×F3S	1.4	DC-25	≥30dB@29-50GHz	15	5.59×3.56×2.36
SYTFL288×C3S	1.75	DC-27	≥40dB@34.0-50.0GHz	10	5.59×3.56×2.5

High Rejection SMD High Pass Filter



Features

- Small size
- Low loss, high suppression
- With shielding cover
- SMD Surface mounted
- Moisture sensitivity level: MSL1
- Operating temp:-55℃ ~ +125℃
- Characteristic impedance:50Ω
- Tape packaging
- It adopts the high-precision thick film process, with competitive cost,suitable for mass use, and the price is overall only 20% of the thin film SMD filter. Its performance such as insertion loss, rejection, return loss, etc. which is same as thin film filters' performance.

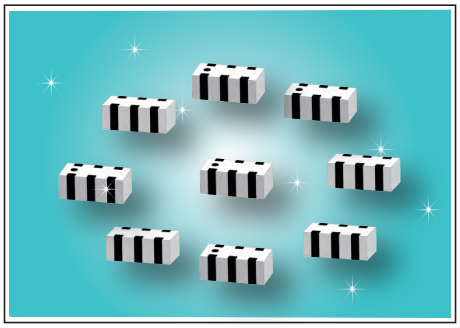
Application

- Communication
- Microwave transceiver module
- Digital transmission
- Radar
- WiFi

Part No.	Insertion Loss (dB)	Freq.Range (GHz)	Rejection	Return Loss (dB)	Size(mm)
SYTFH060×H×S	2	6.5-20	≥30dB@DC-3.5GHz	15	11.43×5.08×2.74
SYTFH080×H×S	2	8.5-22	≥30dB@DC-5.0GHz	15	11.43×5.08×2.74
SYTFH100×H×S	2	10.5-23	≥30dB@DC-5.5GHz	10	11.43×4.45×2.49
SYTFH120×H×S	2.5	12.5-30	≥30dB@DC-9.0GHz	12	11.43×4.45×2.49
SYTFH140×H×S	3	14.5-28	≥30dB@DC-9.5GHz	10	11.43×4.45×2.49
SYTFH160×H×S	2.5	16.5-32.5	≥30dB@DC-12.1GHz	12	11.43×4.45×2.49
SYTFH168×H×S	1.5	17-27	≥35dB@DC-13.0GHz	12	11.43×4.45×2.49
SYTFH182×H×S	2	18.75-28	≥30dB@DC-14.0GHz	12	11.43×4.45×2.49

New

LTCC Balun



Features

- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

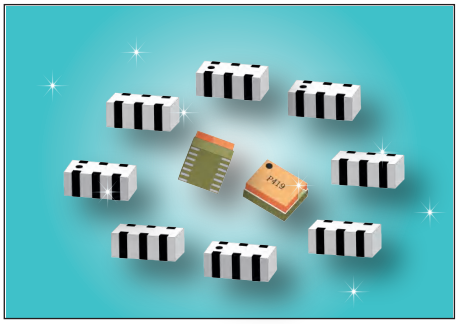
Note: inventory available and customizable

Application

- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Freq.Range (MHz)	Size (mm)	Unbalanced Impedance (Ω)	Differential Balanced Imp. (Ω)	Return Loss (dB)
BD07T50200	50-1450	2.54×2.04	50	200	8
BD0061W50200	54-68	9.0×9.0	50	200	10
BD0120W5050	80-160	3.81×3.81	50	50	10
BD0750W5050	50-1450	3.81×3.81	50	50	8
BD0650W5050	300-1000	3.81×3.81	50	50	10
BD1250T5050	300-2200	2.0×1.25	50	50	12.2
BD1250W5050	300-2200	3.2×1.6	50	50	12.2
BD1251W5050	300-2200	3.81×3.81	50	50	10
BD0600T5050	500-700	2.0×1.25	50	50	9.5
BD1720T5050	625-2815	2.0×1.25	50	50	9.5
BD1720T50100	625-2815	2.0×1.25	50	100	9.5
BD1608W50100	673-2700	1.6×0.8	50	100	8
BD1700W5050	1000-2400	3.81×3.81	50	50	10
BD2600T50200	2500-2700	2.0×1.25	50	200	9.5
BD4400T5050	2800-6000	2.0×1.25	50	50	9.5
BD4400T50100	2800-6000	2.0×1.25	50	100	9.5
BD5500T50100	3000-8000	2.0×1.25	50	100	8
BD7100W50100	5000-9200	1.69×0.94	50	100	13
BD8800W50100	5900-11700	1.04×1.04	50	100	14
BD13000W50100	9200-16150	1.69×0.94	50	100	16

LTCC 2-way/3-way/4-way Power Splitter



Features

- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

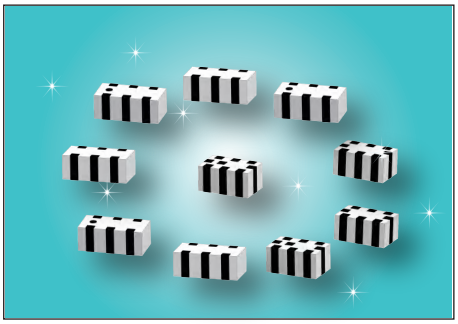
Note: inventory available and customizable

Application

- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Freq.Range (MHz)	Size (mm)	Insertion Loss (dB)	Isolation (dB)	Phase Unbalance (º)	Amplitude Unbalance (dB)	Return Loss(dB) (Output)	Return Loss(dB) (Input)	No. Of Outputs
LPD0190-2012-2	80~300	2.0×1.25×0.95	0.8 max.	5 min.	3 max.	0.3 max.	10 min.	10 min.	2
LPD0190-3216-2	80~300	3.2×1.6×1.1	0.9 max.	10 min.	3 max.	0.3 max.	10 min.	10 min.	2
LPD0190-4838-4	80~300	4.8×3.8×2.4	1.6 max.	5 min.	5 max.	0.8 max.	10 min.	10 min.	4

LTCC Diplexer



Features

- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

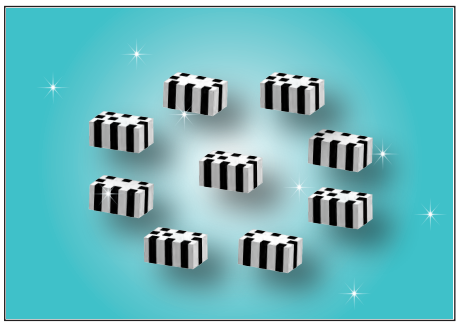
Note: inventory available and customizable

Application

- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Impedance (Ω)	Size (mm)
LDIP0809-3216	300~800	2	1.92	50	3.2×1.6×0.9
	885~2700	1.8			
LDIP1570-2520	450~2200	2.8	1.92	50	2.5×2.0×0.8
	2300~2690	1.9			
LDIP1526-2520	700~2400	2.5	1.92	50	2.5×2.0×0.95
	2500~2700	2.5			
LDIP2035-1608	2400~2500	1.5	2	50	1.6×0.8×0.60
	1570~1610	1.6			
LDIP2425-2012	700~2400	1.9	1.92	50	2.0×1.25×0.95
	2500~2700	2.1			
LDIP3785-1608	2400~2500	0.8	2	50	1.6×0.8×0.60
	4900~6000	0.6			
	1570~1610	0.7			
LDIP4175-1608-V02	2400~2500	0.5	2	50	1.6×0.8×0.60
	4900~5950	0.6			
LDIP4175-1608-V03	2400~2500	0.6	2	50	1.6×0.8×0.60
	4900~5100	1.4			
	5150~5950	1.2			
LDIP4175-1608-V04	4900~5950	0.7	2	50	1.6×0.8×0.70
	2400~2500	0.6			
LDIP4175-1608-V05	2400~2500	0.6	1.8	50	1.6×0.8×0.70
	4900~5950	0.7			
LDIP4175-1608-V07	2400~2500	0.85	1.5	50	1.6×0.8×0.60
	4900~5950	1.1			
LDIP4175-1608-V11	2400~2500	0.6	2	50	1.6×0.8×0.60
	5150~5850	1.5			
LDIP4763-1608	2400~2500	0.65	1.67	50	1.6×0.8×0.60
	5170~7125	1	1.92		

LTCC Triplexer



Features

- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

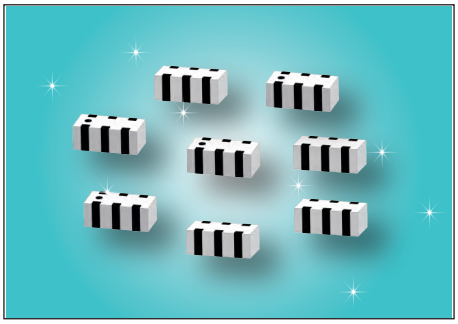
Note: inventory available and customizable

Application

- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Freq.Rang (MHz)	Insertion Loss (dB)	VSWR	Impedance (Ω)	Isolation (dB)	Size (mm)
LTIP3755-2012	1560-1610	0.6	2	50	10	2.0×1.25×0.95
	2400-2500	0.7	2	50	10	
	4900-5950	0.8	2	50	10	

LTCC 3dB 90° Hybrid Coupler



Features
- excellent RF performance
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- LTCC process

Note: inventory available and customizable

Application
- communication
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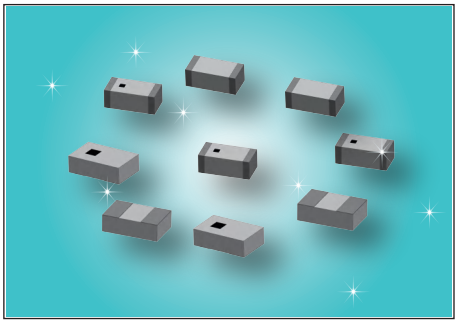
Part No.	Freq.Range (GHz)	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)
LHC07T03	0.6~0.9	4	2.0×1.25	19	0.5	±0.7	90±7.0	20
LHC09T03	0.8~1.0	4	2.0×1.25	20.8	0.4	±0.55	90±3.0	20
LHC12T03	0.96~1.53	4	2.0×1.25	18	0.6	±0.5	90±6.0	18
LHC13T03	1.0~1.5	4	2.0×1.25	20	0.4	±0.5	90±6.0	20
LHC14T03	1.15~1.65	4	2.0×1.25	18	0.55	±0.5	90±5.0	20
LHC16T03	1.5~1.7	4	2.0×1.25	19	0.25	±0.5	90±4.0	21
LHC19T03	1.7~2.0	4	2.0×1.25	17.7	0.3	±0.4	90±5.0	20
LHC20T03	1.7~2.3	4	2.0×1.25	17.7	0.4	±0.4	90±5.0	20
LHC21T03	2.0~2.3	4	2.0×1.25	17.7	0.4	±0.4	90±5.0	20
LHC25T03	2.3~2.7	4	2.0×1.25	17.7	0.3	±0.3	90±4.0	20
LHC35T03	3.2~4.2	4	2.0×1.25	17.7	0.35	±0.3	90±5.0	20
LHC39T03	3.8~4.1	4	2.0×1.25	15.6	0.4	±0.83	90±5.0	18.5
LHC55T03	4.4~6.0	4	2.0×1.25	18	0.35	±1.0	90±7.7	18
LHC70T03	5.8~7.5	4	2.0×1.25	15.6	0.35	±0.7	90±7.0	14.5
LHC77T03	7.0~8.5	4	2.0×1.25	13.98	0.4	±1.0	90±7.0	14.5
LHC05H03	0.425~0.675	15	3.1×1.6	17.7	0.7	±0.75	90±6.0	19
LHC16H03	1.1~1.925	15	3.1×1.6	17.69	0.55	±0.55	90±8.5	21

LTCC Antenna



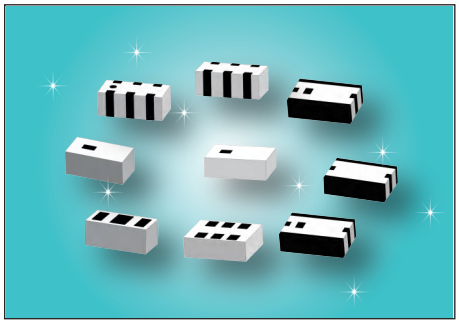
Features
- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

Note: inventory available and customizable

Application
- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Center Freq. (MHz)	Bandwidt (MHz)	Return Loss (dB)	Polarization	Azimuth Beamwidth	Peak Gain (dBi)	Input Impedance (Ω)	Power (W)	Size (mm)
LANT2450-2012	2450	65	10	Linear	Omni-directional	2.7	50	1	2.0×1.25×0.6
LANT2450-3216	2450	100	10	Linear	Omni-directional	5.05	50	1	3.2×1.6×1.2
LANT2450-6020	2450	100	10	Linear	Omni-directional	3.5	50	TBD	6.0×2.0×1.2
LANT7000-3216	7000	1600	10	Linear	Omni-directional	3.8	50	2	3.2×1.6×1.3

LTCC Filter Combination



Features
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Application
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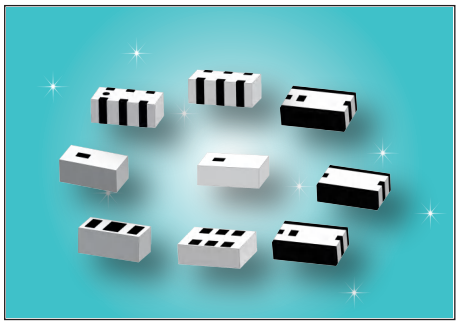
Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Impedance (Ω)	Size (mm)
LDBPF0059-1411	30-43	1.45	1.5	50	14.0×10.9×2.5
	43-62	1.45	1.5		
	62-88	1.4	1.5		
LDBPF0105-1414	30-46	1.5	2	50	13.8×14.0×2.8
	46-72	1.5	2		
	72-115	1.5	2		
	115-180	1.8	2		
LDBPF0452-9090-V01	225-330	1.2	1.5	50	9.0×9.0×2.4
	330-480	0.8	1.5		
	480-678	0.8	1.5		
LDBPF0452-9090-V02	225-330	1.1	1.6	50	9.0×9.0×2.5
	330-480	0.8	1.5		
	480-678	0.8	1.5		
LDBPF1013-1606	225-330	1.3	12	50	6.0×16.0×1.8
	330-480	1.3	12		
	480-700	1.3	12		
	700-1100	1.3	12		
	1100-1800	1.3	12		
LDBPF2300-1205	300-1300	2	1.5	50	12.0×5.0×2.0
	1300-2300	2.5	1.5		
	2300-3300	3	1.5		
	3300-4300	3.5	1.5		

LTCC High Pass Filter



Features
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Note: inventory available and customizable

Application
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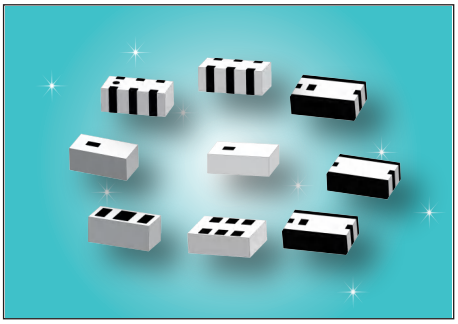
- radar

Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Size (mm)
LHPF1300-5032	1300-2300	1.7	1.6	5.0×3.2×1.2
LHPF1328-5032	1328-1620	2.5	1.7	5.0×3.2×1.2
LHPF1340-5032	1340-2000	3.5	1.92	5.0×3.2×1.2
LHPF1400-5032	1400-1800	3	1.92	5.0×3.2×1.2
LHPF2300-1608	2300-2600	1.3	1.58	1.6×0.8×0.65
LHPF2500-6032	2500-3500	2	1.6	6.0×3.2×1.5
LHPF3300-1608	3300-7250	0.8	1.92	1.6×0.8×0.65

LTCC Band Pass Filter



Yantel®

Key Patents Lead Microwave Tech

Features

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- small size
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- LTCC process

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Application

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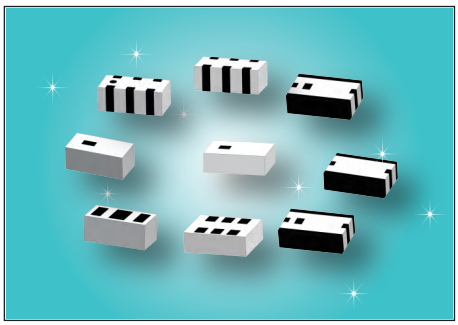
- digital transmission
- radar

Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Size (mm)
LBPF0170-1206	145~195	3	1.6	12.0×6.0×2.0
LBPF0245-8032	225~265	2.5	2	8.0×3.2×1.5
LBPF0288-8032	265~310	2.5	2	8.0×3.2×1.5
LBPF0335-8032	310~360	3.2	2	8.0×3.2×1.5
LBPF0388-8032	360~415	3.2	2	8.0×3.2×1.5
LBPF0445-8032	415~475	2.5	2	8.0×3.2×1.5
LBPF0508-8032	475~540	2.5	2	8.0×3.2×1.5
LBPF0574-8032	540~608	2.5	2	8.0×3.2×1.5
LBPF0625-5032-V01	545~705	3	1.5	5.0×3.2×1.5
LBPF0625-5032-V03	525~725	3	1.5	5.0×3.2×1.5
LBPF0643-8032	608~678	2.5	2	8.0×3.2×1.5
LBPF0750-5032-V01	600~900	3	1.3	5.0×3.2×1.5
LBPF0750-5032-V02	730~770	3.5	1.3	5.0×3.2×1.5
LBPF0750-5032-V03	550~950	2	1.8	5.0×3.2×1.5
LBPF0750-5032-V04	725~775	3.5	1.8	5.0×3.2×1.5
LBPF0750-6032-V01	600~900	3	1.8	6.0×3.2×2.0
LBPF0750-6032-V02	710~790	3	1.8	6.0×3.2×2.0
LBPF0840-5032-V01	815~865	6	2	5.0×3.2×1.5
LBPF0840-5032-V02	740~940	5	2	5.0×3.2×2.0
LBPF0860-1206	835~885	3.5	1.6	12.0×6.0×2.0
LBPF0875-9042	350~1400	4	2.5	9.0×4.2×2.35
LBPF0962-5032	700~1224	3	1.35	5.0×3.2×1.5
LBPF1050-5032	800~1300	3	2	5.0×3.2×1.5
LBPF1085-1410	940~1230	1.8	1.8	14.0×10.0×4.5
LBPF1150-5050	300~2000	1.5	1.6	5.0×5.0×2.0
LBPF1500-4532	1350~1650	3	1.3	4.5×3.2×1.5
LBPF1575-3216	1250~1900	2	2	3.2×1.6×0.94
LBPF1575-4532	1475~1675	2.7	1.7	4.8×3.2×1.5
LBPF1625-3216	1300~1950	1.5	2	3.2×1.6×0.94
LBPF1700-3216	950~1700	2.5	2	3.2×1.6×0.94
LBPF1800-4532	1600~2000	2.5	1.6	4.5×3.2×1.5
LBPF1800-4832	1300~2300	3	2	4.8×3.2×1.2
LBPF1800-8042	1400~2200	3.5	2	8.0×4.2×2.0
LBPF1900-4832	1400~2400	3	1.8	4.8×3.2×1.2
LBPF1915-1608	1805~2025	2	2	1.6×0.8×0.60
LBPF2275-3216	2170~2380	3	2	3.2×1.6×0.94
LBPF2360-4532	2000~2720	3	2	4.5×3.2×1.5
LBPF2375-6045	2338~2413	4	2	6.0×4.5×2.0
LBPF2450-2520	2400~2500	1.2	2	2.5×2.0×1.0
LBPF2575-4532	2565~2585	4	1.3	4.5×3.2×1.5
LBPF2600-1608	2500~2700	2.2	2.1	1.6×0.8×0.60
LBPF2750-4532	2000~3500	3	2	4.5×3.2×1.5
LBPF3000-4532	2000~4000	3	2	4.5×3.2×1.5
LBPF2950-3216	2800~3100	2.5	2	3.2×1.6×0.94
LBPF3000-4532-V02	2200~3800	2	1.5	4.5×3.2×1.5
LBPF3000-4532-V03	2200~3800	2.5	1.5	4.5×3.2×1.5
LBPF3050-8032	2600~3500	3.5	2	8.0×3.2×2.0

LTCC Band Pass Filter

Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Size (mm)
LBPF3150-5032	2800~3500	2.75	2	5.0×3.2×1.5
LBPF3900-4532	3750~4050	3	1.4	4.5×3.2×1.5
LBPF3550-1608	3300~3800	2.6	2	1.6×0.8×0.60
LBPF3750-1608	3300~4200	1.7	2	1.6×0.8×0.60
LBPF3750-2012	3300~4200	2.1	2.1	2.0×1.25×0.65
LBPF4000-3216	3700~4300	2.5	1.8	3.2×1.6×0.94
LBPF5450-1608	4950~5950	1.3	2	1.6×0.8×0.65
LBPF5500-2012	4900~5950	2.3	2.1	2.0×1.25×0.95
LBPF5538-1608	5150~5925	1.5	2	1.6×0.8×0.60
LBPF5550-1608	5150~5950	0.85	2	1.6×0.8×0.60
LBPF5600-6032	5200~6000	3	2	6.0×3.2×2.0
LBPF5750-9032	5500~6000	2.2	1.8	9.0×3.2×1.5
LBPF5788-2520	5725~5850	2.3	2	2.5×2.0×1.0
LBPF5800-2520	5600~6000	3	2	2.5×2.0×1.0
LBPF6025-6025	5850~6200	3	2.5	6.0×2.5×2.0
LBPF6300-3216	6000~6600	3.5	1.5	3.2×1.6×0.94
LBPF7240-2012	6240~8240	2	2	2.0×1.25×0.70
LBPF7620-4532	7610~7630	3.2	2	4.5×3.2×1.5
LBPF9300-4532	9290~9310	3.2	1.6	4.5×3.2×1.5
LBPF9600-2520	9400~9800	2.5	2	2.5×2.0×1.0
LBPF10600-4532	10200~11000	3.7	1.5	4.5×3.2×1.5
LBPF12280-4532	11880~12680	3.7	1.5	4.5×3.2×1.5

LTCC Low Pass Filter



Features

- excellent RF performance
- small size
- very low loss
- SMD package
- LTCC process

Note: inventory available and customizable

Application

- communication
- microwave transceiver module
- digital transmission
- radar

Part No.	Freq.Range (MHz)	Insertion Loss (dB)	VSWR	Size (mm)
LLPF0530-3216	DC-530	1	1.5	3.2×1.6×0.94
LLPF0787-1005	746-787	0.6	1.92	1.0×0.5×0.38
LLPF0900-3216	DC-900	1.1	1.2	3.2×1.6×1.0
LLPF1950-5032	1300-1950	1.5	1.5	5.0×3.2×1.5
LLPF0960-1608-V01	DC-960	0.9	1.6	1.6×0.8×0.60
LLPF0960-1608-V03	699-960	0.85	2	1.6×0.8×0.60
LLPF0960-1608-V04	699-960	0.85	2	1.6×0.8×0.6
LLPF1000-2012	DC-1000	1.8	1.8	2.0×1.25×0.95
LLPF2025-1005	1880-2025	1.4	2	1.0×0.5×0.38
LLPF2025-1608	1880-2025	1.2	1.6	1.6×0.8×0.7
LLPF2180-1005	1650-2180	0.7	1.43	1.0×0.5×0.38
LLPF2300-5032	1300-2300	1.5	1.6	5.0×3.2×1.5
LLPF2690-1109	2300-2690	1.8	1.92	1.1×0.9×0.50
LLPF2690-1608-V03	673-2690	0.5	1.92	1.6×0.8×0.60
LLPF2690-1608-V05	673-2690	0.6	1.92	1.6×0.8×0.60
LLPF2700-1005	2300-2700	0.5	2	1.0×0.5×0.38
LLPF2750-3216	DC-2750	1.2	1.5	3.2×1.6×1.0
LLPF3800-1608	3300-3800	0.6	2	1.6×0.8×0.60
LLPF4500-3220	DC-4500	2.8	1.3	3.2×2.0×0.5

New

Microwave Wideband 2 way/4way Power Divider

Features

- Broad band 6 to 32 GHz performance
- 0.7 dB typical insertion loss
- 20dB typical isolation and return loss
- Excellent phase and amplitude balance
- Compact solder surface mount package
- Excellent directivity
- Broad frequency coverage

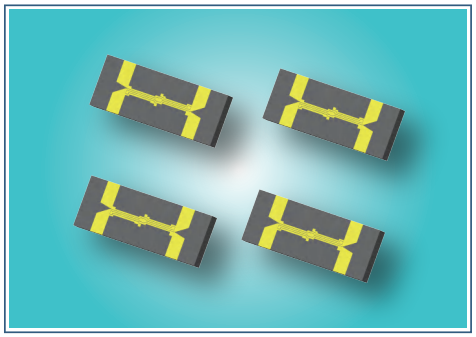
Applications

- Balanced amplifiers
- Modulators
- Point to point

Part No.	Freq.Range (GHz)	Power as a Splitter (W)	Package Size (mm)	Insertion Loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Isolation (dB)	Return Loss (dB)	Nominal Power Splitting (dB)
YT-PDW05758	6~18	5	4.7 X4.06	0.7	± 0.25	± 3	20	20	3
YT-PDW06089	6~18	5	6.35 X 7.62	1	± 0.5	± 3	14	14	6
YT-PDW06984	25~32	TBD	2.16 X 2.41	0.7	± 0.25	± 5	14	14	3
YT-PDW07069	24~32	TBD	3.56 X4.32	1	± 0.5	± 6	10	10	6

New

Microwave Wideband 3dB 90°Hybrid Coupler



Features

- Small size
- 90° phase delta between output ports
- 30W power handling
- Moisture sensitivity level: MSL1
- Frequency stable over temperature
- Operating & storage temp: -55˚C to +125˚C
- Characteristic impedance: 50Ω
- Solder surface mount and wirebond package

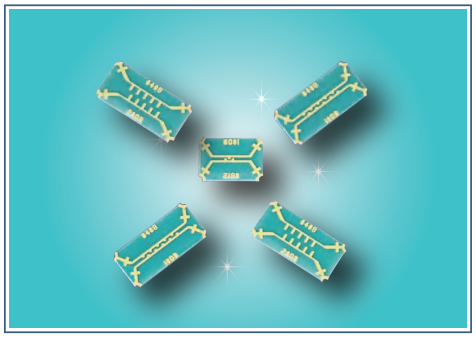
Applications

- Handheld satellite communication equipment
- Helical antenna receiving unit
- Phase shifter

Part No.	Freq.Range (GHz) f_L- f_U	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Balance (dB)	Isolation (dB)
HC0612WB	6~12	30	5×1.82×0.375	10.88	1	±1.0	18
HC0618WB	6~18	30	5×1.82×0.375	10.88	1.5	±1.5	18
HC1020WB	10~20	30	5×1.82×0.375	10.88	1.5	±1.0	18

New

Microwave Wideband Directional Coupler



Features

- Small size
- Fully shielded component
- Solder surface mount package
- Moisture sensitivity level: MSL1
- Frequency stable over temperature
- Characteristic impedance: 50Ω
- Operating & storage temp: -55˚C to +125˚C

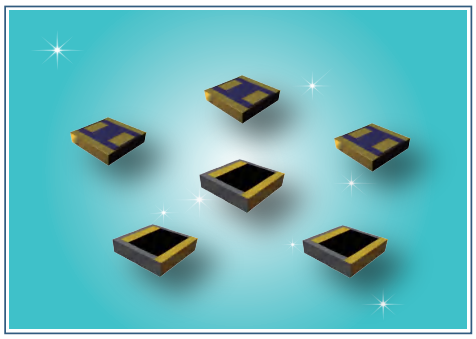
Applications

- Balanced amplifiers
- Modulators
- Point to point

Part No.	Freq.Range (GHz) f_L- f_U	Power (W)	Size L×W (mm)	Return Loss (dB)	Insertion Loss (dB)	Directivity (dB)	Mean Coupling (dB)
YT-FPC06719	6 ~ 18	TBD	6.477×2.54	18	1	10	10 ~11.5
YT-FPC06913	6 ~ 18	TBD	4.572×2.794	15	1	10	20 ~21.5
YT-FPC07181	20 ~ 40	TBD	1.651×1.27	14	0.5	14	18.5 ~21.5
YT-FPC07802	DC ~ 40	TBD	1.52×2.24	12	2.5	/	30±3
YT-FPC07803	DC ~ 40	TBD	1.52×2.24	12	3	/	20±3

New

Diamond Attenuator (EMC substitution)



Features

- Small size-light weight
- Extremely high thermal conductivity
- High peak power
- Pure gold input board
- High power 20W

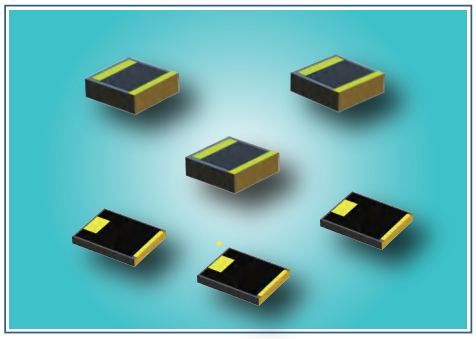
Applications

- Phased-array radar
- Limiter
- Microwave transceiver module

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)	VSWR:1(typical)
		DC~26.5GHz	DC~26.5GHz
AD0505-00	0	± 0.20	1.5
AD0505-01	1	± 0.20	1.5
AD0505-02	2	± 0.20	1.5
AD0505-03	3	± 0.20	1.5
AD0505-05	5	± 0.30	1.5
AD0505-06	6	± 0.30	1.5
AD0505-08	8	± 0.30	1.5
AD0505-09	9	± 0.30	1.5
AD0505-10	10	± 0.35	1.5
AD0505-12	12	± 0.35	1.5
AD0505-15	15	± 0.40	1.5
AD0505-20	20	± 0.50	1.5
AD0505-25	25	± 0.50	1.5
AD0505-30	30	± 0.55	1.5

New

Diamond Termination (Mini substitution)



Features

- Small size - light weight
- Highest thermal performance possible
- Excellent peak power capability
- Rugged passivated TaN film
- Moisture resistant
- Pure gold input pads
- Wire bondable or solderable
- High power

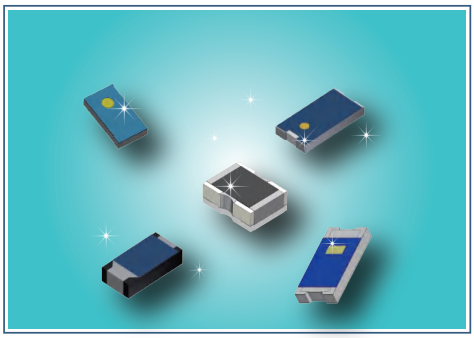
Applications

- Broadcast
- Higher power filters
- High power amplifiers
- Instrumentation
- Isolators
- Military
- Satellite communications
- Phased array radar

CVD Diamond Chip Terminations offer a unique combination of extreme high power ratings in very small packages. These terminatio may be used in applications up to 30 GHz and are ideal for applications with requirements for high power capability, broad frequency response, small footprint and light weight. The terminations are manufactured using all thin film construction and have a gold finish that it both wire bondable and solderable. This total thin film construction also makes them ideal for peak power applications. Select from tape and eel, bulk, or waffle packaging. These products are also lead free, RoHS compliant and S-level approved.

Part No.	Freq.Range (GHz)	Input Power (W)	Package Size (mm)	VSWR (Max.)	Impedance (Ω)
TD0402	DC~26.5	10	1.1 4X 0.6 4	1.95	50
TD0505	DC~20	50	1. 4X 1. 4	1.6	50
TD0603	DC~28	50	1.68 X 0.89	1.6	50
TD1310	DC~14	125	3.33 X 2.67	1.4	50
TD2010	DC~12	300	5.21 X 2.67	1.4	50

New **Termination**



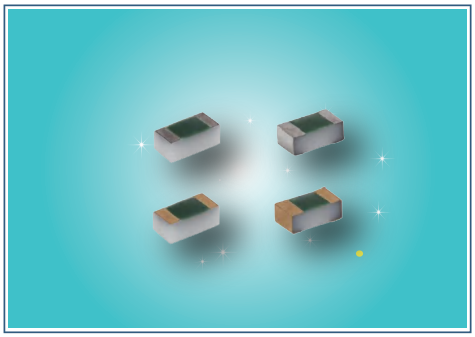
Yantel®

Key Patents Lead Microwave Tech

As a leading supplier of terminators and resistors, our surface mount device terminators perform well in many applications. Our terminators are designed to be small and compact, featuring high frequency and high stability, and are manufactured using either alumina or aluminum nitride substrate (beryllium oxide free) materials based on a thick film process. Surface mount device terminators undergo 100% standardized testing for quality and reliability.

Part No.	Impedance (Ω)	Freq.Range (GHz) f_L- f_U	Power (W)	Return Loss (dB)	Size (mm)
R-008-AO	50	DC-6.0	8	19	3.0×1.5×0.41
R-012-AN	50	DC-6.0	12	20	3.0×1.5×0.41

Frequency Resistor

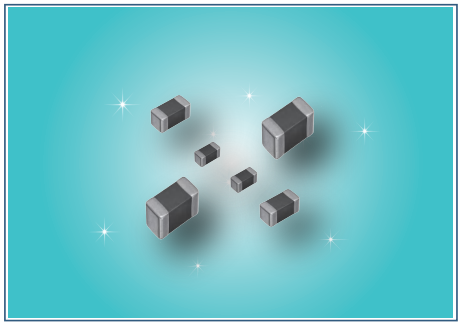


Features

- High purity alumina substrate
- Small intemal reactance(<10mΩ)
- Resistor tolerance to ± 0.1%
- Low TCR (down to ±25ppm/ ˚C)
- Low voltage coefficient <0.1 ppm/V
- Thin film microwave resistors
- Operating frequency to 60 GHz
- Small standard case size (0402)
- High power
- High thermal conductivity aluminum nitride substrate
- Edge sense trimmed block resistors
- Epoxy bondable, wire bondable, and solderable termination styles
- Edge trimmed block resistors
- Ohmic range (20Ω,50Ω,100Ω and 200Ω)

Part No.	Resistance (Ω)	Power (mW)	Freq.Range (GHz)	Size (mm)
R0402-20-A	20	50	DC-20	1.0×0.5×0.127
R0402-20-B	20	50	DC-20	1.0×0.5×0.254
R0402-50-A	50	50	DC-20	1.0×0.5×0.127
R0402-50-B	50	50	DC-20	1.0×0.5×0.254
R0402-100-A	100	50	DC-20	1.0×0.5×0.127
R0402-100-B	100	50	DC-20	1.0×0.5×0.254
R0402-200-A	200	50	DC-20	1.0×0.5×0.127
R0402-200-B	200	50	DC-20	1.0×0.5×0.254
R0603-20-A	20	125	DC-20	1.55×0.8×0.127
R0603-20-B	20	125	DC-20	1.55×0.8×0.254
R0603-50-A	50	125	DC-20	1.55×0.8×0.127
R0603-50-B	50	125	DC-20	1.55×0.8×0.254
R0603-100-A	100	125	DC-20	1.55×0.8×0.127
R0603-100-B	100	125	DC-20	1.55×0.8×0.254
R0603-200-A	200	125	DC-20	1.55×0.8×0.127
R0603-200-B	200	125	DC-20	1.55×0.8×0.254

New NTC/PTC Thermistor



Features

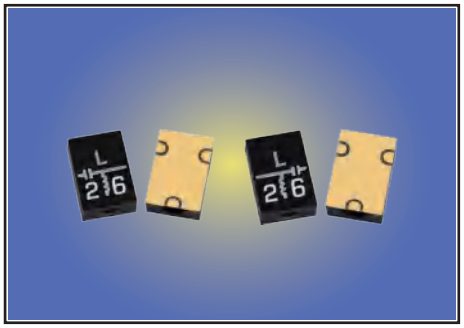
- The two types of products have wide resistance ranges
- Stable performance
- High reliability
- Operating temperature range
- Complete specifications and varieties

Specifications

- Size: φ(3~35),0404,0603 0805,1206
- Resistance Value:0.7~100Ω 101~2MΩ

Part No.	Resistance	Resistance Tolerance	B Value (25℃/50℃)	B Value Tolerance	Power (mW)	Operating Temperature (℃)
NTC0402-47K-4050	47KΩ	±1%	4050K	±1%	240	-40~125
NTC0603-68-2350	68Ω	±5%	2350K	±3%	300	-40~125
NTC0603-1K-3250	1KΩ	±5%	3250K	±3%	300	-40~125
NTC0603-33K-3450	33KΩ	±5%	3450K	±3%	300	-40~125
NTC0805-100K-4100	100KΩ	±5%	4100K	±3%	500	-40~125
NTC0805-2M-5000	2MΩ	±5%	5000k	±3%	500	-40~125
NTC0603-10K-3900	10KΩ	±5%	3900K	±3%	50	-55~125

New Bias Tee (Marki substitution)



Features

- Up to 35GHz
- Power 1W, DC 500mA
- Low insertion loss
- Solid gold input board
- SMD package

Applications

- Bias amplifier
- Bias Laser Diode
- Bias Active Antenna

Part No.	Freq.Range (GHz)	Insertion Loss (dB)	DC Current(A)	DC Port Isolation (dB)	DC Voltage (V)
BT-0006S	0.002-6	1	0.5	17	25
BT-0010	0.01-10	1.05	0.22	25	20
BT-0116	0.1-16	1	0.22	25	20
BT-0120	0.1-20	1.7	0.22	25	20
BTL-0012	0.0005-12	0.5	0.5	35	30
BT-0026	0.02-26	2.5	0.5	20	35
BTL-0026	0.0005-26	6	0.5	35	30
BT-0033S	0.01-33	1.7	0.5	35	30
BT-0035	0.02-35	1	0.5	35	30
BTL-0035	0.0005-35	1	0.5	35	30

Thin Film Microstrip Band-Pass Filters

Yantel®
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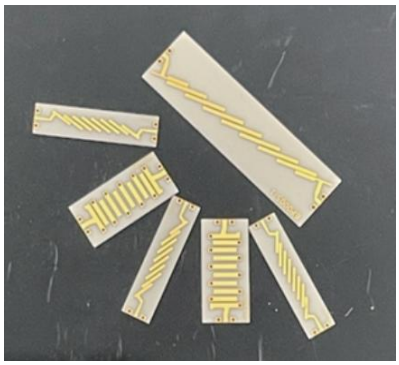


Features

- Miniaturization
- High Reliability
- Wide temperature range
- 50Ω coplanar waveguide output
- Wire bonding, suitable for multi-chip integrated module applications

Applications

- Microwave communications
- Radar
- Satellite communications
- Electronic countermeasures

Thin film microstrip filter is a device with small volume and light weight, which can effectively separate signals of different frequencies. It has the advantages of wide working frequency band, good out of band suppression, small insertion loss, etc. It is used to control the frequency response of signals in the system, allowing useful signals to pass through, and filtering out useless signals. It is widely used in microwave circuit systems.

Model Description

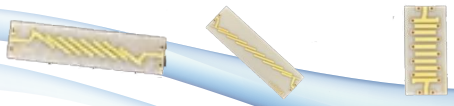
YTF BP ** / ** - ** **

- **Filter Circuit architecture(include:ID,CP,JA,HP,SA etc.)**
- **Filter order**
- **Pass band bandwidth**
- **Central Frequency**
- **Band pass filter(BP:Band-pass,LP:Low-pass)**
- **Thin film Microstrip Filter**

Specifications

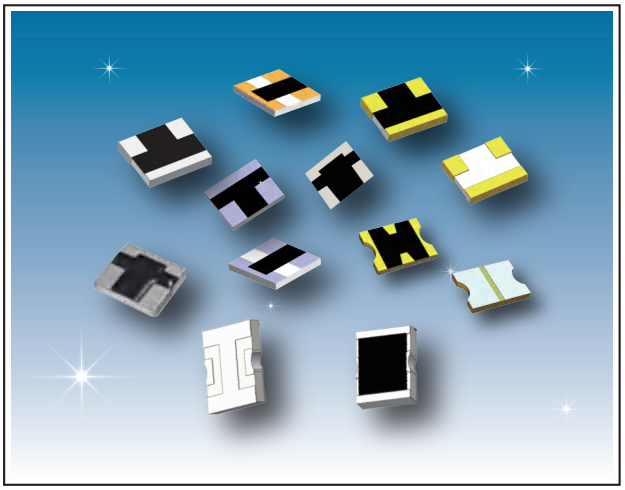
Model	IL0@ f0(dB)	BW1dB(GHz)	Rfs@f1(dBc)		VSWR	Size(mm)
YTFBP6R25/3-8ID	≤2.5	4.75-7.75	≥40dBc@2.5GHz	≥40dBc@9.55GHz	≤1.5	6.0×6.0×0.39
YTFBP7R45/2R9-8JA	≤2.0	6.0-8.9	≥40dBc@4.75GHz	≥40dBc@11GHz	≤1.8	5.5×5.0×0.26
YTFBP8R5/1R2-10JA	≤2.5	7.9-9.1	≥40dBc@6.7GHz	≥40dBc@10.3GHz	≤1.8	8.0×4.0×0.26
YTFBP9R7/4R2-9ID	≤2.5	7.6-11.8	≥40dBc@5.2GHz	≥40dBc@13.9GHz	≤1.6	7.0×4.0×0.26
YTFBP9R75/1R3-7ID	≤2.0	9.1-10.4	≥40dBc@7.5GHz	≥40dBc@11.4GHz	≤1.5	7.0×4.0×0.26
YTFBP10/4-9ID	≤2.5	8.0-12.0	≥40dBc@5.6GHz	≥40dBc@14GHz	≤1.6	7.0×4.0×0.26
YTFBP10R75/1R3-9ID	≤3.0	10.2-11.2	≥30dBc@9.3GHz	≥40dBc@13GHz	≤1.6	9.4×3.1×0.26
YTFBP10R8/2R4-10JA	≤2.2	9.6-12.0	≥40dBc@8.45GHz	≥40dBc@14.2GHz	≤1.6	7×3.5×0.26
YTFBP11R4/2R4-7ID	≤2.0	10.3-12.65	≥40dBc@8.0GHz	≥40dBc@14.5GHz	≤1.6	7×3.6×0.26
YTFBP11R5/1R2-5SA	≤2.5	10.9-12.1	≥40dBc@9.0GHz	≥40dBc@13.6GHz	≤1.8	4×3.2×0.26
YTFBP12R2/3R6-10ID	≤2.0	10.4-13.8	≥40dBc@8.0GHz	≥40dBc@15.85GHz	≤1.5	7.0×3.5×0.26
YTFBP12R85/3R3-8JA	≤2.0	11.2-14.5	≥40dBc@9.5GHz	≥40dBc@16.6GHz	≤1.8	5.5×3.0×0.26

Thin Film Microstrip Band-Pass Filters



Model	IL0@ f0(dB)	BW1dB(GHz)	Rfs@f1(dBc)		VSWR	Size(mm)
YTFBP12R9/1R6-7ID	≤2.5	12.2-13.6	≥40dBc@10.5GHz	≥40dBc@15.0GHz	≤1.5	8.4×2.9×0.26
YTFBP13/4-9ID	≤2.5	11.0-15.0	≥40dBc@8.5GHz	≥40dBc@17GHz	≤1.8	6.0×3.2×0.26
YTFBP13R45/2R7-10JA	≤2.8	12.3-14.8	≥40dBc@10.7GHz	≥40dBc@17.6GHz	≤1.8	7×3×0.26
YTFBP13R9/1R4-9HP	≤3.5	13.3-14.6	≥40dBc@12.3GHz	≥40dBc@16.0GHz	≤1.5	11.5×3.5×0.26
YTFBP14/1-9ID	≤3.0	13.5-14.5	≥45dBc@12GHz	≥40dBc@16GHz	≤1.8	9.0×3.0×0.26
YTFBP14R75/5R5-10ID	≤3.0	12.0-17.0	≥55dBc@8GHz	≥55dBc@21GHz	≤1.8	7.0×2.5×0.26
YTFBP14R95/1R9-10JA	≤3.0	14-15.9	≥40dBc@12.6GHz	≥40dBc@17.5GHz	≤1.8	8 ×2.5×0.26
YTFBP15R9/5-8JA	≤2.0	13.6-18.2	≥40dBc@11.4GHz	≥40dBc@21.0GHz	≤1.8	5.5×2.5×0.26
YTFBP16/1R8-9HP	≤3.5	15.1-16.9	≥40dBc@13.8GHz	≥40dBc@18.3GHz	≤1.6	12.0×3.0×0.26
YTFBP16R25/4R5-9ID	≤2.5	14.0-18.5	≥40dBc@11.0GHz	≥40dBc@20.0GHz	≤1.8	7.0×2.9×0.26
YTFBP16R5/1R4-7HP	≤3.5	16-17.2	≥40dBc@14.6GHz	≥40dBc@18.9GHz	≤1.5	9.0×3.0×0.26
YTFBP16R65/3R1-10JA	≤2.7	15.1-18.2	≥40dBc@13.5GHz	≥40dBc@20.2GHz	≤1.8	7.5×2.5×0.26
YTFBP17/1R8-7ID	≤2.0	16.3-17.9	≥40dBc@13.5GHz	≥40dBc@19.7GHz	≤1.6	7.0×3.0×0.26
YTFBP17R4/1R6-9HP	≤3.5	16.6-18.2	≥40dBc@15.3GHz	≥40dBc@19.5GHz	≤1.6	12.0×3.0×0.26
YTFBP18/8-8ID	≤1.5	14.3-21.9	≥40dBc@9.0GHz	≥40dBc@24.5GHz	≤1.8	4.3×3.0×0.26
YTFBP19R5/5R4-10ID	≤2.5	17-22	≥60dBc@12.0GHz	≥30dBc@25.0GHz	≤1.6	7.0×2.5×0.26
YTFBP21/4-8ID	≤2.0	19.0-23.0	≥40dBc@14GHz	≥40dBc@25.5GHz	≤1.6	6.0×2.5×0.26
YTFBP23/4-7CP	≤2.5	21-25	≥40dBc@19GHz	≥40dBc@27GHz	≤1.6	10.3×3.6×0.26
YTFBP23R5/9-10ID	≤2.0	19.3-27.7	≥40dBc@16.4GHz	≥40dBc@33.0GHz	≤1.6	8.0×2.5×0.39
YTFBP24/6-10ID	≤2.5	21-27	≥40dBc@18.0GHz	≥40dBc@33GHz	≤1.8	7.0×2.2×0.26
YTFBP24R4/1R2-8CP	≤4.5	23.8-25.0	≥40dB@DC-22.8GHz	≥40dB@26GHz-40GHz	≤1.8	10.0×3.0×0.26
YTFBP25R5/7-8ID	≤2.0	22.0-28.8	≥40dBc@17.0GHz	≥40dBc@33.0GHz	≤1.6	6.0×2.5×0.26
YTFBP25R7/7-7ID	≤2.0	22.2-29.0	≥40dBc@16.5GHz	≥40dBc@33.0GHz	≤1.5	6.6×2.5×0.26
YTFBP27/7R5-8ID	≤2.0	22.5-30.0	≥40dBc@18.0GHz	≥40dBc@34.0GHz	≤1.6	6.0×1.9×0.26
YTFBP27R65/1R5-6CP	≤2.5	26.8-28.0	≥40dBc@24.5GHz	≥40dBc@30GHz	≤1.6	8.0×3.0×0.26
YTFBP29R2/4-6CP	≤1.5	27.2-31.2	≥40dBc@24.5GHz	≥40dBc@34.9GHz	≤1.5	8.0×3.0×0.26
YTFBP29R35/5R1-6CP	≤2.0	27.3-31.2	≥40dBc@24GHz	≥40dBc@35GHz	≤1.5	8.0×2.0×0.26
YTFBP30R3/8-8CP	≤1.5	26.7-34.3	≥40dBc@23.4GHz	≥30dBc@37.3GHz	≤1.5	9.5×2.5×0.26
YTFBP30R8/3R6-9CP	≤2.5	29.3-32.3	≥40dBc@27.0GHz	≥40dBc@34.6GHz	≤1.6	10.5×2.5×0.26
YTFBP31/3-8CP	≤2.0	29.5-32.5	≥40dBc@27.0GHz	≥40dBc@35GHz	≤1.5	10.0×2.6×0.26
YTFBP33/4-6CP	≤2.0	31-35	≥40dBc@27.0GHz	≥40dBc@39.0GHz	≤1.6	7.5×2.3×0.26
YTFBP34R5/3R4-6CP	≤2.5	32.8-35.8	≥40dBc@29.6GHz	≥40dBc@38GHz	≤1.6	8.0×3.0×0.26
YTFBP34R6/1R4-6CP	≤2.5	34.15-35.3	≥40dBc@31.5GHz	≥40dBc@37.7GHz	≤1.6	8.5×3.0×0.26
YTFBP35R6/R4-6CP	≤4.0	35.4-35.8	≥40dBc@34.0GHz	≥40dBc@37.0GHz	≤1.8	9.5×2.6×0.26
YTFBP35R7/4-8CP	≤2.0	33.7-37.7	≥40dBc@30.0GHz	≥40dBc@41.0GHz	≤1.6	9.0×2.6×0.26

Fixed Attenuator Chip



Features

- Frequency range: DC to 3GHz, DC to 6GHz, DC to 10GHz, DC to 12.4GHz, DC to 18GHz, DC to 26.5GHz
- Laser trimmed
- Material in Al O , BeO or AIN
- Attenuation: 1dB to 30dB
- Input power: 100mW~400W
- High attenuation accuracy
- Low VSWR
- Temperature stable -55℃ to +150℃
- Power: 100mW、200mW、2W、5W

Applications

- Communications
- Point to Point base station
- Digital transmission
- Radar
- Broadcast television

Specifications

DC to 6GHz, 2W, 5W 50Ω, thick film, size(mm) : 3.10×3.68×0.41 Al2O3(2W), BeO(5W) or AlN(5W) * : A, Planar ; * : B, Triple wrap

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~2GHz	2~4GHz	4~6GHz	DC~2GHz	2~4GHz	4~6GHz
FAC0601*	1	±0.2	0.3	0.5	1.1	1.2	1.3
FAC0602*	2	±0.2	0.5	0.8	1.1	1.2	1.3
FAC0603*	3	±0.2	0.5	0.8	1.1	1.2	1.3
FAC0606*	6	±0.2	0.5	0.8	1.1	1.2	1.3
FAC0610*	10	±0.2	0.3	0.5	1.1	1.2	1.3
FAC0615*	15	±0.3	-0.6	-1	1.1	1.2	1.25
FAC0616*	16	±0.3	-0.8	-1.5	1.1	1.2	1.25

DC to 8GHz, 2W, 50Ω, thick film,for triple wrap, size(mm) : 3.10×3.68×0.41

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~3GHz	3~6GHz	6~8GHz	DC~3GHz	3~6GHz	6~8GHz
FAC0801PW3	1	±0.3	0.5	1	1.1	1.25	1.35
FAC0802PW3	2	±0.3	0.5	1	1.1	1.25	1.35
FAC0803PW3	3	±0.3	0.5	1	1.1	1.25	1.35
FAC0806PW3	6	±0.3	0.75	1	1.1	1.25	1.35
FAC0810PW3	10	±0.5	0.5	0.5	1.1	1.22	1.3

DC to 8GHz, 100mW, 50Ω, thick film,for lead free reflow,size(mm):1.6×0.8×0.38

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(MAX.)		
		DC~4GHz	4~6GHz	6~8GHz	DC~4GHz	4~6GHz	6~8GHz
FAC0800	0	0.35	0.45	0.5	1.15	1.2	1.25
FAC0801	1	±0.35	0.45	0.65	1.15	1.2	1.25
FAC0802	2	±0.30	0.45	0.6	1.15	1.2	1.25
FAC0803	3	±0.45	0.6	0.9	1.2	1.2	1.25
FAC0806	6	0.25	0.3	0.4	1.15	1.2	1.25
FAC0810	10	0.25	0.3	0.4	1.15	1.2	1.25

DC to 8GHz, 0.75~5W, 50Ω, thin film,gold terminal,wrap ground terminal,size(mm) : 1.52×1.90×0.41
* : A, for wire-bonding; * : B, for lead free reflow ; * : C, for triple wrap

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)		VSWR:1(MAX.)		Power (Watt)
		DC~4GHz	4~8GHz	DC~4GHz	4~8GHz	
FAC0800*	0	0.5/0	0.5/0	1.25	1.35	5
FAC0801*	1	±0.5	±0.5	1.25	1.35	5
FAC0802*	2	±0.5	±0.5	1.25	1.35	2
FAC0803*	3	±0.5	±0.5	1.25	1.35	2
FAC0806*	6	±0.5	±0.5	1.25	1.35	1
FAC0810*	10	±0.5	±0.5	1.25	1.35	1
FAC0815*	15	±0.75	0.5/-3	1.25	1.35	0.75
FAC0820*	20	±1.0	-0.125	1.25	1.35	0.75

DC to 10GHz, 100mW,50Ω,thick filmsize(mm):1.20×2.00×0.53

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~4GHz	4~8GHz	8~10GHz	DC~4GHz	4~8GHz	8~10GHz
FAC1001	1	±0.3	0.6	1	1.15	1.25	1.4
FAC1002	2	±0.3	0.6	1	1.15	1.25	1.4
FAC1003	3	±0.3	0.6	1	1.15	1.2	1.4
FAC1006	6	±0.3	0.6	1	1.15	1.25	1.4
FAC1010	10	±0.3	0.7	1	1.15	1.25	1.4
FAC1015	15	±0.6	0.6	0.6	1.15	1.3	1.4

Fixed Attenuator Chip

DC to 12.4GHz, 300mW, 50Ω, thin film, size(mm) : 1.52×1.90×0.41 * : A, for plana; * : B, for triple wrap ;

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~3GHz	3~8.5GHz	8.5~12.4GHz	DC~3GHz	3~8.5GHz	8.5~12.4GHz
FAC1201*	1	±0.3	0.5	1	1.05	1.15	1.4
FAC1202*	2	±0.3	0.5	1	1.05	1.15	1.4
FAC1203*	3	±0.3	0.5	1	1.1	1.45	1.5
FAC1206*	6	±0.3	0.75	1	1.05	1.25	1.4
FAC1210*	10	±0.3	0.75	1	1.05	1.25	1.4

DC to 12.4GHz, 2W, 50Ω, thick film, gold terminal, wrap ground terminal, size(mm) : 3.10×3.68×0.41
* : A, for wire-bonding; * : B, for lead free reflow ; * : C, for triple wrap

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~3GHz	3~8.5GHz	8.5~12.4GHz	DC~3GHz	3~8.5GHz	8.5~12.4GHz
FAC1201P*	1	±0.3	0.5	1	1.05	1.15	1.4
FAC1202P*	2	±0.3	0.5	1	1.05	1.15	1.4
FAC1203P*	3	±0.3	0.5	1	1.05	1.15	1.4
FAC1206P*	6	±0.3	0.75	1	1.05	1.25	1.4
FAC1210P*	10	±0.3	0.75	1	1.05	1.25	1.4

DC to 18GHz, 200mW, 50Ω, thin film,gold terminal,wrap ground terminal,size(mm) : 1.52×1.90×0.41
* : A, for wire-bonding; * : B, for lead free reflow ; * : C, for triple wrap

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~4GHz	4~12.4GHz	12.4~18GHz	DC~4GHz	4~12.4GHz	12.4~18GHz
FAC1801*	1	±0.5	0.5	0.8	1.05	1.15	1.4
FAC1802*	2	±0.5	0.5	1	1.05	1.15	1.4
FAC1803*	3	±0.5	0.5	1	1.05	1.15	1.4
FAC1806*	6	±0.5	0.75	1	1.05	1.25	1.4
FAC1810*	10	±0.5	0.75	1	1.05	1.25	1.4

DC to 18GHz, 1.5W, 50Ω, thin film,for triple wrap,size(mm) : 1.52×1.90×0.41

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~4GHz	4~12.4GHz	12.4~18GHz	DC~4GHz	4~12.4GHz	12.4~18GHz
FAC1801N	1	±0.5	0.5	0.8	1.05	1.15	1.4
FAC1802N	2	±0.5	0.5	1	1.05	1.15	1.4
FAC1803N	3	±0.5	0.5	1	1.05	1.15	1.4
FAC1806N	6	±0.5	0.75	1	1.05	1.25	1.4
FAC1810N	10	±0.5	0.75	1	1.05	1.25	1.4

DC to 18GHz, 2W, 50Ω, thin film,size(mm) : 3.1×3.68×0.41

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~4GHz	4~12.4GHz	12.4~18GHz	DC~4GHz	4~12.4GHz	12.4~18GHz
FAC1801P	1	±0.5	0.5	0.8	1.05	1.15	1.4
FAC1802P	2	±0.5	0.5	1	1.05	1.15	1.4
FAC1803P	3	±0.5	0.5	1	1.05	1.15	1.4
FAC1806P	6	±0.5	0.75	1	1.05	1.25	1.4
FAC1810P	10	±0.5	0.75	1	1.05	1.25	1.4

DC to 20GHz, 200mW, 50Ω, thick film,wrap ground terminal,Size(mm) : 1.52×1.91×0.38
* : A, for wire-bonding(Wrap ground),Size(mm) : 1.52×1.81×0.38; * : B, for lead free reflow(Triple wrap)

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)			VSWR:1(typical)		
		DC~8.5GHz	8.5~18GHz	18~26.5GHz	DC~8.5GHz	8.5~18GHz	18~20GHz
FAC2001*	1	±0.5	0.5	1	1.05	1.15	1.4
FAC2002*	2	±0.5	0.5	1	1.05	1.15	1.4
FAC2003*	3	±0.5	0.5	1	1.05	1.15	1.4
FAC2006*	6	±0.5	0.75	1	1.05	1.25	1.4
FAC2010*	10	±0.5	0.75	1	1.05	1.25	1.4

16 to 36GHz, 100mW, 50Ω,for wire-bonding,Size(mm) : 3.05×1.65×0.28(mm) ;

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)	VSWR:1(typical)
		16~36GHz	16~36GHz
FAC3601	1	1	1.3
FAC3602	2	1	1.3
FAC3603	3	1	1.3
FAC3606	6	1	1.35
FAC3610	10	1	1.35

DC to 40GHz, 100mW, 50Ω,thick film,Size(mm) : 0.8×0.85×0.27(mm) ;
* : A, for wire-bonding; * : B, for lead free reflow ; * : C, for triple wrap

Part No.	Attenuation (dB)	Attenuation Accuracy(typical)(dB)	VSWR:1(typical)
		DC~40GHz	DC~40GHz
FAC4001*	1	1	1.5
FAC4002*	2	1	1.5
FAC4003*	3	1	1.5
FAC4006*	6	1	1.5
FAC4010*	10	1	1.5

Fixed Attenuator

Patent Product
China Patent No.: CN 2009 1 0006333
USA Patent No.: US 8,100,721 B2

Yantel®
Key Patents Lead Microwave Tech

Features

- Frequency range from DC to 18GHz
- Attenuation from 1dB to 40dB
- Input power: 2W, 5W, 25W, 50W,80W, 100W,150W
- High attenuation accuracy
- Low VSWR
- Stainless steel or brass
- Ceramic chip
- Low cost-high performance

Applications

- Communications
- Digital transmission
- Radar
- Broadcast television
- Test

Model Description

FATXXXXXXX

X – Material:(no code)=Brass,(S)=Stainless steel
X – power handling: 2W, 5W, 25W, 50W, 100W
X – connector type: B-SMB, S-SMA,Q-QMA,M-MCX,C-MMCX,B-BNC or N- N type connector
XX – attenuation: **dB
XX – frequency range: 06 represents DC to 6GHz
18 represents DC to 18GHz

suffix “M” refers to the miniature size type

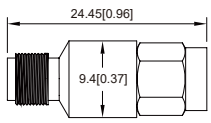
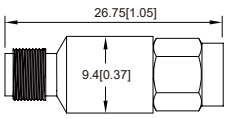
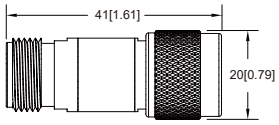
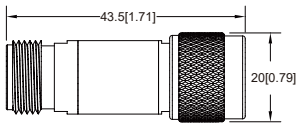
Example: Model No. FAT0603S2 is fixed attenuator DC-6GHz, 3dB, SMA type, 2W, Brass.

Specifications

- DC to 6GHz, 2 Watts or 5 Watts, SMA(S), N type(N), QMA(Q),MCX(M),MMCX(C),BNC(B),Coaxial Fixed Attenuator

Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB)		VSWR (:1)				Power (Watt)
					DC-2GHz	2-4GHz	4-6GHz	DC-6GHz	
			DC-3GHz	3-6GHz	Typical	Typical	Typical	Max.	
FAT0601***	DC~6	1	±0.45	±0.45	1.10	1.15	1.20	1.30	2
FAT0602***		2	±0.35	±0.35	1.10	1.15	1.20	1.30	
FAT0603***		3	±0.35	±0.35	1.10	1.15	1.20	1.30	
FAT0604***		4	±0.35	±0.35	1.10	1.15	1.20	1.30	
FAT0605***		5	±0.35	±0.35	1.10	1.15	1.20	1.30	
FAT0606***		6	±0.35	±0.35	1.10	1.15	1.20	1.30	
FAT0609***		9	±0.60	±0.60	1.10	1.15	1.20	1.30	
FAT0610***		10	±0.60	±0.60	1.10	1.15	1.20	1.30	
FAT0615***		15	±0.70	±0.70	1.10	1.15	1.20	1.30	
FAT0620***		20	±0.60	±0.60	1.10	1.15	1.20	1.35	
FAT0630***		30	±2.00	±2.00	1.10	1.15	1.20	1.35	

DC-6GHz Outline Dimensions (unit: mm&inch)

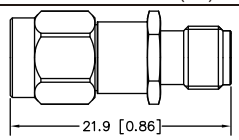
size for SMA 1-12(dB)	size for SMA 15-40(dB)	size for N 1-12(dB)	size for N 15-40(dB)
			

● DC to 18GHz, 2 Watts, SMA(S) type Miniature Size Coaxial Fixed Attenuator

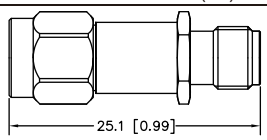
Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB) DC to 18GHz	VSWR (:1) DC~6GHz Typical	VSWR (:1) 6~12GHz Typical	VSWR (:1) 12~18GHz Typical	VSWR (:1) DC~18GHz Max.	Power (Watt)
FAT1801S2SM	DC~18	1	±0.40	1.15	1.25	1.30	1.35	2
FAT1802S2SM		2	±0.40	1.15	1.25	1.30	1.35	
FAT1803S2SM		3	±0.40	1.15	1.25	1.30	1.35	
FAT1804S2SM		4	±0.40	1.15	1.25	1.30	1.35	
FAT1805S2SM		5	±0.40	1.15	1.25	1.30	1.35	
FAT1806S2SM		6	±0.40	1.15	1.25	1.30	1.35	
FAT1808S2SM		8	±0.60	1.15	1.20	1.30	1.35	
FAT1809S2SM		9	±0.60	1.15	1.20	1.30	1.35	
FAT1810S2SM		10	±0.60	1.15	1.20	1.30	1.35	
FAT1815S2SM		15	±0.60	1.15	1.20	1.30	1.35	
FAT1820S2SM		20	±0.80	1.15	1.25	1.30	1.35	
FAT1830S2SM		30	±0.85	1.15	1.25	1.30	1.35	
FAT1840S2SM		40	±1.50	1.15	1.25	1.30	1.35	

DC-18GHz Outline Dimensions (unit: mm&inch)

size for SMA 1-12(dB)



size for SMA 15-40(dB)

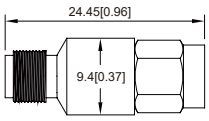


● DC to 18GHz, 2 Watts or 5 Watts, SMA(S),N type(N), Coaxial Fixed Attenuator

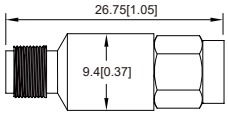
Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB) DC to 18GHz	VSWR (:1) DC~8GHz Typical	VSWR (:1) 8~12GHz Typical	VSWR (:1) 12~18GHz Typical	VSWR (:1) DC~18GHz Max.	Power (Watt)
FAT1803***	DC~18	3	±0.3	1.15	1.20	1.30	1.50	2
FAT1806***		6	±0.5	1.15	1.20	1.30	1.50	
FAT1810***		10	±1.0	1.15	1.20	1.30	1.50	
FAT1820***		20	±1.2	1.15	1.20	1.30	1.50	
FAT1830***		30	±1.5	1.15	1.30	1.55	1.65	
FAT1840***		40	±1.5	1.15	1.30	1.55	1.65	

DC-18GHz Outline Dimensions (unit: mm&inch)

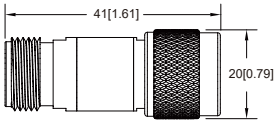
size for SMA 1-12(dB)



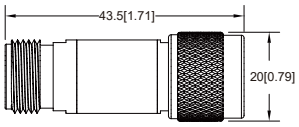
size for SMA 15-40(dB)



size for N 1-12(dB)



size for N 15-40(dB)

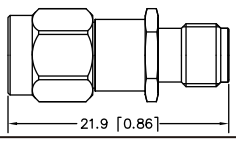


● DC to 26GHz, 2 Watts, SMA(S) type Miniature Size Coaxial Fixed Attenuator

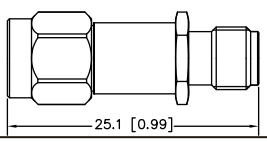
Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB) DC~26.5GHz	VSWR (:1) 2~4GHz Typical	Power (Watt)
FAT2601	DC~26	1	±0.20	1.35	2
FAT2602		2	±0.20	1.35	
FAT2603		3	±0.20	1.35	
FAT2605		5	±0.30	1.35	
FAT2606		6	±0.30	1.35	
FAT2608		8	±0.30	1.35	
FAT2609		9	±0.30	1.35	
FAT2610		10	±0.35	1.35	
FAT2612		12	±0.35	1.35	
FAT2615		15	±0.35	1.35	
FAT2620		20	±0.40	1.35	

DC-26GHz Outline Dimensions (unit: mm&inch)

size for SMA 1-12(dB)



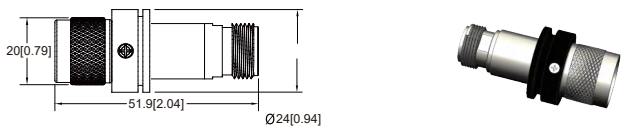
size for SMA 15-40(dB)



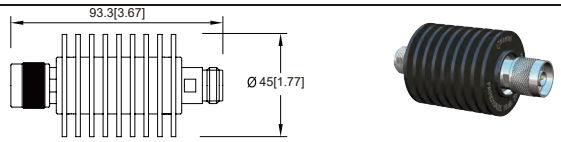
● DC to 3GHz, 5 Watts or 25 Watts, N(N) type Coaxial Fixed Attenuator

Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB)	VSWR (:1)				Power (Watt)
				DC~1GHz	DC~2GHz	DC~3GHz		
			DC to 3GHz	Typical	Typical	Typical	Max.	
FAT0340N5	DC~3	40	±0.75	1.10	1.15	1.20	1.25	5
FAT0350N5		50	±0.75	1.10	1.15	1.20	1.25	
FAT0360N5		60	±0.75	1.10	1.15	1.20	1.25	
FAT0370N5		70	±1.0	1.10	1.15	1.20	1.25	
FAT0380N5		80	±1.0	1.10	1.15	1.20	1.25	
FAT0390N5		90	±1.2	1.10	1.15	1.20	1.25	
FAT0303N25	DC~3	3	±0.70	1.15	1.25	1.30	1.35	25
FAT0306N25		6	±0.70	1.15	1.25	1.30	1.35	
FAT0310N25		10	±0.70	1.15	1.25	1.30	1.35	
FAT0320N25		20	±1.0	1.15	1.25	1.30	1.35	
FAT0330N25		30	±1.0	1.15	1.25	1.30	1.35	
FAT0340N25		40	±1.2	1.15	1.25	1.30	1.35	

DC-3GHz 5W Outline Dimensions (unit: mm&inch)



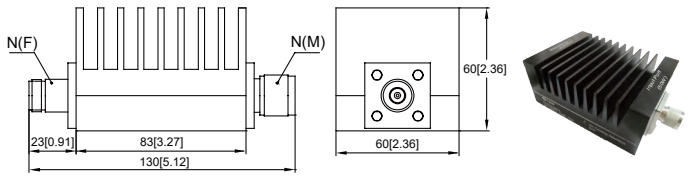
DC-3GHz 25W Outline Dimensions (unit: mm&inch)



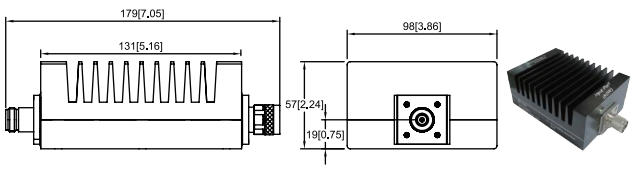
● DC to 3GHz, 50,80,100 or 150Watts, N(N) type Low PIM Coaxial Fixed Attenuator

Model	Freq. Range (GHz) f_L-f_U	Attenuation (dB)	Attenuation Accuracy (dB)	VSWR (:1)				Power (Watt)
				DC~1GHz	DC~2GHz	DC~3GHz		
			DC to 3GHz	Typical	Typical	Typical	Max.	
FAT0303N50	DC~3	3	±0.50	1.10	1.20	1.25	1.30	50
FAT0306N50		6	±0.50	1.10	1.20	1.25	1.30	
FAT0310N50		10	±0.50	1.10	1.20	1.25	1.30	
FAT0320N50		20	±0.5	1.10	1.20	1.25	1.30	
FAT0330N50		30	±0.6	1.10	1.20	1.25	1.30	
FAT0340N50		40	±0.6	1.10	1.20	1.25	1.30	
FAT0303N80	DC~3	3	±0.60	1.10	1.20	1.25	1.30	80
FAT0306N80		6	±0.60	1.10	1.20	1.25	1.30	
FAT0310N80		10	±0.60	1.10	1.20	1.25	1.30	
FAT0320N80		20	±1.0	1.15	1.25	1.30	1.35	
FAT0330N80		30	±1.0	1.15	1.25	1.30	1.35	
FAT0340N80		40	±1.0	1.15	1.25	1.30	1.35	
FAT0303N100	DC~3	3	±0.65	1.10	1.20	1.25	1.30	100
FAT0306N100		6	±0.65	1.10	1.20	1.25	1.30	
FAT0310N100		10	±0.75	1.15	1.20	1.30	1.35	
FAT0320N100		20	±0.75	1.15	1.20	1.30	1.35	
FAT0330N100		30	±0.8	1.15	1.20	1.30	1.35	
FAT0340N100		40	±1.0	1.15	1.20	1.30	1.35	
FAT0303N150	DC~3	3	±0.65	1.10	1.20	1.25	1.30	150
FAT0306N150		6	±0.65	1.10	1.20	1.25	1.30	
FAT0310N150		10	±0.75	1.15	1.25	1.30	1.35	
FAT0320N150		20	±0.75	1.15	1.25	1.30	1.35	
FAT0330N150		30	±1.0	1.15	1.20	1.30	1.35	
FAT0340N150		40	±1.0	1.15	1.25	1.30	1.35	

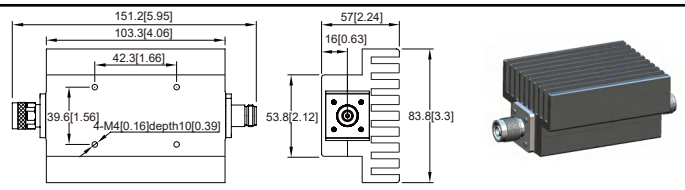
DC-3GHz 50W Outline Dimensions (unit: mm&inch)



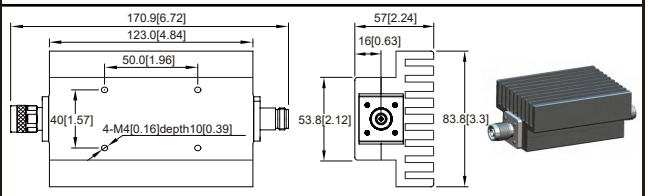
DC-3GHz 80W Outline Dimensions (unit: mm&inch)



DC-3GHz 100W Outline Dimensions (unit: mm&inch)

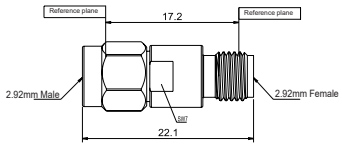


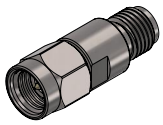
DC-3GHz 150W Outline Dimensions (unit: mm&inch)



● DC~40GHz, 2W, 2.92mm Connector,Coaxial Fixed Attenuator

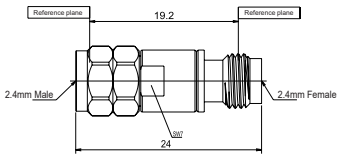
Model	Freq. Range (GHz) f_L - f_U	Attenuation (dB)	Attenuation Accuracy(typical)(dB)		VSWR:1(typical)	Power (Watt)
			DC-26.5GHz	26.5-40GHz	DC-40GHz	
FAT4001	DC-40	1	±0.50	±0.50	1.25	2
FAT4002		2	±0.50	±0.50	1.25	
FAT4003		3	±0.50	±0.60	1.25	
FAT4004		4	±0.50	±0.60	1.25	
FAT4005		5	±0.50	±0.60	1.25	
FAT4006		6	±0.50	±0.60	1.25	
FAT4010		10	±0.50	±0.80	1.25	
FAT4012		12	±0.50	±0.60	1.25	
FAT4020		20	±0.80	±1.00	1.25	
FAT4030		30	±0.80	±1.00	1.25	



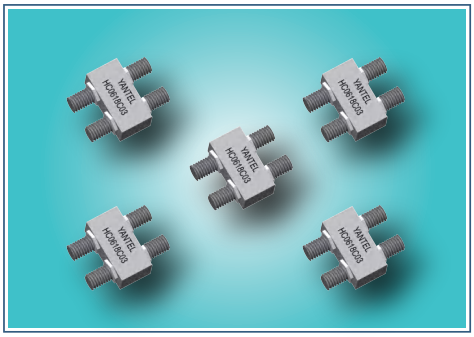


● DC~50GHz, 2W, 2.4mm Connector,Coaxial Fixed Attenuator

Model	Freq. Range (GHz) f_L - f_U	Attenuation (dB)	Attenuation Accuracy(typical)(dB)		VSWR:1(typical)	Power (Watt)
			DC-26.5GHz	26.5-40GHz	DC-40GHz	
FAT5001	DC-50	1	±0.50	±0.80	1.25	2
FAT5002		2	±0.50	±0.80	1.25	
FAT5003		3	±0.50	±0.80	1.25	
FAT5004		4	±0.50	±0.80	1.25	
FAT5005		5	±0.50	±0.80	1.25	
FAT5006		6	±0.50	±0.80	1.25	
FAT5010		10	±0.50	±1.00	1.25	
FAT5012		12	±0.80	±1.00	1.25	
FAT5020		20	±0.80	±1.20	1.25	
FAT5030		30	±0.80	±1.20	1.25	



3dB 90° Wideband & High Power Coaxial Hybrid Coupler



Features

- Ultra-low loss
- Small standing wave
- High isolation
- Excellent amplitude balance and phase balance
- In-situ replacement
- High reliability
- Good product consistency

Applications

- radar
- microwave transceiver module
- Microwave amplifier systems

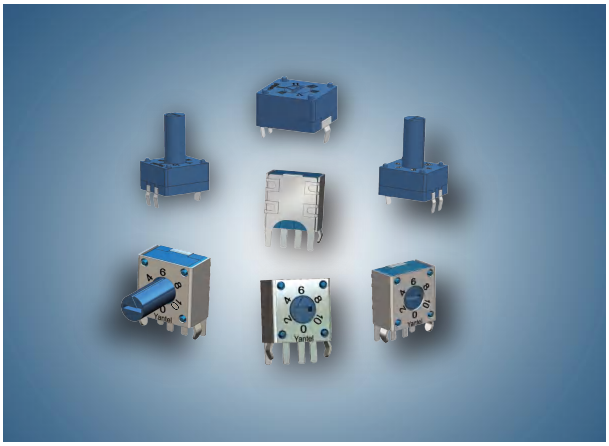
Model	Freq.Range (GHz)	Amplitude Balance (dB)	Insertion Loss (dB)	Isolation (dB)	VSWR	Average Power (W)	Peak Power (kW)	Size (mm)
HC0102C03	1.0 - 2.0	± 0.5	0.2	22	1.2	30	3	45.2×12.7×9.7
HC0204C03	2.0 - 4.0	± 0.5	0.25	22	1.25	30	3	29.4×12.7×9.7
HC0408C03	4.0 - 8.0	± 0.5	0.3	20	1.25	30	3	25.4×12.7×9.7
HC0812C03	8.0 - 12.4	± 0.5	0.5	18	1.35	30	3	25.4×12.7×9.7
HC1218C03	12.4 - 18.0	± 0.5	0.5	18	1.45	30	3	25.4×12.7×9.7
HCR502C03	0.5 - 2.0	± 0.5	0.6	24	1.2	30	3	141.7×17.9×9.7
HC0208C03	2.0 - 8.0	± 0.5	0.5	20	1.3	30	3	43.4×12.7×9.7
HC0412C03	4.0 - 12.4	± 0.5	0.6	20	1.25	50	3	43.7×27.2×9.7
HC0218C03	2.0 - 18.0	± 1.0	0.6	20	1.45	50	3	47.6×33×9.7
HC0618C03	6.5 - 18.0	± 0.5	0.6	15	1.45	30	3	25.4×12.7×9.7
HC0418C03	4.0 - 18.0	± 0.5	1	18	1.45	100	5	38.1×28×9.7

DIP Variable Attenuator
VAD Series,Step (DC ~ 2.5GHz)

Patent Product

China Patent No.: CN 2008 1 0144258
USA Patent No.: US 8,476,544 B2
Japen Patent No.: 2011-524168
Taiwan Patent No.: I 393347

Yantel®
Key Patents Lead Microwave Tech



Features

- Step variable
- Tube package, Ultra-small size, able to be mounted
- Wide frequency range: DC ~ 2.5GHz
- Low VSWR
- Low insertion loss
- High performance, competitive price
- Wide attenuation range
- Step attenuation values flexible and selectable
- Power handling: 125mW
- Impedance: 50Ω or 75Ω
- Operating temperature:-40˚C ~ +105˚C
- Compared with digital attenuators, zero distortion, no extra IP3, lower noise, higher reliability.
- At least 360 times (60 circles,6 times as a circle) tuning operation
- Customized attenuation values available

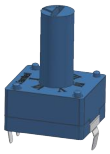
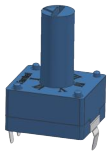
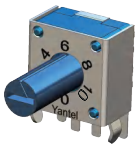
Part No. Description

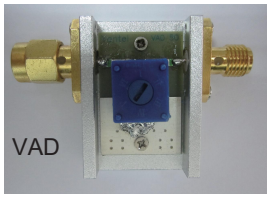
VAD	**	**	*	**	*
	Attenuation Range	**Step value**	**Impedance**	**Package**	**shaft**

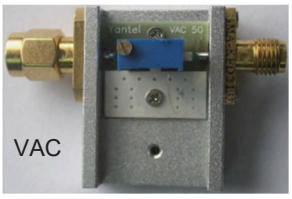
e.g.:VAD0102BDH

Attenuation Range :01 represents 0~1dB,
Step value :02 represents step value 0.2dB,
Impedance: "B" represents 75Ω impedance, " no code" represents 50Ω impedance.
Package: "DL" represents lateral DIP package, "D" represents vertical DIP package.
shaft: "H" represents a handling shaft , "HH"represents a handling shaft with rotating cap, "no code" represents without handling shaft.

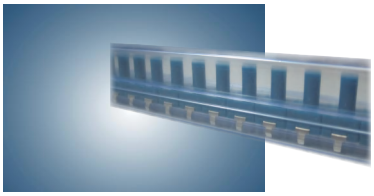
Note: Rotating caps for VAD(with handling shaft type) series is available.

	VADXXXXD（50Ω）	VADXXXXBD（75Ω）	VADXXXXDH（50Ω）	VADXXXXBDH（75Ω）	VADXXXXDHH（50Ω）	VADXXXXBDHH（75Ω）
Vertical DIP Type						
	VADXXXXDL（50Ω）	**VADXXXXBDL（75Ω）**	**VADXXXXDLH（50Ω）**	**VADXXXXBDLH（75Ω）**	**VADXXXXDLHH（50Ω）**	**VADXXXXBDLHH（75Ω）**
Lateral DIP Type						





Evaluation boards



Tube Package

Step Type Spec.

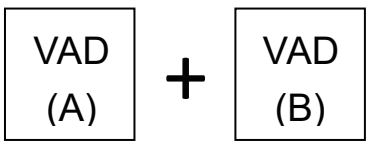
● Frequency range: DC ~ 2.5GHz ● Power rating: 125mW ● Impedance: 50Ω or 75Ω ● Dimensions(mm):10×11×6

Part No.	Attenuation Range(dB)	Step Value (dB)	Impedance (Ω)	Typ.VSWR:1		Insertion Loss at 0dB (dB)	Attenuation Accuracy(dB)
				DC~2GHz	2GHz~2.5GHz	DC ~ 2GHz	DC ~ 2GHz
VAD0102D**	0 ~ 1	0.2	50	1.3	1.4	0.35	1
VAD0203D**	0 ~ 1.8	0.3	50	1.35	1.45	0.35	1
VAD0204D**	0 ~ 2	0.4	50	1.35	1.45	0.35	1
VAD0305D**	0 ~ 2.5	0.5	50	1.35	1.45	0.35	1
VAD0306D**	0 ~ 3	0.6	50	1.35	1.45	0.35	1
VAD0510D**	0 ~ 5	1	50	1.4	1.6	0.35	1.3
VAD0815D**	0 ~ 7.5	1.5	50	1.45	1.65	0.35	1.5
VAD1020D**	0 ~ 10	2	50	1.45	1.65	0.35	1.3
VAD1325D**	0 ~ 12.5	2.5	50	1.5(@ 1.0GHz)	-	0.35	1.2(@ 1.0GHz)
VAD1530D**	0 ~ 15	3	50	1.5(@ 1.0GHz)	-	0.35	1.2(@ 1.0GHz)
Application1A	0 ~ 15	1	50	1.5(@ 1.0GHz)	-	0.35	1.2(@ 1.0GHz)
Application2A	0 ~ 20	1	50	1.5(@ 1.0GHz)	-	0.35	1.2(@ 1.0GHz)
VAD0102BD**	0 ~ 1	0.2	75	1.3	1.45	0.3	0.5
VAD0203BD**	0 ~ 1.8	0.3	75	1.3	1.45	0.3	0.5
VAD0204BD**	0 ~ 2	0.4	75	1.35	1.45	0.3	0.5
VAD0305BD**	0 ~ 2.5	0.5	75	1.35	1.45	0.3	0.6
VAD0306BD**	0 ~ 3	0.6	75	1.35	1.45	0.3	0.6
VAD0510BD**	0 ~ 5	1	75	1.35	1.45	0.3	1
VAD0815BD**	0 ~ 7.5	1.5	75	1.35	1.45	0.3	1
VAD1020BD**	0 ~ 10	2	75	1.35	1.45	0.3	1.2
VAD1325BD**	0 ~ 12.5	2.5	75	1.6(@ 1.5GHz)	-	0.3	1.0(@ 1.0GHz)
VAD1530BD**	0 ~ 15	3	75	1.45(@ 1.0GHz)	-	0.3	1.0(@ 1.0GHz)
Application1B	0 ~ 15	1	75	1.45(@ 1.0GHz)	-	0.3	1.0(@ 1.0GHz)
Application2B	0 ~ 20	1	75	1.45(@ 1.0GHz)	-	0.3	1.0(@ 1.0GHz)

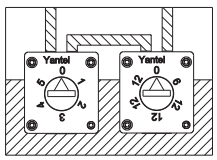
Option: VAD in DIP Package is available with a handling shaft. Part number with a suffix H represents VAD with a handling shaft.
For example, VAD1530BDH is 0-15dB,3dB/step,75ohm,DIP,with handling shaft.

Application Note:

Example 1:
You need 2 sets(pieces) of VAD,**it can meet the attenuation range:0 to 18 dB by 1dB/step**
VAD(A): 0,1,2,3,4,5dB;
VAD(B): 0, 6,12,13,13,13dB;
You can get the attenuation value are:A+B=M dB
Application 1: When A=0, 1, 2, 3, 4, or 5dB, B=0dB, then M=A+B=0, 1, 2, 3, 4 or 5dB;
Application 2: When A=0, 1, 2, 3, 4, or 5dB, B=6dB, then M=A+B=6, 7, 8, 9, 10 or 11dB;
Application 3: When A=0, 1, 2, 3, 4, or 5dB, B=12dB, then M=A+B=12, 13, 14, 15, 16 or 17dB;
Application 4: When A=0, 1, 2, 3, 4, or 5dB, B=13dB, then M=A+B=13, 14, 15, 16, 17 or 18dB;

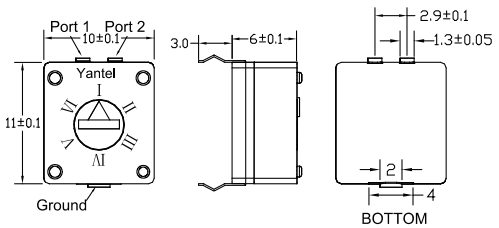


Example 2:
You need 2 sets(pieces) of VAD,**it can meet the attenuation range:0 to 20 dB by 1dB/step**
VAD(A): 0,1,2,3,4,5dB;
VAD(B): 0, 6,12,15,15,15dB;
You can get the attenuation value are:A+B=M dB
Application 1: When A=0, 1, 2, 3, 4, or 5dB, B=0dB, then M=A+B=0, 1, 2, 3, 4 or 5dB;
Application 2: When A=0, 1, 2, 3, 4, or 5dB, B=6dB, then M=A+B=6, 7, 8, 9, 10 or 11dB;
Application 3: When A=0, 1, 2, 3, 4, or 5dB, B=12dB, then M=A+B=12, 13, 14, 15, 16 or 17dB;
Application 4: When A=0, 1, 2, 3, 4, or 5dB, B=15dB, then M=A+B=15, 16, 17, 18, 19 or 20dB;

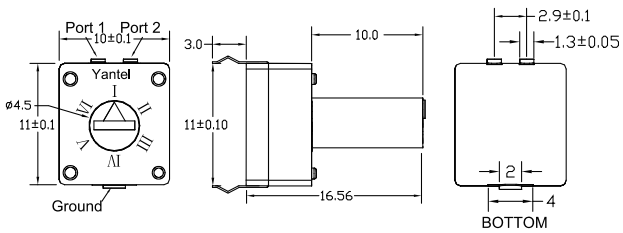


Outline Dimensions (unit: mm)

VAD DIP Package



VAD DIP with handling shaft



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New

Drum/Rotary Variable Attenuator
(VAX Series,step)

Yantel®
Key Patents Lead Microwave Tech

Features

- Input power: 2W,5W,10W
- Available in step adjusting
- Wide frequency range: DC ~6.0GHz,DC ~18GHz
- Low VSWR, Low insertion loss
- Sealed structure moisture-proof & damp-proof,can be work outdoors in harsh condition
- Easy to operate,adjustment results visually readable
- Step series has locking devices within each attenuation, shockproof capability
- Can reach over 5000 times adjustment.
- Easy to adjust,widely used in production line,or to be installed in the system & device for signal control

Applications

- DAS POI
- Indoor repeater
- Wireless signal coverage
- RF Labs

Single-circle Drum-type step attenuator

Model	Attenuation Range (dB)	Frequency Range	Step Value	VSWR (Max)	Nominal Impedance	Input Power CW
VAX0601P1	0~1	DC to 6GHz	0.1	1.5	50Ω	5W,10W
VAX061001	0~10	DC to 6GHz	1	1.5	50Ω	5W,10W
VAX069010	0~90	DC to 6GHz	10	1.5	50Ω	5W,10W

Dual-circle Drum-type step attenuator

Model	Attenuation Range (dB)	Frequency Range	Step Value	VSWR (Max)	Nominal Impedance	Input Power CW
VAX061101	0~11	DC to 6GHz	1	1.3	50Ω	5W,10W
VAX067001	0~70	DC to 6GHz	1	1.3	50Ω	5W,10W
VAX069001	0~90	DC to 6GHz	1	1.3	50Ω	5W,10W
VAX186901	069dB	DC-8	1	1.5	50	2W,5W
		8-12.4		1.6		
		12.4-18		1.75		

Dual-circle Rotary step attenuator

Model	Attenuation Range (dB)	Frequency Range	Step Value	VSWR (Max)	Nominal Impedance	Input Power CW
VAB061101	0~11	DC to 6GHz	1	1.3	50Ω	5W,10W
VAB067001	0~70	DC to 6GHz	1	1.3	50Ω	5W,10W
VAB069001	0~90	DC to 6GHz	1	1.3	50Ω	5W,10W

New

Programmable Step Attenuator DC-50GHz

Yantel®

Key Patents Lead Microwave Tech

Programmable step attenuators offer fast and precise signal-level control,with frequency up to 50 GHz. Combining low insertion loss with long life and excellent repeatability,

Specifications

- Frequency range: DC-50 GHz
- Attenuation: 0-11 dB, 1 dB step;
  0-60 dB, 10 dB step;
  0-65 dB, 5 dB step

Features

- Low insertion loss: <2.6 dB @ 50 GHz
- Long life: >1 million cycles
- Optional calibration data
- High accuracy
- Excellent reliability
- Program control/CNC can be customized
- Excellent high and low temperature performance
- Anti static ESD protection circuit

Applications

- Radar system
- Communication system
- Testing and measurement scenarios
- Customizable according to user scenarios

Model	Attenuation Range (dB)	Frequency Range (GHz)	Step Value (dB)	Insertion Loss (dB)	VSWR:1	Power (Watt)
DVA501101	0-11	DC-50	1	3.0 max.	3.0 max.	1
DVA506010	0-60	DC-50	10	2.6 max.	2.6 max.	1
DVA506505	0-65	DC-50	5	3.0 max.	3.0 max.	1

Application of Radar System and 6G Communication System

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Non-abrupt Change Variable Attenuator

VAS Series,Step Type (DC ~ 6GHz)

International patent product

China Patent No.:CN 2008 8 0001111

USA Patent No.:US 8,212,648 B2

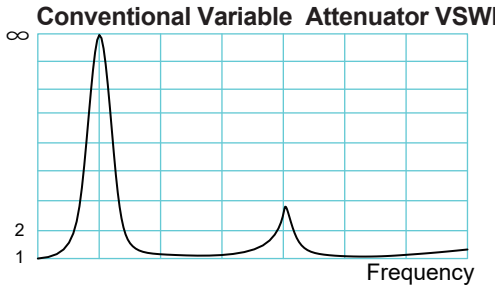
EU Patent No.:EP2190116A4

Yantel®

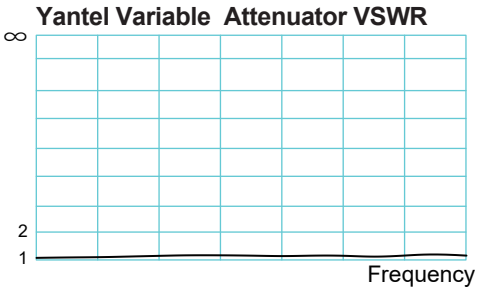
Key Patents Lead Microwave Tech

■ Abrupt change of reflection occurs in conventional variable attenuator when adjusting attenuation, resulted in RF Power Amplifier being burnt.

Conventional Variable Attenuator VSWR



Yantel Variable Attenuator VSWR



Features

- Using advanced microstrip technology, ultra-small size
- High RF performance, ultra-competitive price
- Wide frequency range: DC to 6 GHz
- Low VSWR :1.1 ~ 1.5
- Low attenuation tolerance, low insertion loss.
- Adjusting the transmitting (receiving) distance of RF signal precisely. Adjusting accuracy is limited to 5cm.
- Wide attenuation values available are 1, 2, 3, 4, 5, 6, 8, 9, 10 and 12 dB.
- High adjustment accuracy
- Power rating: 2W, 5W
- Impedance: 50Ω or 75Ω
- Switch repeatability avg.>10000 operations(5000 cycles) per switch.
- PC(Polycarbonate) switch, operating termperature up to 120℃
- It adopts an innovative technology, and thus it eliminates sudden big reflection in attenuators when attenuation is being adjusted, preventing the preliminary RF circuit(such as power amplifier) from being burnt, and keeping the system stable.
- Attenuation values are adjustable in power-on state, test data can be read continuously, no interruption.
- Connector Type: SMA, N, F, BNC etc. available
- Connector Position: Back Connectors or Left & right Connectors

Applications

- DAS POI
- Indoor Repeater
- Wireless Signal Coverage
- Mobile communication repeater station system
- Signal emitter inside buildings
- WLAN repeater station system
- Radar
- Lab test

Model Description

VAS ** (Type) ** (Attenuation Range) ** (Step Values) * (Connector Type) * (Max. Power) * (Connector Option) * (Connector Position) (Impedance)

Notes:
Type: 06 represents type number.
Attenuation Range: Maximum attenuation
Connector Type: SMA, N, F, BNC etc.
Max. Power: 2 and 5 are available, currently 2W and 5W are available.
Connector Option: “1” represents Female/Female, “2” represents Male/Female, “3” represents Male/Male.
Connector Position: “A” represents back connectors, without “A” represents left and right connectors.
Impedance:“B” represents 75Ω impedance, “no code” represents 50Ω impedance.

Specifications:

06 Series

● N Type,DC~3GHz,2W or 5W ● SMA Type,DC~4GHz or DC~5.8GHz,2W or 5W

Model	Attenuation Range (dB)	Step Values (dB)	Attenuation Accuracy Full Scale(dB)	Typical VSWR(:1)		Max. VSWR (:1)		Insertion Loss at 0 dB	Connector Type SMA/N/F/BNC Size (mm) for SMA/N	Package Type	
			DC ~ 3GHz	DC~3GHz	3~6GHz	DC~3GHz	3~6GHz	3GHz	L*W*H	Left & right Connectors	Back Connectors
2 switches, DC~6GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω① ,N type available											
VAS060903S2**	0 to 9	3	0~+1.2	1.3	1.5	1.35	1.6	0.65	51.1*23*10.5/ 81.4*32*16.0		
VAS061806S2**	0 to 18	6	0~+0.8	1.15	1.3	1.2	1.5	0.4			
VAS062010S2**	0 to 20	10	0~+1.0	1.1	1.3	1.1	1.5	0.4			
3 switches, DC~6GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω① ,N type available											
VAS062103S2**	0 to 21	3	0~+1.2	1.15	1.35	1.2	1.5	0.5	57.3*23*10.5/ 87.6*32*16.0		
VAS062505S2**	0 to 25	5	0~+1.1	1.15	1.35	1.2	1.5	0.5			
VAS063010S2**	0 to 30	10	0~+1.0	1.1	1.3	1.2	1.5	0.5			
4 switches, DC~6GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω① ,N type available											
VAS061501S2**	0 to 15	1	0~+1.55	1.15	-	1.35	-	1.0	54.4*23*20.9/ 65.5*23*10.5/ 95.8*32*16.0		
VAS061501S5**	0 to 15	1	0~+1.75	1.25	-	1.45	-	1.1			
VAS061501S5A*	0 to 15	1	0~+1.75	1.25	-	1.45	-	1.1			
VAS062402S2**	0 to 24	2	0~+1.4	1.1	1.3	1.2	1.5	0.7			
VAS063003S2**	0 to 30	3	0~+1.0	1.15	1.35	1.2	1.5	0.7			
VAS063505S2**	0 to 35	5	0~+0.9	1.15	1.35	1.3	1.5	0.7			
VAS064010S2**	0 to 40	10	0~+1.0	1.1	1.15	1.2	1.3	0.7			
6 switches, DC~6GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω① ,N type available											
VAS0404H5S21**	0 to 4.5	0.1	0~+1.0	1.25	-	1.3		0.7	87.9*25*10.5/ 70.2*27*22.4/ 118.2*32*16.0		
VAS068P4P2S2**	0 to 8.4	0.2	0~+2.0	1.2	1.8	1.3	1.5	1.2			
VAS0625HS2**	0 to 25.5	0.5	0~+2.0	1.3	1.5	1.35	1.6	1.2			
VAS063501S2**	0 to 35	1	0~+2.0	1.25	-	1.45	-	1.3			
VAS063501S5**	0 to 35	1	0~+2.0	1.25	-	1.45	-	1.3			
VAS064001S5**	0 to 40	1	0~+2.0	1.25	-	1.45	-	1.3			
VAS064501S2**	0 to 45	1	0~+2.0	1.25	-	1.45	-	1.3			
VAS064402S2**	0 to 44	2	0~+1.8	1.2	1.4	1.3	1.5	1.2			
VAS064503S2**	0 to 45	3	0~+1.5	1.2	1.4	1.3	1.5	1.2			
VAS065505S2**	0 to 55	5	0~+2.0	1.15		1.3	1.5	1.3			
VAS066010S2**	0 to 60	10	-1.5~+2.0	1.2	-	1.4	-	1.4			
9 switches, DC~6GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω① ,N type available											
VAS0636P2**	0 to 36.4	0.2	0~+3.5	1.2	1.4	1.3	1.5	1.8	116.5*25*10.5/ 146.8*32*16.0	* Plastic screw driver for adjusting attenuation	
VAS0655HS2**	0 to 55.5	0.5	0~+2.0	1.2	1.4	1.3	1.6	1.8			
VAS036501F**	0 to 65	1	0~+2.0	1.5	-	1.8	-	1.2			
VAS066501S2**	0 to 65	1	0~+3.5	1.3	-	1.5	-	2.0			
VAS067402S2**	0 to 74	2	0~+2.0	1.15	1.35	1.2	1.5	1.8			
VAS067203S2**	0 to 72	3	0~+3.5	1.2	1.4	1.3	1.6	2.3			
VAS068505S2**	0 to 85	5	0~+2.0	1.2	1.4	1.3	1.6	1.8			
VAS069010S2**	0 to 90	10	0~+3.0	1.2	1.3	1.3	1.5	2.0			
12 switches, DC~6GHz, Average Power 2W or 5W,Impedance 50Ω or 75Ω① ,N type available											
VAS069501S2**	0 to 95	1	0~+3.0	1.15	-	1.35	-	2.5	117.6*27*22.4/ 128.8*27*11.7		
VAS069501S5**	0 to 95	1	±2.5	1.2	-	1.4	-	1.5			
VAS0610001S2**	0 to 100	1	0~+3.0	1.15	-	1.35	-	2.5			
VAS0610001S2A*	0 to 100	1	0~+3.0	1.15	-	1.35	-	2.5			
VAS0611001S2**	0 to 110	1	±3.0	1.15	-	1.35	-	2.2			

07 Series

● N Type,DC~5.8GHz,High attenuation accuracy,2W or 5W ● SMA Type,DC~5.8GHz,High attenuation accuracy,2W or 5W

Model	Attenuation Range (dB)	Step Values (dB)	Attenuation Accuracy Full Scale(dB)		Typical VSWR(:1)		Max. VSWR (:1)		Insertion Loss at 0 dB		Connector Type SMA/N/F/BNC Size (mm) for SMA/N	Package Type
			DC~4GHz	4~5.8GHz	DC~4GHz	4~5.8GHz	DC~4GHz	4~5.8GHz	DC~4GHz	4~5.8GHz	L*W*H	
4 switches, DC~5.8GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω①												
VAS071501*5**	0 to 15	1	-1.0~+2.0	0~+4.5	1.20	1.30	1.30	1.65	1.2	2.0	46.4*23*11.15(SMA) 47*28*19.5(N)	
VAS072402*5**	0 to 24	2	-1.1~+2.1	0~+6.5	1.20	1.30	1.40	1.65	0.8	1.25		
VAS073505*5**	0 to 35	5	-1.1~+2.1	0~+6.5	1.20	1.30	1.40	1.65	0.8	1.25		
VAS074010*5**	0 to 40	10	-1.2~+3.0	0~+6.5	1.30	1.30	1.65	1.65	0.8	1.25		
6 switches, DC~5.8GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω①												
VAS073501*2**	0 to 35	1	0~+3.0	0~+6.0	1.20	1.35	1.45	1.65	1.7	3.2	62.2*25*11.65(SMA) 63*28*19.5(N)	
VAS073501*5**	0 to 35	1	-1.0~+3.5	0~+7.0	1.20	1.30	1.40	1.65	1.4	1.5		
VAS074402*5**	0 to 44	2	-1.6~+3.5	-4.0~+10	1.25	1.30	1.50	1.65	1.2	2.0		
VAS074503*5**	0 to 45	3	-1.5~+4.5	0~+10	1.30	1.40	1.60	1.75	1.0	1.5		
VAS0725H*2**	0 to 25.5	0.5	0~+3.5	0~+6.0	1.20	1.35	1.45	1.65	1.7	3.2		
7 switches, DC~5.8GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω①												
VAS074501*2**	0 to 45	1	-0.3~+3.5	-6.0~+6.0	1.20	1.30	1.50	1.55	2.2	3.5	70.9*28*19.5(N)	
VAS074501*5**	0 to 45	1	-1.0~+3.0	0~+6.0	1.25	1.35	1.50	1.65	1.8	3.2		
9 switches, DC~5.8GHz, Average Power 2W or 5W, Impedance 50Ω or 75Ω①												
VAS076501*2**	0 to 65	1	0~+3.5	-2.0~+7.0	1.10	1.25	1.35	1.55	2.6	4.2	85.5*25*11.65(SMA) 86.6*28*19.5(N)	
VAS076501*5**	0 to 65	1	-1~+3.0	-1.0~+6.0	1.25	1.35	1.50	1.70	1.5	2.5		
VAS077402*2**	0 to 74	2	0~+3.5	-2.0~+7.0	1.10	1.25	1.35	1.60	2.6	4.2		
VAS077402*5**	0 to 74	2	-2~+3.5	-2.0~+7.0	1.10	1.25	1.50	1.70	1.5	2.5		
VAS079010*2**	0 to 90	10	0~+3.0	-5.0~+5.0	1.10	1.25	1.35	1.55	3.0	5.5		
VAS079010*5**	0 to 90	10	-2~+3.0	-5.0~+5.0	1.10	1.25	1.50	1.70	1.5	2.5		

Note: ① For detailed specifications of 75 ohm attenuator, please check with our sales representatives. ② Custom attenuation value is available.

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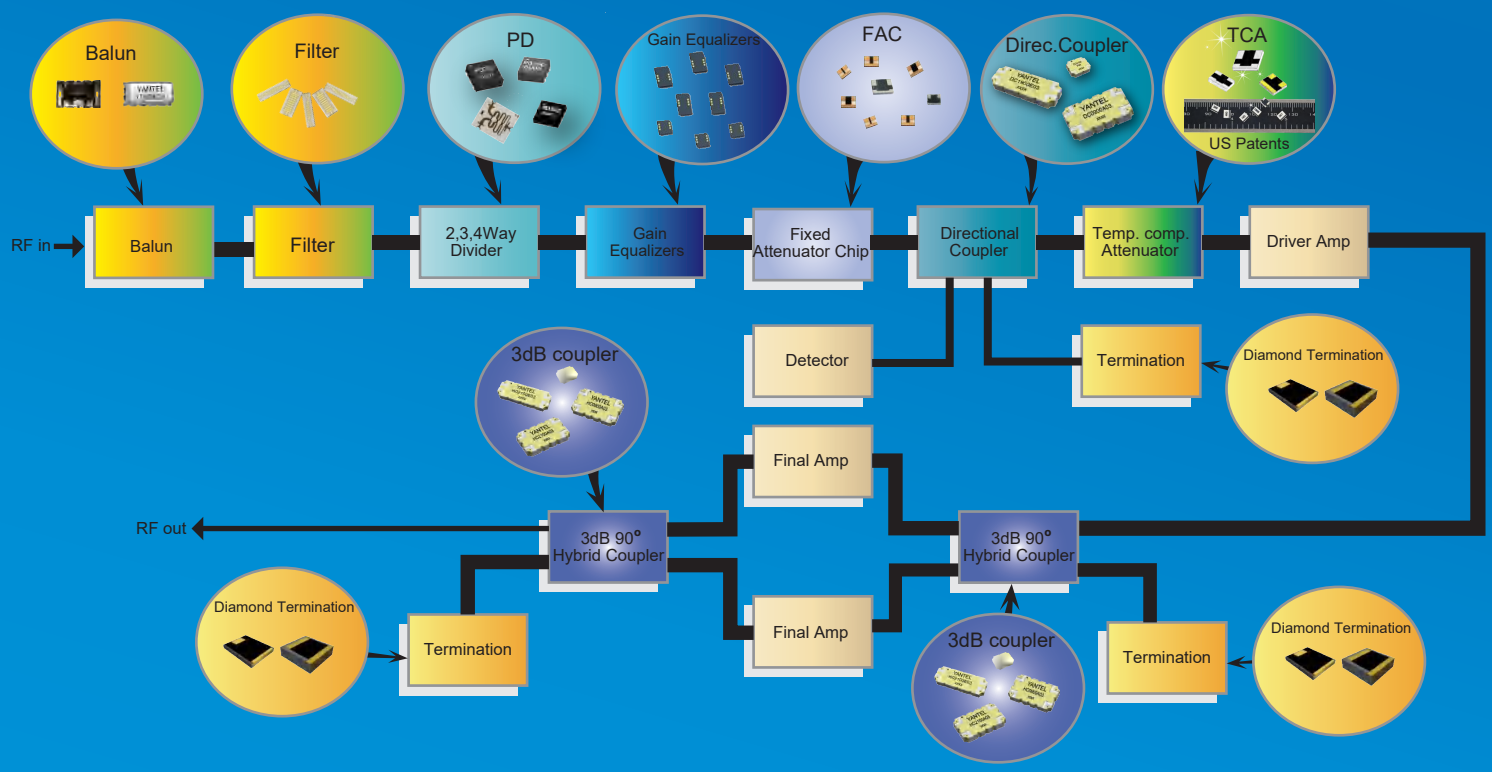
Key Patents Lead Microwave Tech

Passive Solutions of RF & Microwave Systems



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