

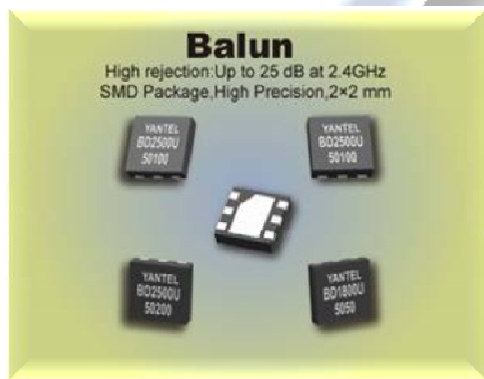


Yantel Products Applied to GNSS



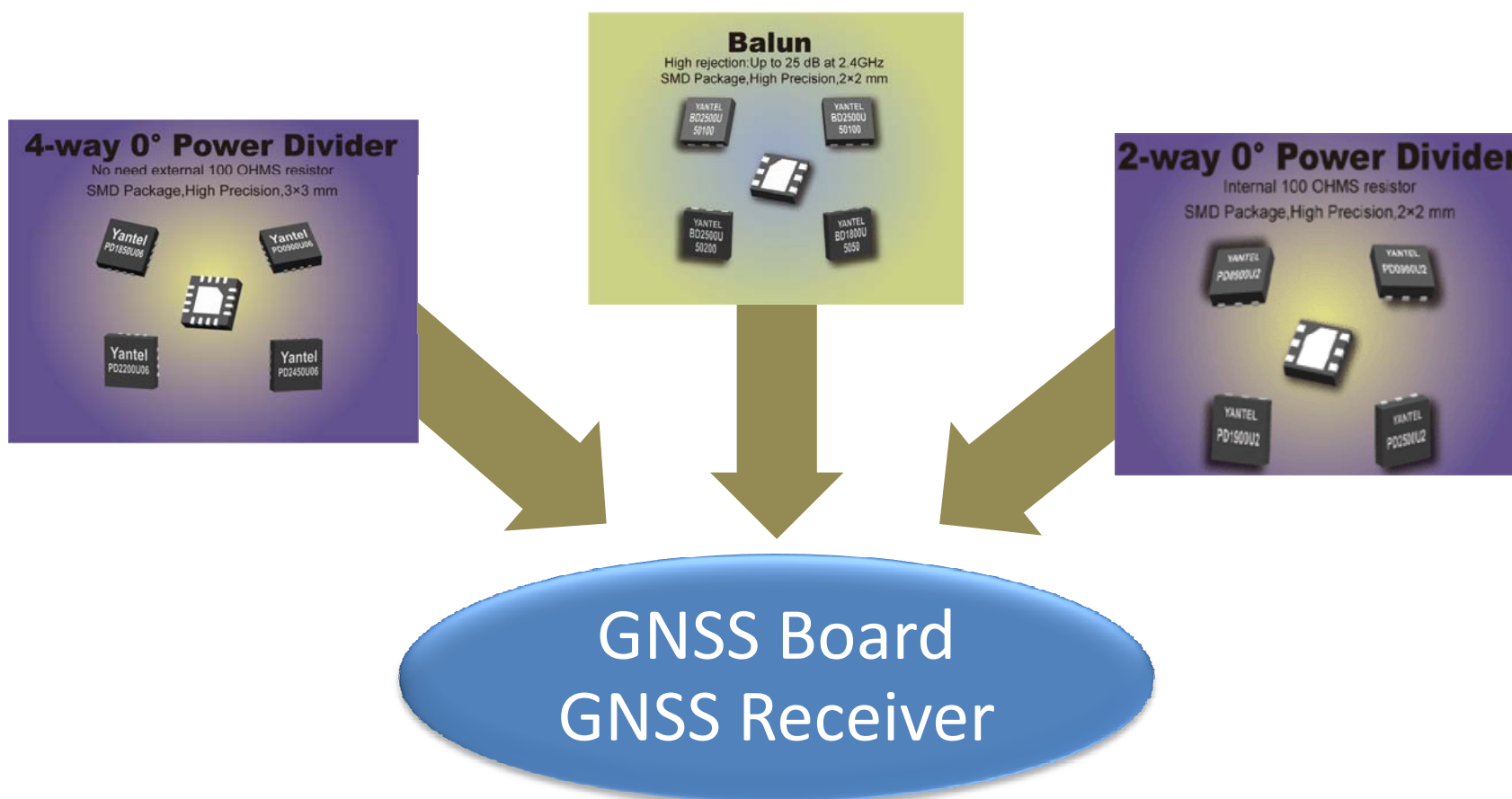
ISO9001-2008





2-way and 4-way Power Divider/Combiner IC and Balun IC

Applied to GNSS Board and Receiver



2-way Power Divider/Combiner IC

Applied to Dual System such as GPS + Beidou
etc



Part No.	Freq. Range (GHz)	Power (W) as a divider	Power (W) as a combiner	Package Size L×W (mm)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD1500U03-140	1.35~1.65	2	1	2X2	0.35	0.1	0.5	20	1.2	1.2
PD1500U03W	1.00~2.00	2	1	2X2	0.7	0.1	0.5	10~20	1.5	1.45

For more details, please visit: http://www.yantel-corp.com/en/products/products1_183.html

4-way Power Divider /Combiner IC

Applied to Four System GPS + Beidou+ Galileo +
Glonass



Part No.	Freq. Range (MHz)	Power(W) as a divider	Power (W) as a combiner	Package Size L×W	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD1400U06	1200~1650	2	0.5	3X3	0.6	0.27~0.35	±4	10~32	1.12~1.9	1.05~1.85

For more details, please visit: http://www.yantel-corp.com/en/products/products1_184.html

Power Divider/Combiner IC Application Solution on GNSS board and Receiver

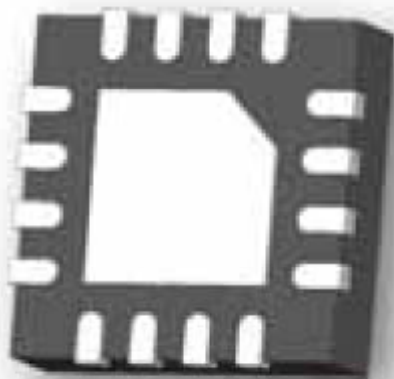
Microstrip Circuit Disadvantages:

- Larger in Size
- Need external matching resistor
- Lower power and inaccurate match
- Not excellent isolation and VSWR performance

2-way and 4-way Divider/Combiner IC Advantages:

- Small size. High integration
- No need external matched resistor
- Excellent amplitude & phase balance
- Excellent isolation and VSWR performance
- Low power consumption
- More competitive price

2-way and 4-way Divider/Combiner IC



Advantages:

- No need external 100Ω Resistor
- Built with leading edge RFIC design technology
- Low Loss & Low VSWR
- Excellent amplitude & phase balance
- High Isolation
- Ultra small size: 2.0 x 2.0 mm or 3.0 x 3.0 mm
- Excellent repeatability
- Tape & Reel
- Average Power: 2 Watts @ divider 1Watts @ combiner (2-way Divider/Combiner IC). 2 Watts as a divider 0.5 Watts as a combiner (4-way Divider/Combiner IC)

2-way Divider/Combiner IC Specification

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 (deg)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD0500U03-210	280~610	2	1	2X2	0.6	0.1	0.5	12~20	1.4	1.2
PD0900U03-070	800~1000	2	1	2X2	0.4	0.1	0.5	20	1.2	1.12
PD1500U03-140	1350~1650	2	1	2X2	0.35	0.1	0.5	20	1.2	1.2
PD1500U03W	1000~2000	2	1	2X2	0.7	0.1	0.5	10	1.5	1.45
PD1700U03W	600~2900	2	1	3X3	0.7	0.1	0.5	11~27	1.2~1.6	1.1~1.6
PD1850U03-080	1650~2050	2	1	2X2	0.4	0.1	0.5	20	1.2	1.17
PD2150U03-090	1900~2350	2	1	2X2	0.4	0.1	0.5	20	1.2	1.17
PD2450U03-100	2200~2650	2	1	2X2	0.4	0.1	0.5	20	1.2	1.18
PD3550U03-110	3300~3800	2	1	2X2	0.4	0.1	0.5	20	1.2	1.2

For more P/N and details, please visit : http://www.yantel-corp.com/en/products/products1_183.html

4-way Divider/Combiner IC Specification

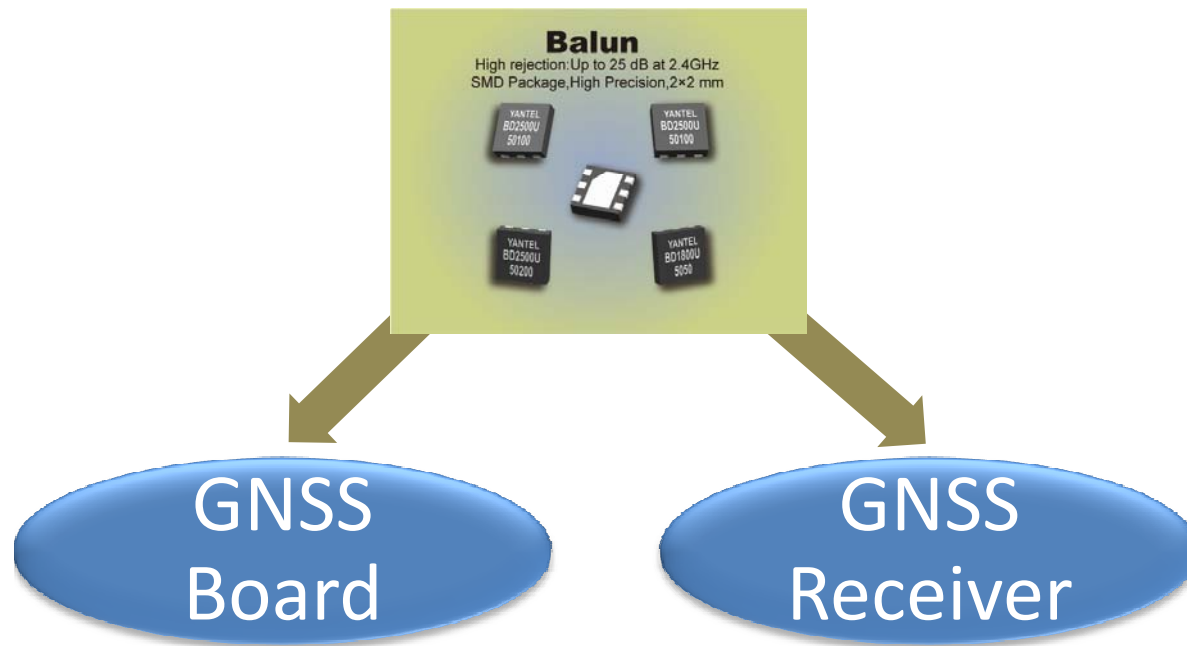
Part No.	Freq. Range (MHz)	Power (W) as a divider	Power (W) as a combiner	Package Size L×W	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Isolation (dB)	Input VSWR (:1)	Output VSWR (:1)
PD0900U06-150	820~960	2	0.5	3X3	0.8	±0.2	±1.5	22	1.3	1.2
PD1400U06	1200~1650	2	0.5	3X3	0.6	0.27~0.35	±4.0	10~32	1.12~1.9	1.05~1.85
PD1850U06-160	1700~2000	2	0.5	3X3	0.8	±0.35	±1.5	21	1.35	1.25
PD2200U06-170	1700~2700	2	0.5	3X3	0.6~1.1	±0.35	±2.0	12~35	1.8	1.6
PD2450U06-180	2300~2700	2	0.5	3X3	0.7	±0.4	±2.0	18	1.35	1.25

For more P/N and details, please visit: http://www.yantel-corp.com/en/products/products1_184.html

Balun IC

Applied to GNSS Board and Receiver

Transfer one way single end input signal into two way differential output signal



Advantages:

- 850~2500MHz
- 0.85mm Height Profile
- 50 Ohm to 2x100 Ohm
- High CMRR
- Low Insertion Loss
- Input to Output DC Isolation
- Surface Mountable
- Tape & Reel
- Non-conductive Surface
- RoHS Compliant

Yantel Balun IC Specification

Part No.	Freq. Range (MHz)	Power (W)	Size LXW (mm)	Unbalanced Port Impedance (Ω)	Balanced Port Impedance (Ω)	Insertion loss (dB)	Amplitude Balance (dB)	Phase Balance (deg)	Return Loss (dB)	CMRR (dB)
BD0900U510-1301	800~1000	2	2X2	50	100	1.3	0.2	2	10	37
BD0900U520-1300	850~980	2	2X2	50	200	1.8	0.35	2	10	37
BD1200U510-1306	1100~1300	2	2X2	50	100	1.3	0.3	4	10	32
BD1200U520-1305	1100~1300	2	2X2	50	200	1.5	0.5	5	10	35
BD1600U510-1326	1500~1800	2	2X2	50	100	1.3	0.5	5	10	27
BD1600U520-1325	1400~1600	2	2X2	50	200	1.1	0.4	4	10	30
BD1800U510-1336	1700~1900	2	2X2	50	100	1.2	0.3	5	10	27
BD1800U520-1335	1600~1900	2	2X2	50	200	1.4	0.3	6	10	28
BD2100U510-1351	1900~2300	2	2X2	50	100	1.1	0.6	5	10	30
BD2100U520-1350	1900~2100	2	2X2	50	200	1.3	0.6	3	10	31
BD2400U510-1366	2100~2500	2	2X2	50	100	1.3	0.7	4	10	30
BD2400U520-1365	2300~2500	2	2X2	50	200	1.3	0.8	4	10	28

For more P/N and details, please visit: http://www.yantel-corp.com/en/products/products1_182.html

3dB 90° Hybrid Coupler

Applied to Antenna as Phase Shifter



GNSS
Antenna

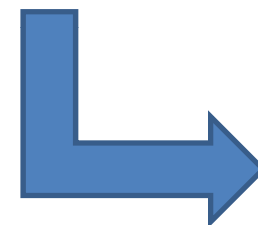
SMD 3dB 90° Hybrid Coupler as Phase Shifter

Applied to GPS Antenna, Beidou Antenna, Galileo Antenna, Glonass Antenna, Satellite Antenna

Advantages:

- Excellent Performance
- Low Loss & Low VSWR
- Good Repeatability
- CTE Compatible with FR4,G-10,RF-35,RO4350B and polyimide
- Immersion gold, prevent surface oxidation & scratch
- High Reliability
- Low Cost
- SMD package
- Tap & Reel Package available
- RoHS Compliant

3dB 90° Hybrid Coupler
Low Loss & Low VSWR. High Reliability



**GNSS
Antenna**

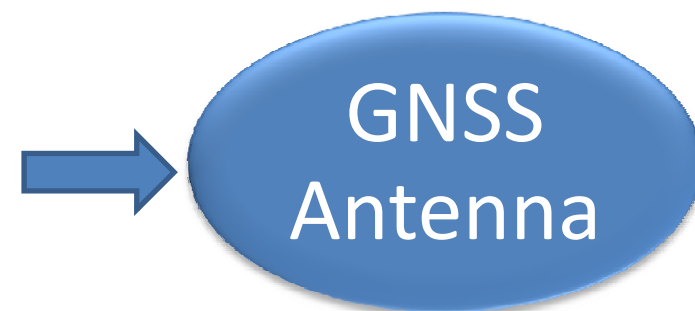
Part No.	Freq. Range	Power	Package Size	Return Loss	Insertion loss	Amplitude Balance (dB)	Phase Balance (deg)	Isolation
	(GHz)	(W)	L×W	(dB)	(dB)			(dB)
	$f_L \sim f_U$		(mm)					
HC1400P03	1.2 ~ 1.6	30	6.35×5.08	20.8	0.3	±0.35	90±3.0	20
HC1400P03-L	1.1 ~ 1.6	30	6.35×5.08	20.8	0.3	±0.35	90±3.0	20
HC1600P03	1.55 ~ 1.62	30	6.35×5.08	20.8	0.15	±0.25	90±2.0	27

3dB 90° Hybrid Coupler IC as Phase Shifter

Applied to GPS Antenna, Beidou Antenna, Galileo Antenna, Glonass Antenna, Satellite Antenna

Advantages:

- Built with leading edge RFIC design technology
- Low Loss & Low VSWR
- High isolation
- Excellent amplitude & phase balance
- Ultra small size: 2.0 x 2.0 mm
- Excellent repeatability



Part No.	Freq. Range	Power	package Size L X W	Package	Insertion	Amplitude	Phase	Isolation	Return
	(MHz)	(W)	(mm)	type	loss (dB)	Balance (dB)	Balance	(dB)	Loss (dB)
HC1150U03-190	1120-1260	4	2 X 2	A	0.35	±0.5	±1.5	25	30
HC1650U03-200	1620-1830	4	2 X 2	A	0.35	±0.5	±1.5	25	30

For more P/N and details, please visit: http://www.yantel-corp.com/en/products/products1_180.html

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Thanks for your care and support !