

Broadcast (CATV) Temperature Compensation Attenuator DC~3GHz 75Ω 2W 1~6dB N3~N9
Part No. Descriptions

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Series	Frequency	Attenuation	Temperature Coefficient Code	Metallization Options	Termination	Plating Options
BTCA	03	(01 to 6) 1dB to 6 dB	(N3 to N9)	Planar(no code), W3	(no code)=lead free or (S)=Lead(Pb)	

Part No.	Frequency Range (GHz)	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation (dB/dB/°C)	Max. VSWR (:1) @1GHz@25°C	Max. Input Power (W)	Attenuation Accuracy (dB)
BTCA0601N*	DC-3	1	N3~N9	-0.003~ -0.009	1.2	2	±0.5
BTCA0602N*	DC-3	2	N3~N9	-0.003~ -0.009	1.2	2	±0.5
BTCA0603N*	DC-3	3	N3~N9	-0.003~ -0.009	1.2	2	±0.5
BTCA0604N*	DC-3	4	N3~N9	-0.003~ -0.009	1.2	2	±0.5
BTCA0605N*	DC-3	5	N3~N9	-0.003~ -0.009	1.2	2	±0.5
BTCA0606N*	DC-3	6	N3~N9	-0.003~ -0.009	1.2	2	±0.5

General Specifications

- Frequency Range DC to 3GHz
- Attenuation 4dB
- Attenuation Accuracy at 25°C ±0.5dB@1GHz
- VSWR 1.20:1 Max. @1GHz at 25°C
- Nominal Impedance 75Ohms
- Power Rating 2 Watts CW
- Power Derating 100% @ 125°C
Derates to 0% @ 150°C
- Operating Temperature -55°C to +150°C
- Temperature Coefficient over Operating Temperature Range: See Table Above.
Temperature Coefficient Tolerance: ±0.001dB/dB/°C.
- Substrate: Alumina (Al₂O₃)
- Resistive material: Thick film
- Terminal material: Thick film, Nickel barrier with pure tin plate (lead free) or with tin (Sn90) plate (10% lead contained)
- Protective Coating: Thick film (ethyl acetate)
- Package Outline: See Sheet 3.
- Workmanship: per MIL-PRF-55342.
- Electrostatic Discharge Control: per MIL-STD-1686.

Unit Marking dB Value (XX), Direction of Shift (N) and TCA Shift (X), Lead free (F).
Legibility and Permanency: per MIL-STD-130.

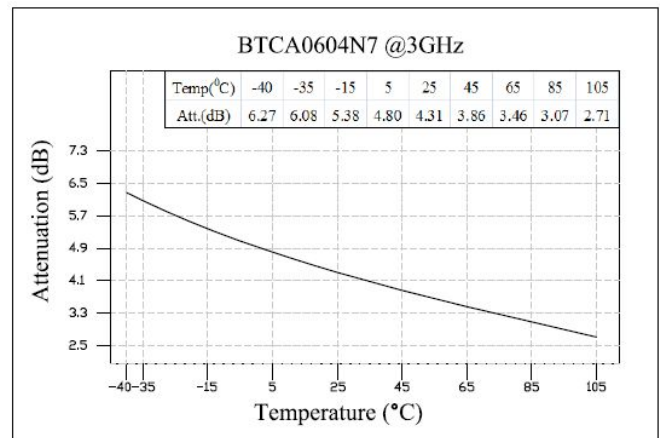
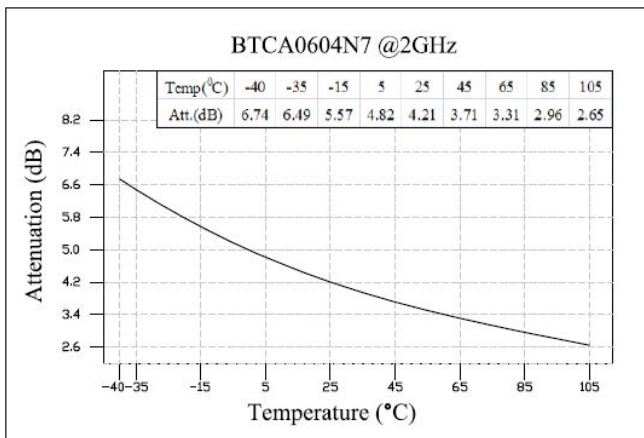
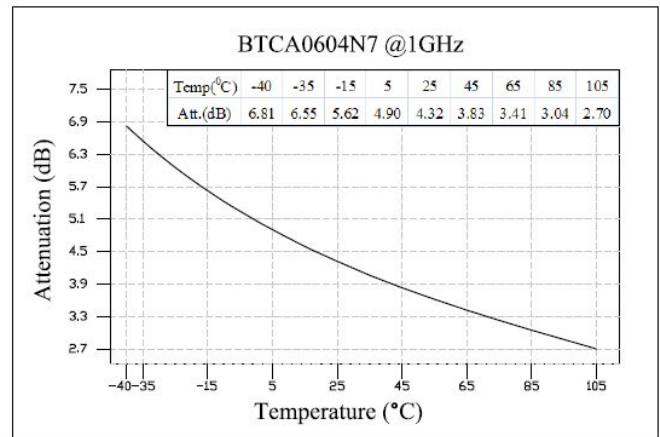
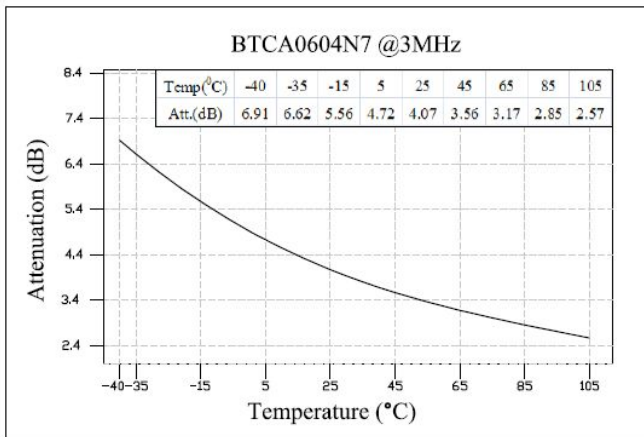
Quality Assurance

- Sample inspect per ANSI/ASQC Z1.4 general inspection, LEVEL II, AQL = 1.0.
 - 1.1 Visual and mechanical examination for conformance to outline package requirements.
- Select five (5) Units from lot measure attenuation from DC to 3GHz every 20°C over the temperature range -55°C to +125°C.
 - 2.1 Calculate, using linear regression, the slope of the curve.
 - 2.2 Calculate TCA using the following formula: TCA = Slope / Attenuation @ 25°C.
- Test data required for customer.

Yantel Corporation

Add: 3F, Building 3, Southern District 2 of Zhongguan Honghualing Industrial Park, Xili, Nanshan, Shenzhen, China
Tel: 86-755-8355-1886 Fax: 86-755-8355-2533

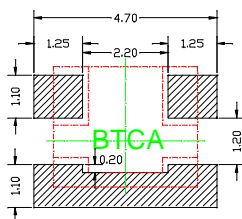
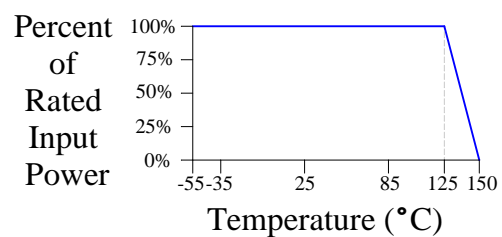
For detailed performance specs & shopping online see Yantel web site : www.yantel-corp.com

BTCA Response


Temp(°C) \ ATT(dB)	3MHz	1GHz	2GHz	3GHz
-40	6.91	6.81	6.74	6.27
-35	6.62	6.55	6.49	6.08
-15	5.56	5.62	5.57	5.38
5	4.72	4.90	4.82	4.80
25	4.07	4.32	4.21	4.31
45	3.56	3.83	3.71	3.86
65	3.17	3.41	3.31	3.46
85	2.85	3.04	2.96	3.07
105	2.57	2.70	2.65	2.71

Recommended Layout

All dimensions shown in mm unless stated otherwise


Power Rating & Derating Curve

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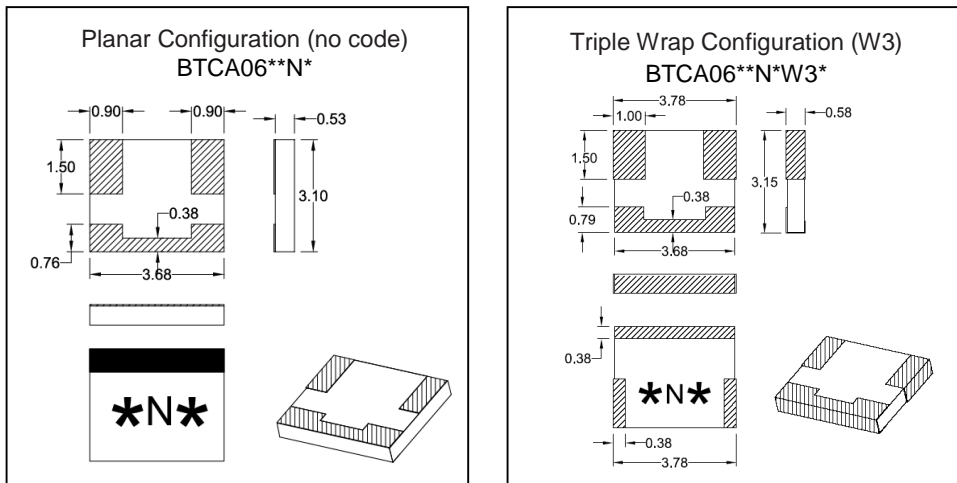
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Package Outlines

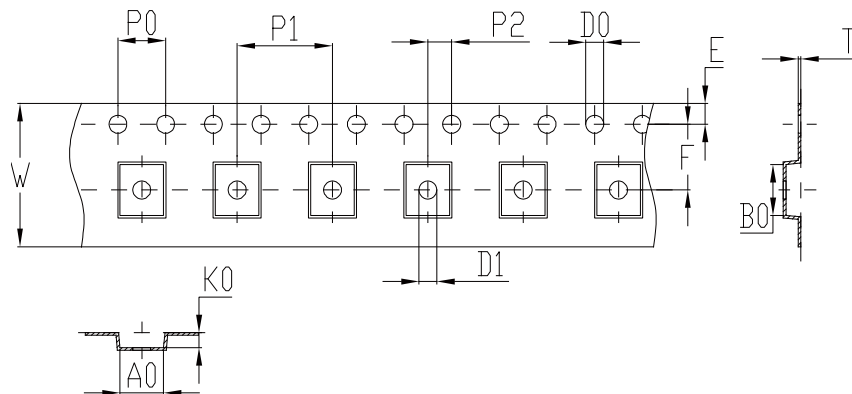
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Note: Dimension tolerance in ± 0.10 otherwise mention. * represents number



Tape & Reel Drawing

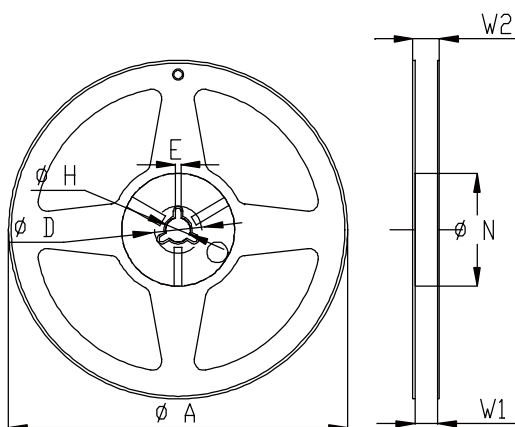
All dimensions shown in mm unless stated otherwise



Notice:

- A. 10 Sprocket hole pitch cumulative tolerance is 0.2mm.
- B. Carrier camber shall be not more than 1mm per 100mm through a length of 250mm.
- C. All dimensions meet EIA-418-B requirements.
- D. A0 & B0 measured as indicated.
- E. K0 measured from a place on the inside bottom of the pocket to top surface of carrier.
- F. Material: PE 100
- G. Thickness: 0.23 ± 0.05 mm
- H. 1500 units (maximum) / T&R

symbol	A0	B0	K0	P0	P1	P2
spec	3.65 ± 0.1	4.25 ± 0.1	1.25 ± 0.1	4.0 ± 0.1	8.0 ± 0.1	2.0 ± 0.1
symbol	W	T	E	F	D0	D1
spec	12.0 ± 0.3	0.23 ± 0.05	1.75 ± 0.1	5.5 ± 0.1	$\Phi 1.5^{+0.1}_{-0.0}$	$\Phi 1.5$ min



Symbol	Dimensions(mm)
A	$180^{+0/-3}$
N	$60^{+1/-0}$
W1	12.0 ± 0.3
W2	14 ± 1.0
D	25 ± 0.8
H	13 ± 0.2
E	3 ± 0.5

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