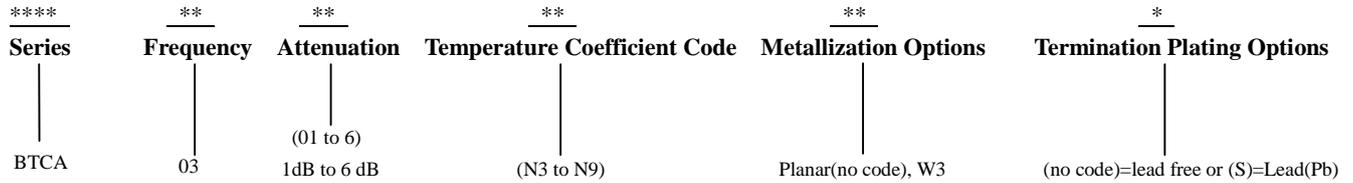


**Broadcast (CATV) Temperature Compensation Attenuator    DC~3GHz    75Ω    2W    1~6dB    N3~N9**

**Part No. Descriptions**


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

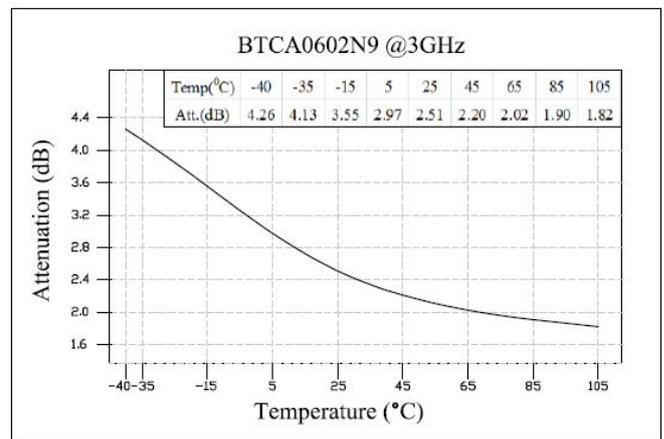
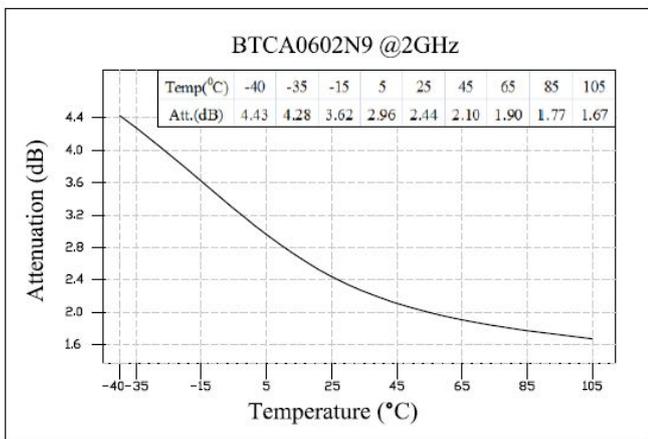
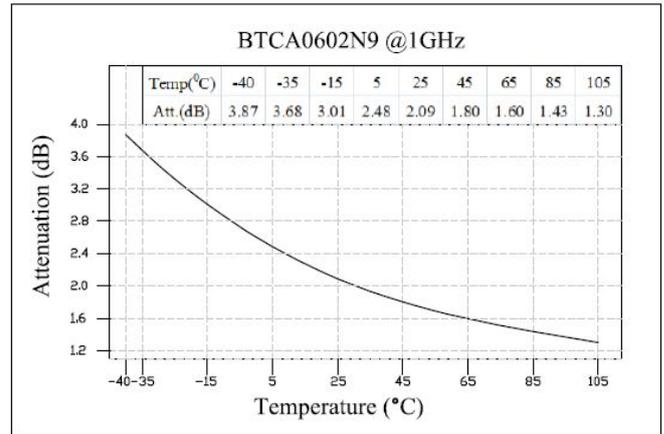
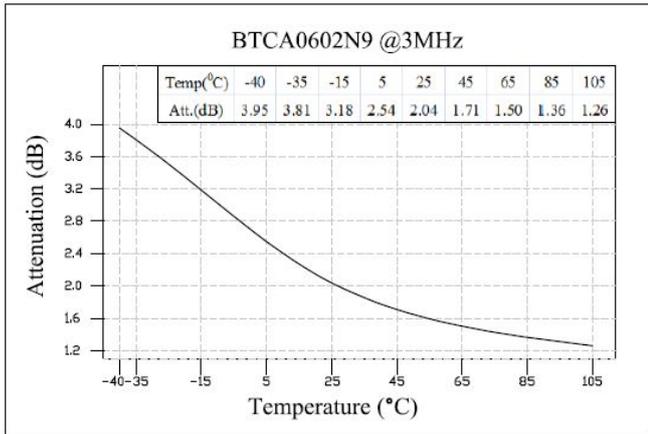
**General Specifications**

- |   |  |
|---|--|
| 1. Frequency Range  | DC to 3GHz   |
| 2. Attenuation  | 2dB  |
| 3. Attenuation Accuracy   | at 25°C ±0.5dB@1GHz                                |
| 4. VSWR   | 1.20:1 Max. @1GHz at 25°C                          |
| 5. Nominal Impedance  | 75Ohms   |
| 6. Power Rating   | 2 Watts CW   |
| 7. Power Derating   | 100% @ 125°C<br>Derates to 0% @ 150°C              |
| 8. Operating Temperature  | -55°C to +150°C                                    |
| 9. Temperature Coefficient over Operating Temperature Range: See Table Above.   | Temperature Coefficient Tolerance: ±0.001dB/dB/°C. |
| 10. Substrate: Alumina (Al2O3)  |  |
| 11. Resistive material: Thick film  |  |
| 12. Terminal material: Thick film, Nickel barrier with pure tin plate (lead free) or with tin (Sn90) plate (10% lead contained) |  |
| 13. Protective Coating: Thick film (ethyl acetate)  |  |
| 14. Package Outline: See Sheet 3.   |  |
| 15. Workmanship: per MIL-PRF-55342.   |  |
| 16. Electrostatic Discharge Control: per MIL-STD-1686.  |  |

**Unit Marking**    dB Value (XX), Direction of Shift (N) and TCA Shift (X) , Lead free (F) or standard parts, compliant with RoHS and is lead exempted(no code).  
 Legibility and Permanency: per MIL-STD-130.

**Quality Assurance**

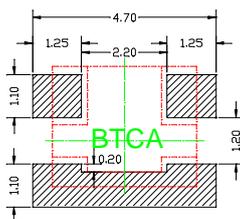
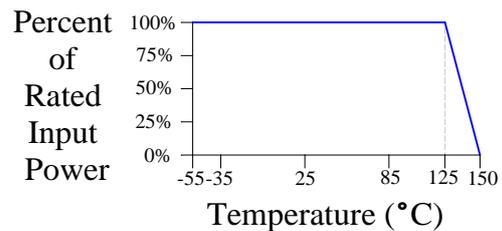
1. Sample inspect per ANSI/ASQC Z1.4 general inspection, LEVEL II, AQL = 1.0.
  - 1.1 Visual and mechanical examination for conformance to outline package requirements.
2. Select five (5) Units from lot measure attenuation from DC to 3GHz every 20°C over the temperature range -55°C to +125°C.
  - 2.1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

**BTCA Response**


Statistical Table of Attenuation(typ.) VS Temperature				
Temp(°C) \ ATT(dB)	3MHz	1GHz	2GHz	3GHz
-40	3.95	3.87	4.43	4.26
-35	3.81	3.68	4.28	4.13
-15	3.18	3.01	3.62	3.55
5	2.54	2.48	2.96	2.97
25	2.04	2.09	2.44	2.51
45	1.71	1.80	2.10	2.20
65	1.50	1.60	1.90	2.02
85	1.36	1.43	1.77	1.90
105	1.26	1.30	1.67	1.82

**Recommended Layout**

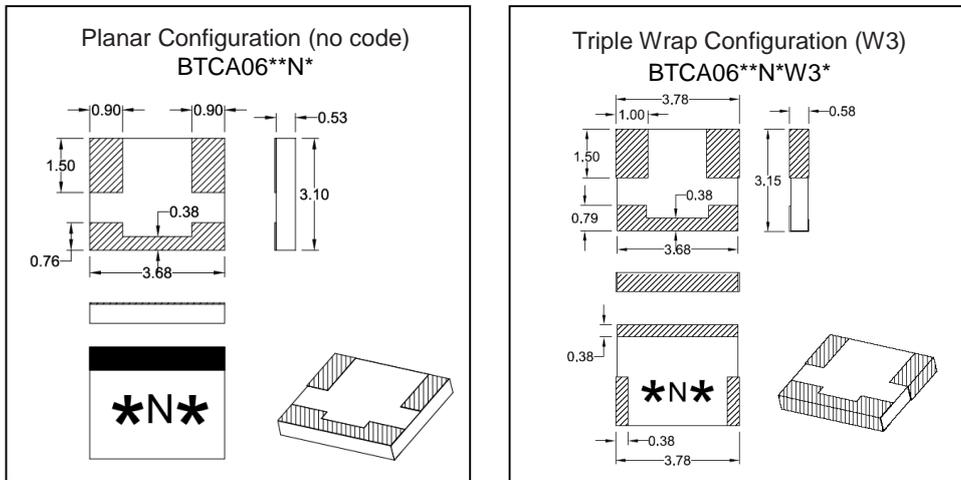
All dimensions shown in mm unless stated otherwise


**Power Rating & Derating Curve**


### Package Outlines

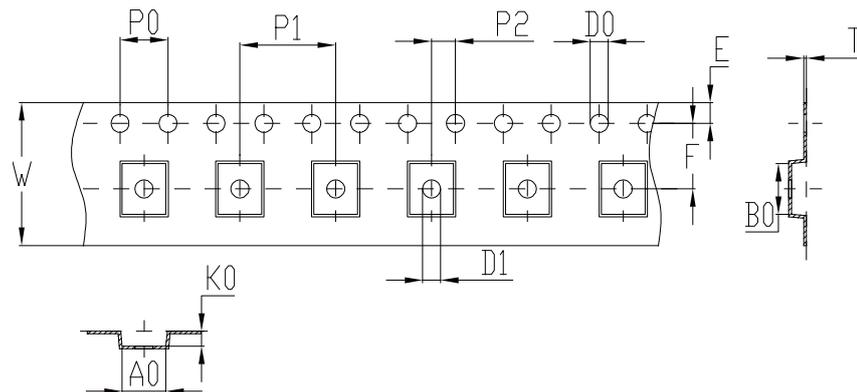
All dimensions shown in mm unless stated otherwise

Note: Dimension tolerance in  $\pm 0.10$  otherwise mention. \* represents number



### Tape & Reel Drawing

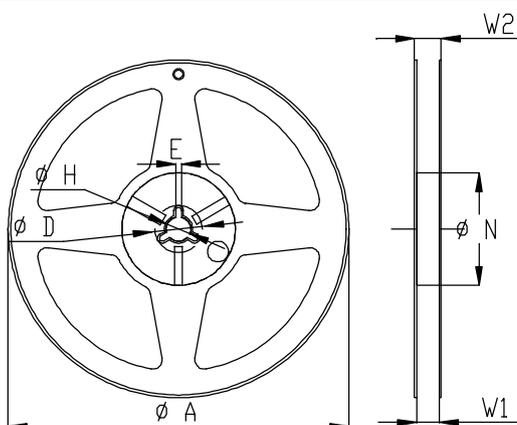
All dimensions shown in mm unless stated otherwise



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:  $0.23 \pm 0.05$ mm
- H. 1500 units (maximum) / T&R

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



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