

Part No. Descriptions

*** Series	** Frequency	** Attenuation	** Temperature Coefficient Code	** Metallization Options	* Termination Plating Options
STCA,	06	(01 to 10) 1dB to 10 dB	N3 to N10	Planar(no code), W1, 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 (mW)	Attenuation Accuracy (dB)
STCA0601N*	DC-6	1	N3~N9	-0.003~ -0.009	1.20	100	±0.5
STCA0602N*	DC-6	2	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0603N*	DC-6	3	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0604N*	DC-6	4	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0605N*	DC-6	5	N3~N11	-0.003~ -0.011	1.20	100	±0.5
STCA0606N*	DC-6	6	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0607N*	DC-6	7	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0608N*	DC-6	8	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0609N*	DC-6	9	N3~N10	-0.003~ -0.010	1.20	100	±0.5
STCA0610N*	DC-6	10	N3~N10	-0.003~ -0.010	1.20	100	±0.5

General Specifications

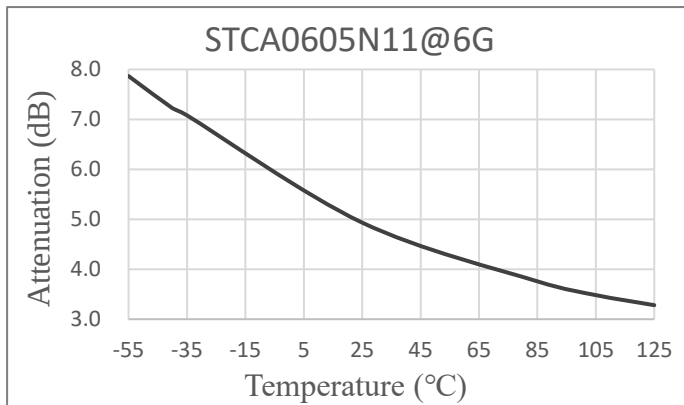
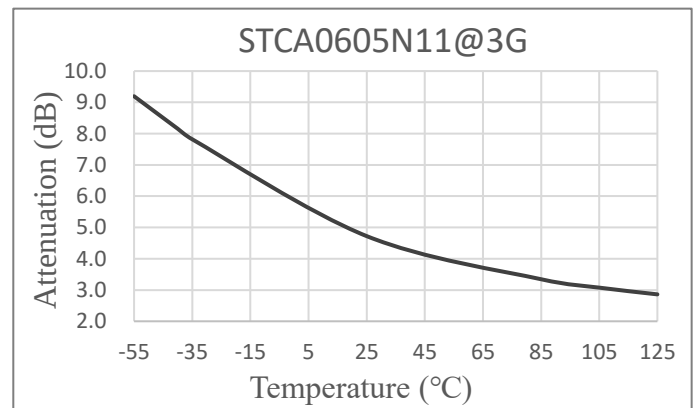
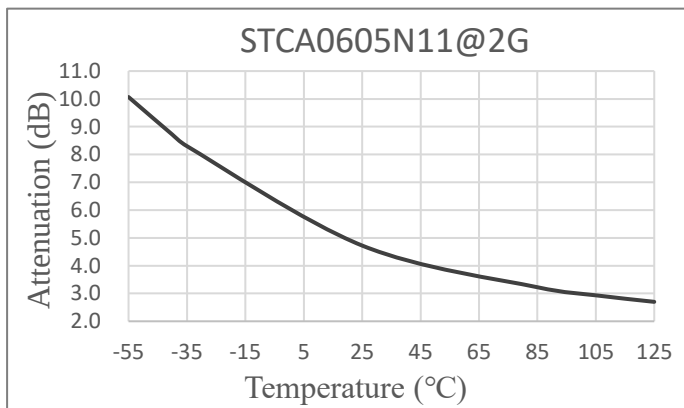
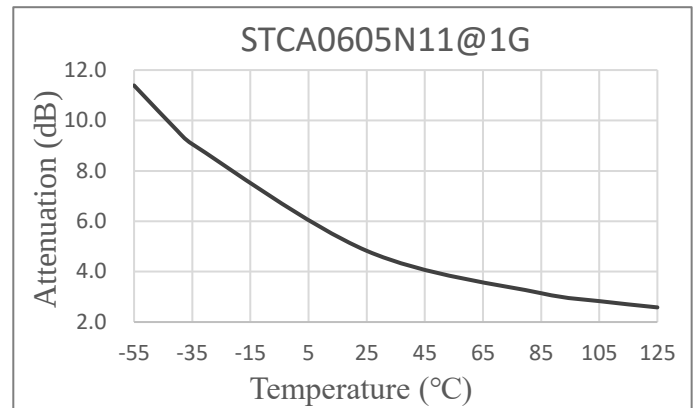
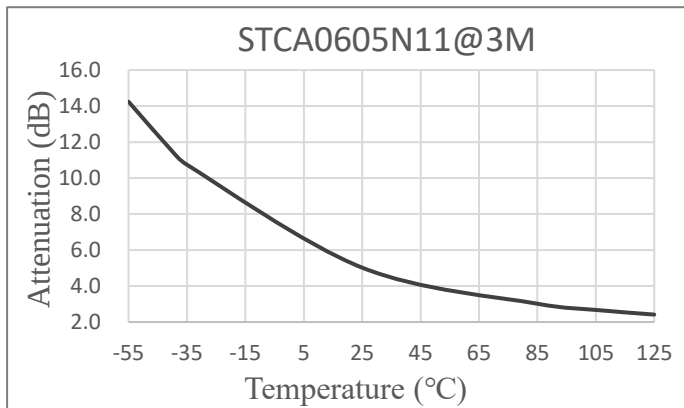
- | | |
|---|--|
| 1. Frequency Range | DC to 6GHz |
| 2. Attenuation | 5dB |
| 3. Attenuation Accuracy | at 25°C ±0.5dB@1GHz |
| 4. VSWR | 1.20:1 Max. @1GHz at 25°C
1.20:1 typical @2GHz at 25°C
1.20:1 typical @3 GHz at 25°C |
| 5. Nominal Impedance | 50 Ohms |
| 6. Power Rating | 100 mW CW |
| 7. Power Derating | 100% @ 125°C
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. RoHS Compliant. | |
| 17. Electrostatic Discharge Control: per MIL-STD-1686. | |

Unit Marking dB Value (XX), Direction of Shift (N) and TCA Shift (X).
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 6GHz every 20°C over the temperature range -35°C to +105°C.
 - 2.1 Calculate, using linear regression, the slope of the curve.
 - 2.2 Calculate TCA using the following formula: $TCA = \text{Slope} / \text{Attenuation @ } 25^{\circ}\text{C}$.
3. Test data required for customer.

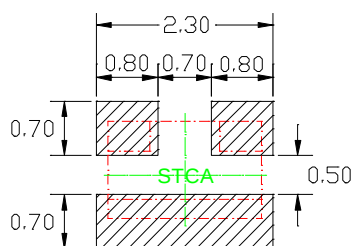
STCA Response



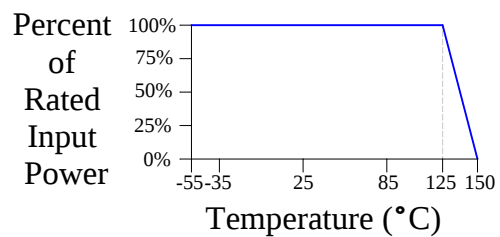
Statistical Table of Attenuation(typ.) VS Temperature					
ATT(dB) \ Temp(°C)	3MHz	1GHz	2GHz	3GHz	6GHz
-55	14.24	11.39	10.07	9.20	7.87
-40	11.48	9.58	8.72	8.16	7.23
-35	10.74	9.06	8.30	7.82	7.08
25	5.02	4.83	4.72	4.72	4.93
85	3.02	3.14	3.22	3.34	3.76
105	2.67	2.83	2.93	3.08	3.48
125	2.41	2.58	2.70	2.86	3.28

Recommended Layout

All dimensions shown in mm unless stated otherwise



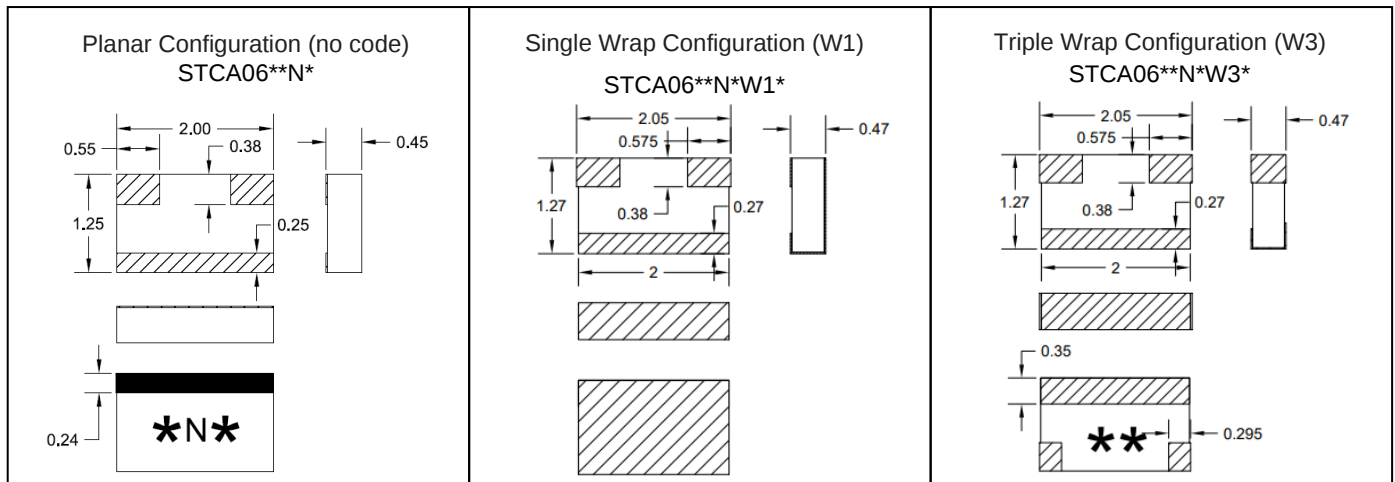
Power Rating & Derating Curve



Package Outlines

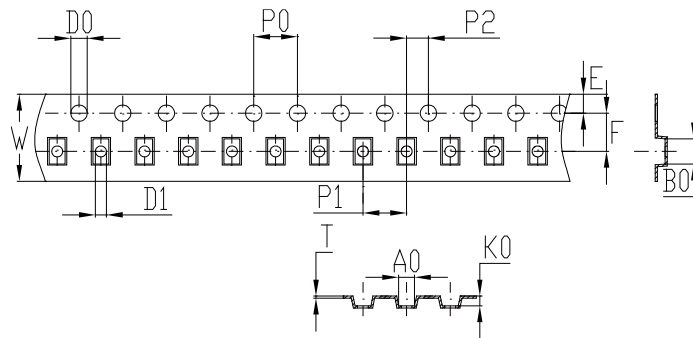
All dimensions shown in mm unless stated otherwise

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



Tape & Reel Drawing

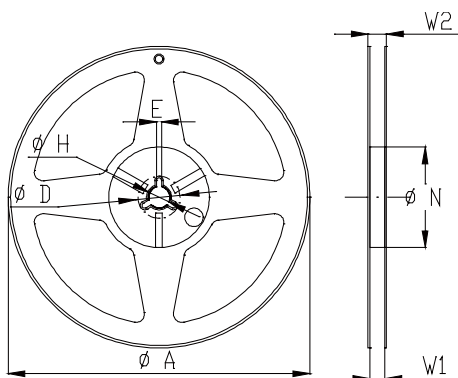
All dimensions shown in mm unless stated otherwise



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: 0.20 ± 0.05 mm
- H. 3000 units (maximum) / T&R

symbol	A0	B0	K0	P0	P1	P2
spec	1.45 ± 0.1	2.30 ± 0.1	0.9 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.1
symbol	W	T	E	F	D0	D1
spec	8.0 ± 0.1	0.20 ± 0.05	1.75 ± 0.1	3.5 ± 0.1	$\Phi 1.5^{+0.1}_{-0.0}$	$\Phi 1.0^{+0.1}_{-0.0}$



Symbol	Dimensions(mm)
A	$180^{+0/-3}$
N	$60^{+1/-0}$
W1	9.0 ± 0.3
W2	11 ± 1.0
D	25 ± 0.8
H	13 ± 0.2
E	3 ± 0.5

