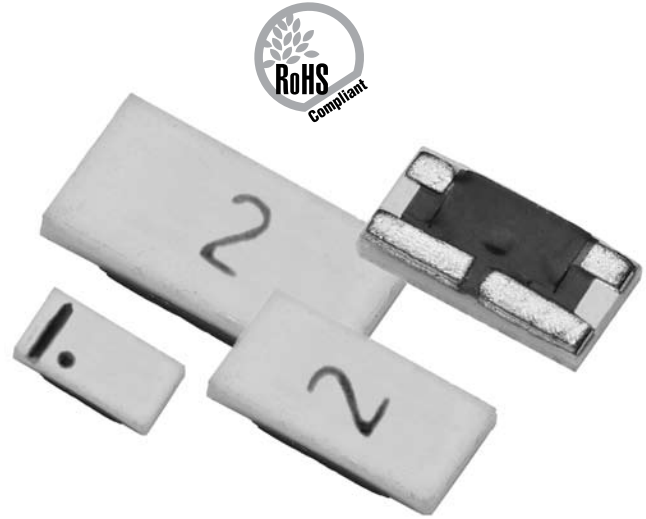


TFA Series

Fixed Thin Film Precision Chip Attenuator

The Ohmite TFA series attenuators are designed with the electrodes and resistance patterns formed on a ceramic substrate, resistance is protected by an epoxy-based material on the resistive film. The electrodes are then plated on the exterior. These attenuators are offered in multiple sizes all covering a wide frequency range.



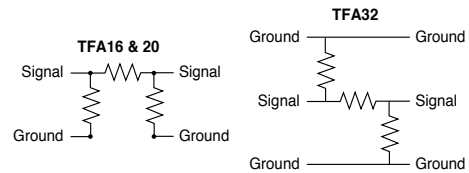
SERIES SPECIFICATIONS

Series	Type (Size)	Power Rating (@70°C)	Impedance	Attenuation Tolerance			VSWR		
				5GHz	10GHz	20GHz	5GHz	10GHz	20GHz
TFA16	1608 (0603)	64mW							
TFA20	2012 (0805)	100mW	50Ω	±0.2db	±0.3db	±0.5db	<1.2	<1.3	<1.5
TFA32	3216 (1206)	125mW							

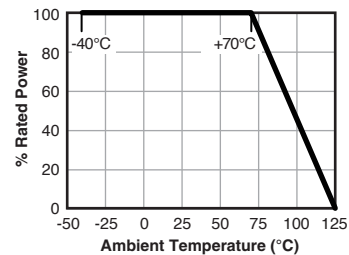
CHARACTERISTICS

Type	Thin Film
Terminal Plating	Sn
VSWR	DC ~ 5GHz: Less than 1.2 ~ 10GHz: Less than 1.3 ~ 20GHz: Less than 1.5
Frequency Range	DC ~ 20GHz
Operating temperature range	-40 ~ +125°C
Rated ambient temperature	+70°C

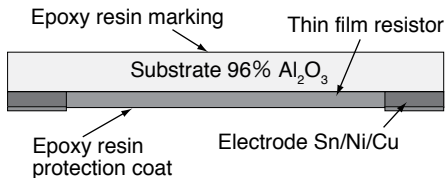
Circuit Schematic



Derating



Construction



TFA Series

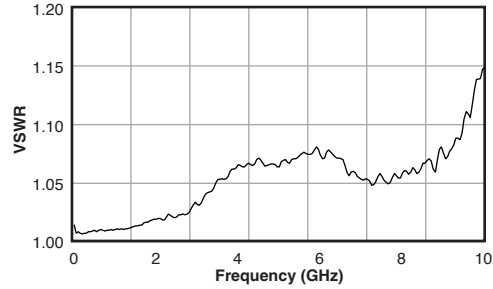
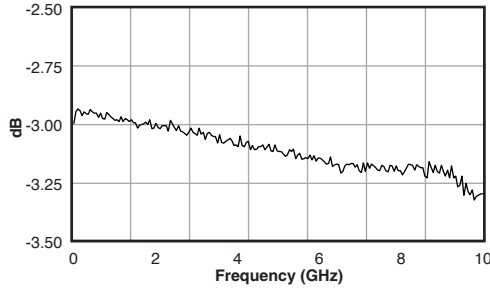
Fixed Thin Film Precision Chip Attenuator

PERFORMANCE CHARACTERISTICS

Parameter	Condition	Tolerance	
		Attenuation	Impedance
Short Time Overload	Apply a voltage 2.5 times the rated power for 5 seconds	±0.02dB	±0.2%
Rated load	70±3°C, rated voltage 90 minutes applied, 30 minutes pause repeated for 1000 hours.	±0.04dB	±0.5%
Moisture load	60±2°C 90-95%RH Rated voltage is applied for 90 minutes and 30 minutes pause is repeated for 1000 hours.	±0.04dB	±0.5%
Thermal cycling	5 cycles of [-40°C 30 min. / Room temp. 3 min. / +125°C 30 min. / room temp. 3 min]	±0.02dB	±0.2%
Soldering heat	Immersed in the molten solder at 260±5°C for 10±1 sec.	±0.02dB	±0.2%

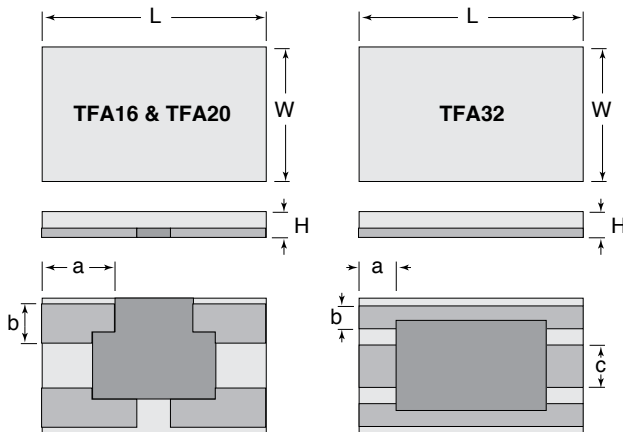
Frequency Characteristics

Example: TFA16C03DBER

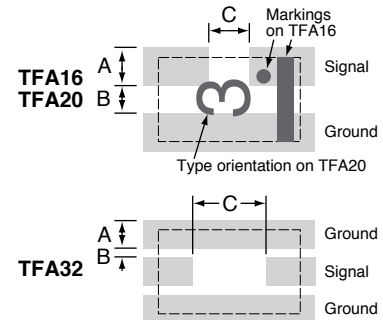


DIMENSIONS

(mm)



Land Pattern



Part	W	L	a	b	c	H	A	B	C
TFA16	0.85 ±0.20	1.60 ±0.20	0.43 ±0.15	0.24 ±0.12	0.24 ±0.12	0.5 ±0.20	0.50	0.30	0.40
TFA20	1.25 ±0.20	2.00 ±0.20	0.58 ±0.15	0.42 ±0.15	0.45 ±0.15	0.5 ±0.20	0.60	0.30	0.50
TFA32	1.65 ±0.20	3.05 ±0.20	0.45 ±0.15	0.38 ±0.15	0.38 ±0.15	0.5 ±0.20	0.500	0.375	2.000