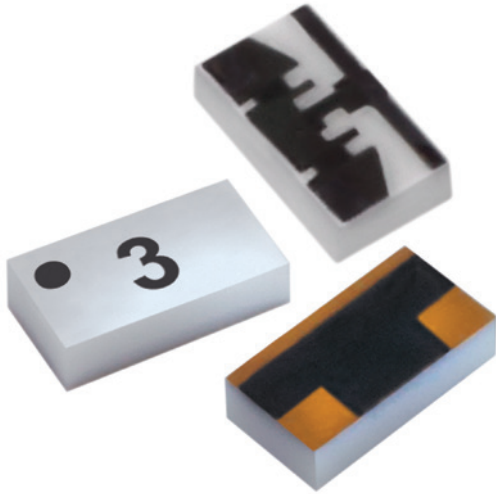


TS06 Series

ATTENUATOR CHIP DC-20GHZ



Smiths Interconnect is the world leader in chip attenuators offering the widest selection of products from DC through Q band. Chip components are offered on Alumina, Aluminum Nitride, Beryllium Oxide, and CVD Diamond for a wide range of applications. Backed by proven performance and significant heritage, Smiths Interconnect is the leader in high reliability components.

The TS06 platform offers best in class performance from DC-20 GHz in a small package size. Rated for DC-20 GHz with excellent broadband response, the TS06 series of products has a wide range of applications. It is constructed on an Alumina substrate with rugged thin film terminations and passivated Tantalum Nitride resistive elements. The product also includes a protective coating for added protection from various environmental conditions. Multiple attenuation values and surface finishes are available for RoHS and tin lead solder applications.

TS06 Series Chip Attenuators offers best in class performance from DC-20 GHz in a small package size.

Features and Benefits

- Small Footprint
- Multiple Terminal Finishes
- Broad Frequency Range
- Low VSWR
- Wide Range of Attenuation Values
- Tight Attenuation Tolerance

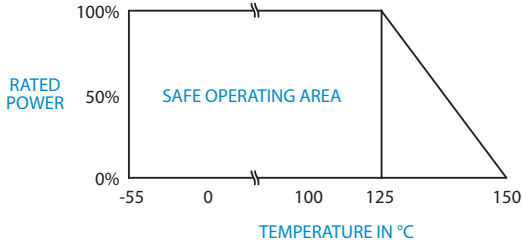
Applications

- Amplifier Circuits
- Transmit/Receive Modules
- Up/Down Converters
- Instrumentation
- Satellite Communications
- Radar
- Broadcast

Technical Characteristics

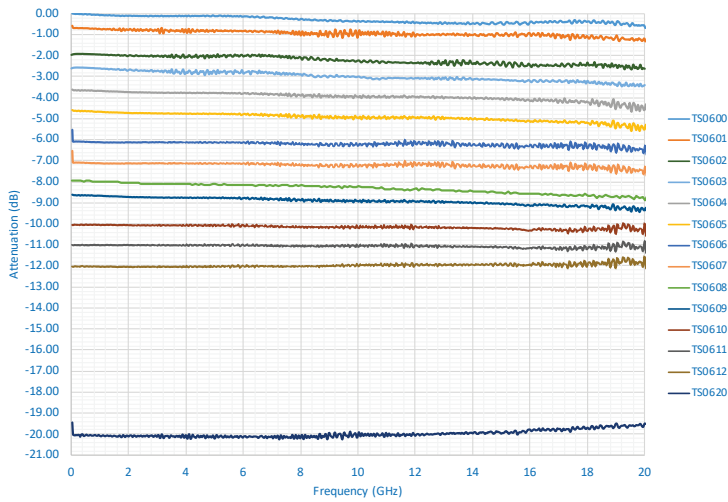
Mounting Configuration Options	Planar					
Electrical						
Nominal Impedance	50 ohms					
Frequency Range	DC -20 GHz					
Attenuation Values Available	0-12, 15 & 20 dB in 1 dB Increments					
Attenuation Accuracy	ATTENUATION ACCURACY (dB)					
	Attenuation Value (dB)	DC-10 GHz		10-20 GHz		
	0	Continuity Only				
	1-9	± 0.50		± 0.50		
	10-20	± 0.75		± 1.00		
Input Power CW	INPUT POWER (CW)					
	dB	Watts	dB	Watts	dB	Watts
	0-1	3.0	2-3	1.0	4-20	0.5
Peak Power	10X CW power based on 1 µs pulse width @ 1% Duty Cycle					
VSWR	DC-10GHz 1.25:1 Max, 10-20GHz 1.35:1 Max					
Environmental						
Operating Temperature	-55°C to +150°C					
Storage Temperature	-65°C to +150°C					
Temperature Coefficient	± 200 PPM/°C Max					
Moisture Sensitivity Level	MSL 1 - Unlimited					
Mechanical						
Substrate Material	Alumina (Al ₂ O ₃) 96%					
Resistive Film	Thin Film, Tantalum Nitride					
Terminal Material	Thin Film, Solderable Gold over Nickel					
Protective Coating	Silicon Nitride					
Finish Options	Blank	Solder Plated (Sn60/Pb40)				
	-F	Silver Plated (RoHS Compliant)				
	-S	Pretinned (Sn60/Pb40)				
Marking						
Unit Marking	Orientation dot and dB Value					
Quality Assurance						
	Sample visual and mechanical inspection - 1.0 AQL per mechanical drawing requirements. Periodic electrical inspection performed for commercial grade products. High reliability tested products are available per MIL-PRF-55342.					
Packaging						
Standard Packaging	Tape and Reel or Waffle Pack					

Power Derating Curve



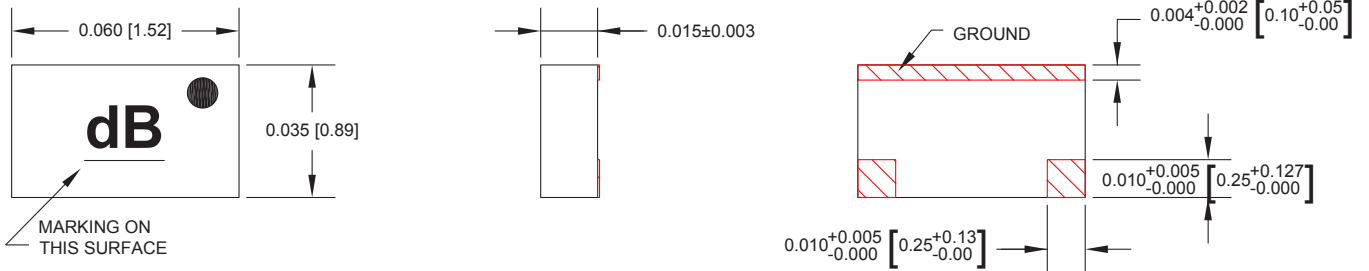
Typical Data

TS06XX Series Attenuation



Mechanical

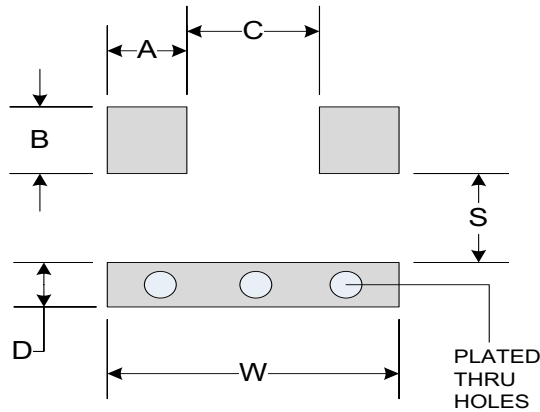
TS06XX - Planar Option



Unless otherwise specified, tolerance: X.XXX = ±0.005"

Suggested Mounting Footprint

Part Number	Inches						Millimeters					
	A	B	C	D	S	W	A	B	C	D	S	W
TS06xxF	0.018	0.018	0.033	0.020	0.016	0.068	0.46	0.46	0.84	0.51	0.41	1.73



How To Order

Specify Model Number: **TS06XXX**

	1	2	3
1 Series Name	TS06 Series		
2 Attenuation Value	00 00 dB through 12.0 dB	15 15.0 dB	20 20.0 dB
3 Terminal Finish	Standard	S Pretinning	F RoHS

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