

Features

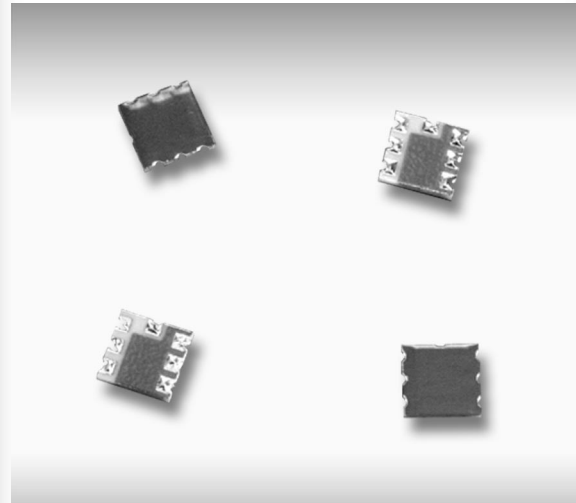
- Single, Completely Passive Device
- True RMS Power Detection Independent of Modulation
- Wide Dynamic Range
- Highly Linear to RF Power Level
- Internal-Temperature Compensation
- Surface Mountable
- Immune to Damage from Common Levels of Static Electric Discharge and Radiation

Advantages Over Diode Detectors

- Reduced Component Count
- No Added Intermodulation
- Temperature Insensitivity
- Radiation and ESD Immunity
- Modulation Independent
- Converts RF Input Power to Linear Voltage Output

Applications

- Amplifiers
- Broadcast Transmitters
- Built-in Test Equipment (BITE)
- LO Monitor
- Telecom Base Stations
- Radar Systems
- Satcom
- VSWR Meters



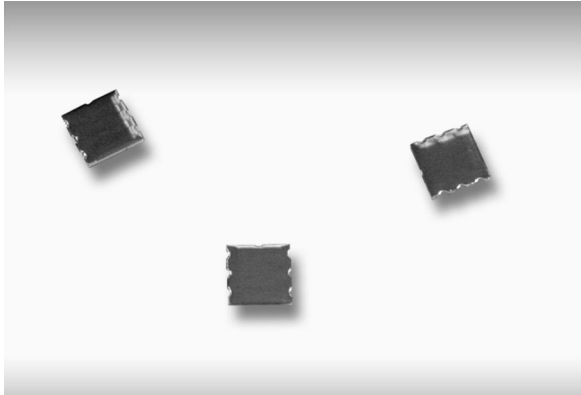
EMC Technology's SmartLoad® (Patent # 5,953,811 and 6,147,481) Power Sensing Terminations provide a single chip solution for measuring True RMS RF power. SmartLoad® responds to the heating effects of RF power and is ideal for amplifier, satellite, base station, BITE, and other microwave circuit applications.

Quick Selector Chart

Part Number	Sensitivity (mV/W)	Max Input Power (W)	Frequency Range (MHz)
PST-01-A-1	400	0.8	600-6000
PST-04-A-1	700	0.6	600-6000
PST-06-A-1	500	0.6	DC-6000

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EMC Technology's SmartLoad® Power Sensing Termination is designed to offer true RMS measurement with built-in temperature compensation in a single passive chip solution. The PST-01 Series is the first generation of power sensing terminations made for the broadest number of applications and includes coupling capacitors to isolate the DC component from the RF power.

General Specifications

Impedance 50 Ohms Nominal
 Frequency 600 to 6000 MHz
 Power Rating 0.8 Watts Max @ 25° C
 Power Derating 100% @ 100° C
 Derates to 0% @ 125° C
 Operating Temperature -55° C to 125° C
 Sensitivity 400 mV/Watt
 Response Time 20 mseconds
 Power Supply 14mA Max @ 5V
 VSWR 1.50 Max
 Offset Voltage ±10 mV (no RF input)
 Output Linearity ... ±10% Deviation from best fit straight line

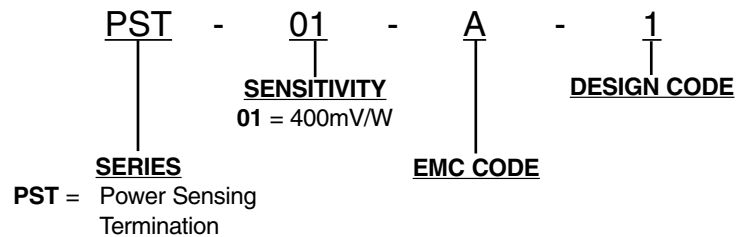
Material Specifications

Substrate Alumina
 Resistive Element Thick Film
 Termination Material Thick Film
 Nickel Barrier, Solder Plated Finish

Pinout Designations

Pin	PST-01
1	Ground
2	Ground
3	Ground
4	Temperature Reference
5	Supply Voltage
6	Power Output Reference
7	RF Input

Ordering Information



PST-01

