

Voltage Variable Absorptive Attenuator

DC - 3 GHz

AT-252

V 4.00

Features

- Low Intermodulation Products
- Ultra Low DC Power Consumption
- Single Voltage Control 0 to -4 Volts
- Small Package Size, 0.180" (4.6 mm) Sq.

Guaranteed Specifications¹ (From -55°C to +85°C)

Frequency Range	DC – 3.0 GHz	
Insertion Loss	DC – 3.0 GHz	3.8 dB Max
	DC – 2.0 GHz	3.5 dB Max
VSWR	DC – 3.0 GHz	2.1:1 Max
Attenuation ²	DC – 3.0 GHz	8.5 dB Min
	DC – 2.0 GHz	10.5 dB Min
Flatness (to 12 dB Attenuation) (Peak to Peak)	DC – 3.0 GHz	±2.7 dB Max
	DC – 2.0 GHz	±1.8 dB Max
	DC – 1.0 GHz	±1.3 dB Max
Attenuation vs Temperature	0 to 10 dB Att.	±1.8 dB Max

Operating Characteristics

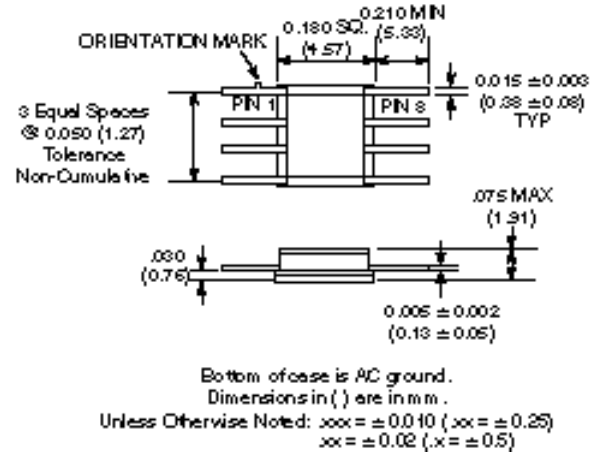
Impedance	50 Ohms Nominal		
Switching Characteristics			
Trise, Tfall (10% to 90%)			3 ns Typ
Ton, Toff (50% CTL to 90%/10% RF)			5 ns Typ
Transients (In-Band)			10 mV Typ
Power Handling			
Linear Operation			+13 dBm Max
Absolute Max Input Power			+21 dBm Max
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)			
Intercept Points	IP2	IP3 ³	
0.05 GHz	34	+31	dBm Typ
0.5 GHz to 2.0 GHz	47	+36	dBm Typ
Control Voltages (A Input)	-4V to 0V @ 100 µA Max		

1. All specifications apply with 50 ohm connected to all RF ports.
2. Above reference insertion loss.
3. For levels above 6 dB attenuation. For levels below 6 dB, IP₃ = 18 dBm minimum.
4. Contact the factory for standard or custom screening requirements.

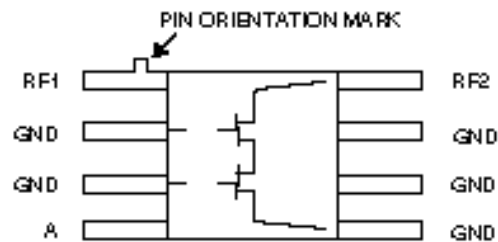
Ordering Information

Part Number	Package
AT-252 PIN	Ceramic

CR-3



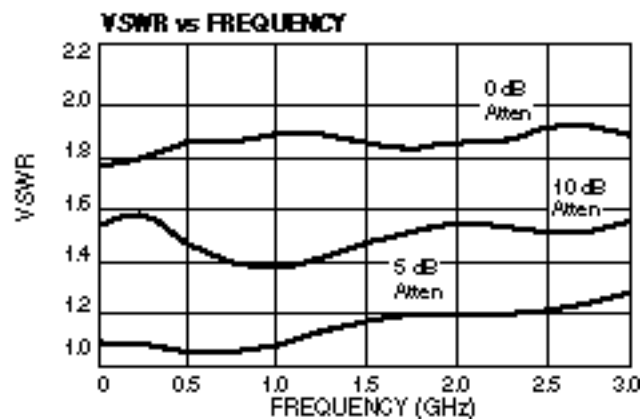
Functional Schematic (Top View)



Absolute Maximum Ratings¹

Parameter	Absolute Maximum
Max. Input Power	+21 dBm
Control Voltage	+5 V, -8.5 V
Operating Temperature	-55°C to +25°C
Storage Temperature	-65°C to +150°C

1. Operation of this device above any one of these parameters may cause permanent damage.



Typical Performance

