

Voltage Variable Absorptive Attenuator

DC - 2 GHz

AT-332, AT-337

V 2.00

Features

- Available in Ceramic and TO-5 packages
- 40 dB Matched Attenuation
- Low Insertion Loss

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

Frequency Range	DC - 2.0 GHz		
Insertion Loss	DC - 2.0 GHz	1.5 dB Max	
	DC - 1.0 GHz	1.2 dB Max	
VSWR	AT-332	AT-337	
	DC - 2.0 GHz	1.4:1	1.5:1 Max
	DC - 1.0 GHz	1.25:1	1.3:1 Max
Attenuation (Matched) @ 25°C	DC - 2.0 GHz	40 dB Min	
Flatness (Peak to Peak)	0-20 dB Attenuation	1.0 dB Max	
	0-30 dB Attenuation	2.0 dB Max	
	0-40 dB Attenuation	3.0 dB Max	
Attenuation vs Temperature (Relative to 25°C)	0 to 20 dB Attenuation	±2.5 dB	
	0 to 30 dB Attenuation	±4.0 dB	
	0 to 40 dB Attenuation	±6.0 dB	

Operating Characteristics

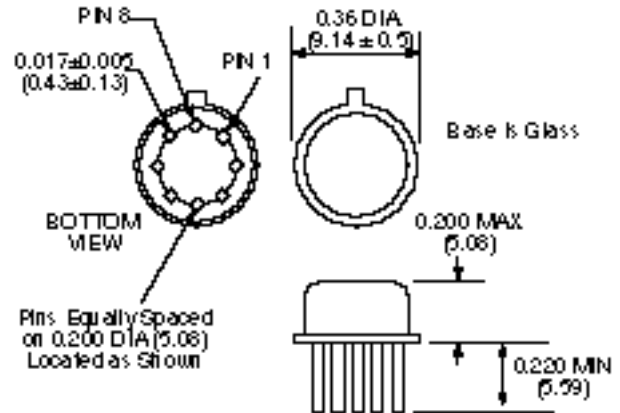
Impedance	50 Ohms Nominal					
Switching Characteristics						
Trise, Tfall (10% to 90%)	14 ns Typ					
Ton, Toff (50% CTL to 90%/10% RF)	22 ns Typ					
Transients (in band)	14 mV Typ					
Input Power for 1 dB Compression						
Attenuation Level	0 dB					
0.05 GHz	21					
0.5 GHz to 2.0 GHz	27					
	dBm Typ					
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)						
Intercept Points	IP2		IP3			
Attenuation Level (dB)	0	5	10	0	5	10
0.05 GHz	54	43	39	39	33	30
0.5 to 2 GHz	65	54	49	47	44	38
	dBm Typ		dBm Typ			
Phase Shift (Relative to 0 dB Attenuation)						
Attenuation Level	10 dB	20 dB	30 dB	40 dB		
0.5 GHz	0.1	3	10	19	Deg Typ	
2.0 GHz	0.4	12	35	60	Deg Typ	
Control Voltages						
A input (Shunt FETS)	0 to -4V @ 100 µA Max					
B input (Series FETS)	0 to -4V @ 100 µA Max					

1. All specifications apply with 50 ohm connected to all RF Ports.
2. Contact the factory for standard or custom screening requirements.

Ordering Information

Model No.	Package
AT-354 PIN	Dual Inline

AT-332 (TO-5-4)



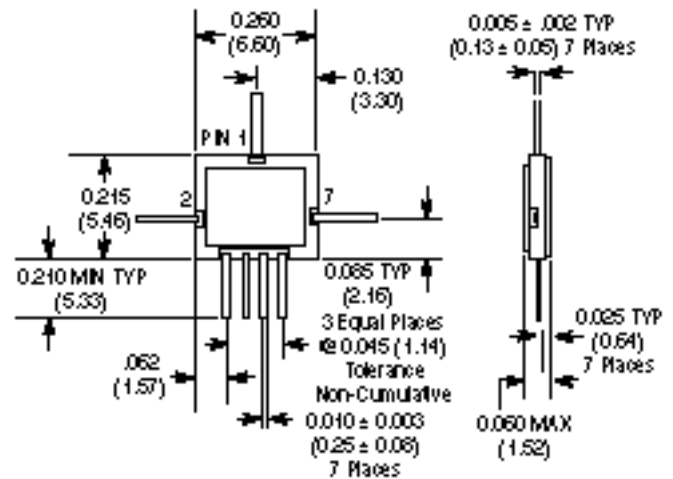
Bottom of Case is AC Ground

Dimensions in () are in mm.

Unless Otherwise Noted: .xxx = ±0.010 (xx = ±0.25)

.xx = ±0.02 (x = ±0.5)

AT-337 (CR-2 w/o Pin 1)



Bottom of Case is AC Ground

Dimensions in () are in mm.

Unless Otherwise Noted: .xxx = ±0.010 (xx = ±0.25)

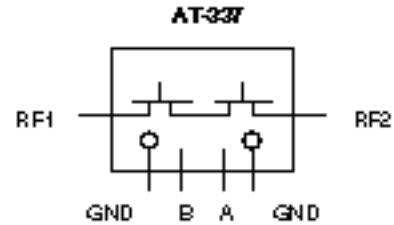
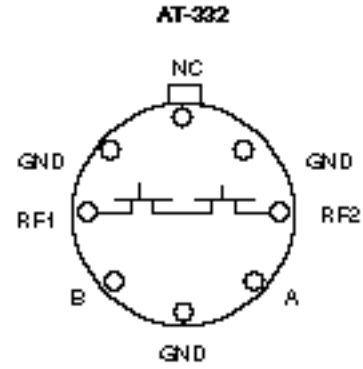
.xx = ±0.02 (x = ±0.5)

Absolute Maximum Ratings

Parameter	Absolute Maximum ¹
Max. Input Power	
0.05 GHz	+27 dBm
0.5 – 2.0 GHz	+30 dBm
Control Voltage	+5V, -8.5V
Operating Temperature	-55°C to +125°C
Storage Temperature	-65°C to +150°C

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

Functional Schematics (Top View)



Typical Performance

