

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

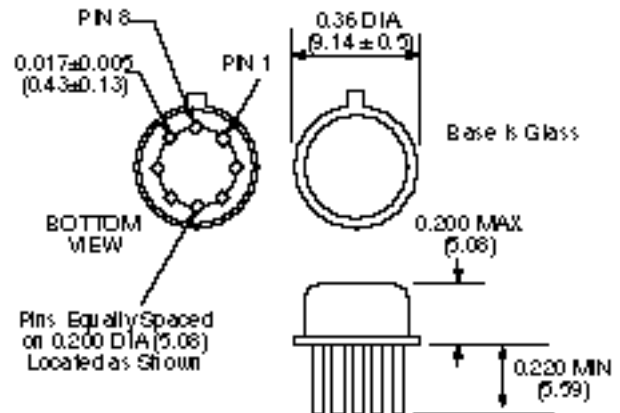
Impedance	50 Ohms Nominal		
Switching Characteristics			
Trise, Tfall (10% to 90%)	14 ns Typ		
Ton, Toff (50% CTL to 90%/10% RF)	22 ns Typ		
Transients (in band)	14 mV Typ		
Input Power for 1 dB Compression			
Attenuation Level	0 dB		
0.05 GHz	21		
0.5 GHz to 2.0 GHz	27		
	dBm Typ		
Intermodulation Intercept 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	dBm Typ
0.5 to 2 GHz	65 54 49	47 44 38	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
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

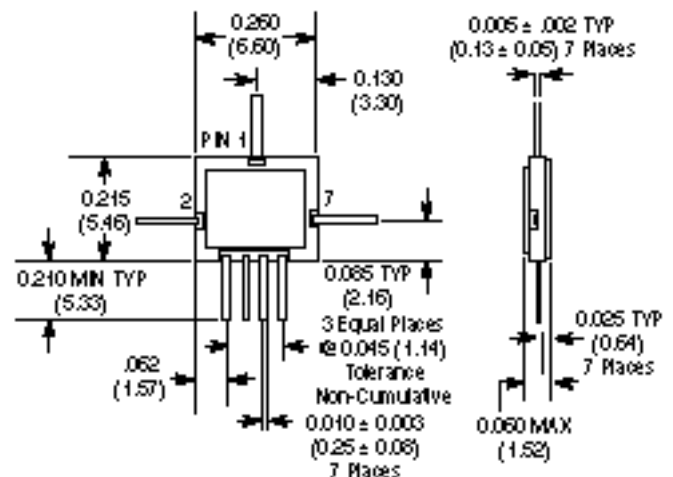
Model No.	Package
AT-354 PIN	Dual Inline

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)



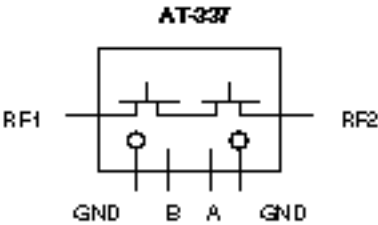
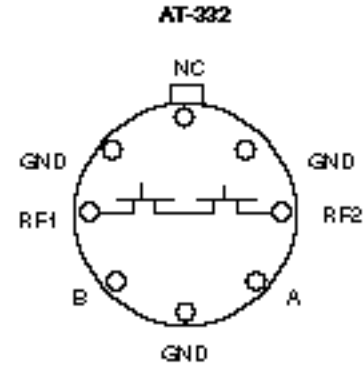
Bottom of Case is AC Ground
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (xx = ±0.25)
.xx = ±0.02 (x = ±0.5)

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

