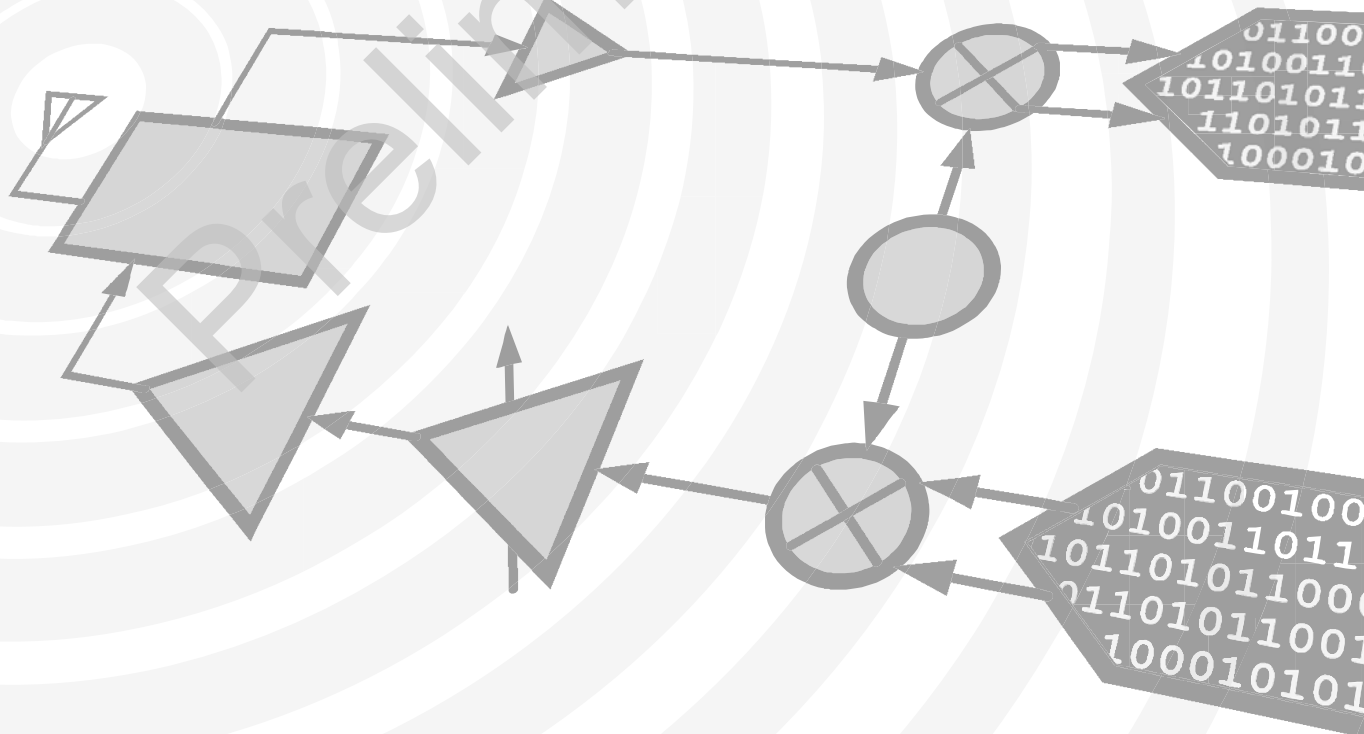




Hittite
MICROWAVE PRODUCTS
FROM ANALOG DEVICES

Analog Devices Welcomes Hittite Microwave Corporation



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Preliminary

GaAs MMIC SMT VOLTAGE-VARIABLE ATTENUATOR, DC - 8 GHz

Typical Applications

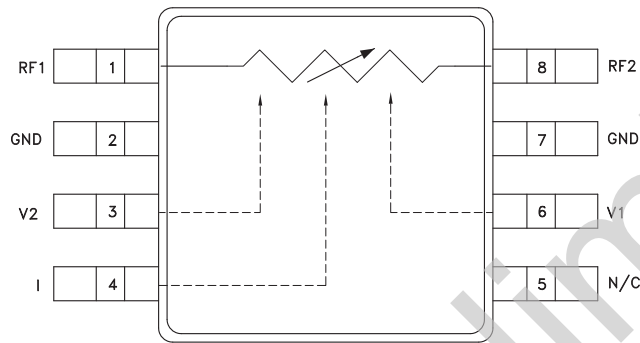
This attenuator is ideal for use as a VVA for DC - 8 GHz applications:

- Point-to-Point Radio
- VSAT Radio

Features

- Wide Bandwidth: DC - 8 GHz
- Low Phase Shift vs. Attenuation
- 32 dB Attenuation Range

Functional Diagram



General Description

The HMC346AMS8G & HMC346AMS8GE are absorptive Voltage Variable Attenuators (VVA) in 8 lead surface-mount packages operating from DC - 8 GHz. It features an on-chip reference attenuator for use with an external op-amp to provide simple single voltage attenuation control, 0 to -3V. The device is ideal in designs where an analog DC control signal must control RF signal levels over a 30 dB amplitude range. Applications include AGC circuits and temperature compensation of multiple gain stages in microwave point-to-point and VSAT radios.

Electrical Specifications, $T_A = +25^\circ\text{C}$, 50 ohm system

Parameter	Min	Typical	Max	Units
Insertion Loss DC - 8 GHz		1.5	2.5	dB
Attenuation Range DC - 8 GHz	27	32		dB
Return Loss DC - 8 GHz	5	10		dB
Switching Characteristics	tRISE, tFALL (10/90% RF)	2		ns
	tON, tOFF (50% CTL to 10/90% RF)		8	ns
Input Power for 0.25 dB Compression (0.5 - 8 GHz)	Min. Atten.	+8		dBm
	Atten. >2 dB		-2	dBm
Input Third Order Intercept (0.5 - 8 GHz) (Two-tone Input Power = -8 dBm Each Tone)	Min. Atten.	+25		dBm
	Atten. >2 dB		+10	dBm

GaAs MMIC SMT VOLTAGE-VARIABLE ATTENUATOR, DC - 8 GHz

Absolute Maximum Ratings

RF Input Power	+18 dBm
Control Voltage Range	+1 to -5 V
Storage Temperature	-65 to +150 °C
Operating Temperature	-40 to +85 °C
ESD Sensitivity (HBM)	Class 1A



**ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS**

Outline Drawing

