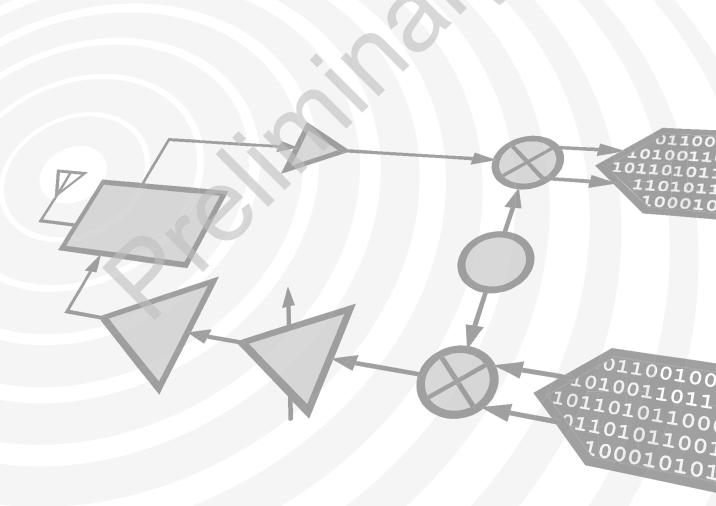




# Analog Devices Welcomes Hittite Microwave Corporation



www.hittite.com

www.analog.com

#### THIS PAGE INTENTIONALLY LEFT BLANK



### HMC346AMS8G / 346AMS8GE

v00.1115

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

#### **Typical Applications**

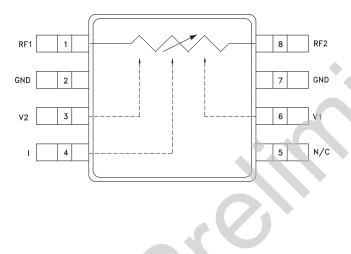
This attenuator is ideal for use as a VVA for DC - 8 GHz applications:

- 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 30 dB amplitude range. а Applications include AGC circuits and temperature compensation of multiple gain stages in microwave point-to-point and VSAT radios.

#### Electrical Specifications, $T_A = +25^{\circ}$ 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) tON, tOFF (50% CTL to 10/90% RF)		2 8		ns ns
Input Power for 0.25 dB Compression (0.5 - 8 GHz)	Min. Atten. Atten. >2 dB		+8 -2		dBm dBm
Input Third Order Intercept (0.5 - 8 GHz) (Two-tone Input Power = -8 dBm Each Tone)	Min. Atten. Atten. >2 dB		+25 +10		dBm dBm

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.



v00.1115

### HMC346AMS8G / 346AMS8GE

#### 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		



**Outline Drawing** 3.10 |22 |14 .031 0.80 .122 **3.10** .114 **2.90** .200 5.08 .184 4.68 .070 [1.78] MAX ふ EXPOSED GROUND PADDLE MUST BE CONNECTED TO RF/DC GROUND. .009 0.22 LOT NUMBER .095 [2.41] MAX .037 0.95 .029 0.75 .043 [1.10] MAX NOTES: 1. LEADFRAME MATERIAL: COPPER ALLOY 005 0.13 2. DIMENSIONS ARE IN INCHES [MILLIMETERS]. .0256 [0.65] TYP A DIMENSION DOES NOT INCLUDE MOLDFLASH OF 0.15mm PER SIDE.

## A DIMENSION DOES NOT INCLUDE MOLDFLASH OF 0.25mm PER SIDE. .015 0.38 .009 0.22 TYP 5. ALL GROUND LEADS AND GROUND PADDLE MUST BE SOLDERED TO PCB RF GROUND.