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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

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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.