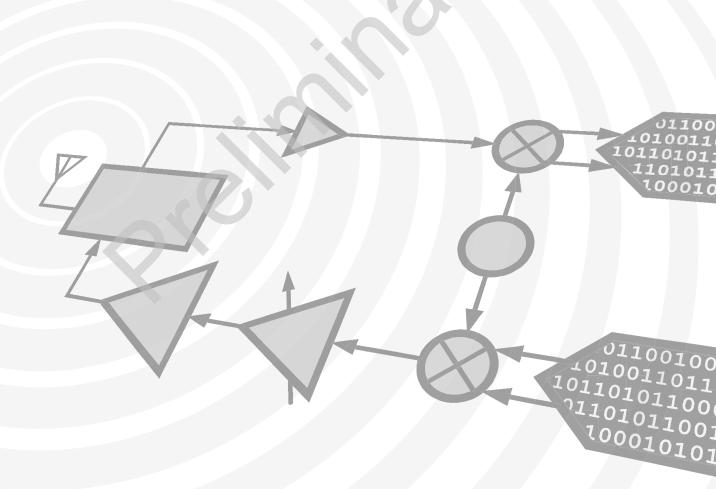




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HMC346ALC3B

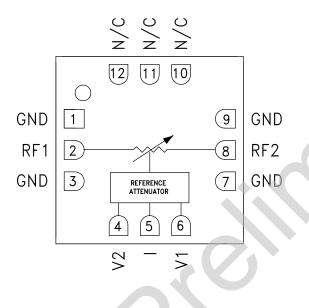
GaAs MMIC VOLTAGE-VARIABLE ATTENUATOR, DC - 18 GHz

Typical Applications

The HMC346ALC3B is ideal for:

- Test Instrumentation
- Fiber Optics & Broadband Telecom
- Microwave Radio & VSAT
- Military Radios, Radar, & ECM

Functional Diagram



Features

Wide Bandwidth: DC - 18 GHz Low Phase Shift vs. Attenuation 30 dB Attenuation Range Simplified Voltage Control RoHS Compliant 3 x 3 mm SMT Package

General Description

The HMC346ALC3B is an absorptive Voltage Variable Attenuator (VVA) in a leadless "Pb free" RoHS compliant SMT mount ceramic package operating from DC - 18 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. The HMC346ALC3B allows the use of surface mount manufacturing techniques.

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

Parameter		Min	Typical	Max	Units
Insertion Loss	DC - 10 GHz DC - 14 GHz DC - 18 GHz		1.5 2.2 2.8	2.0 2.7 3.5	dB dB dB
Attenuation Range	DC - 12 GHz DC - 18 GHz	26 22	30 26		dB dB
Return Loss	DC - 18 GHz		10		dB
Input Power for 0.25 dB Compression (0.5 - 18 GHz)	Min. Atten: Atten. >2 dB:		+8 -4		dBm dBm
Input Third Order Intercept (0.5 - 18 GHz) (Two-tone Input Power = -8 dBm Each Tone)	Min. Atten: Atten. >2 dB:		+25 +10		dBm dBm
Switching Characteristics	tRISE, tFALL (10/90% RF): tON, tOFF (50% CTL to 10/90% RF):		2 8		ns ns

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HMC346ALC3B

GaAs MMIC VOLTAGE-VARIABLE ATTENUATOR, DC - 18 GHz

Absolute Maximum Ratings

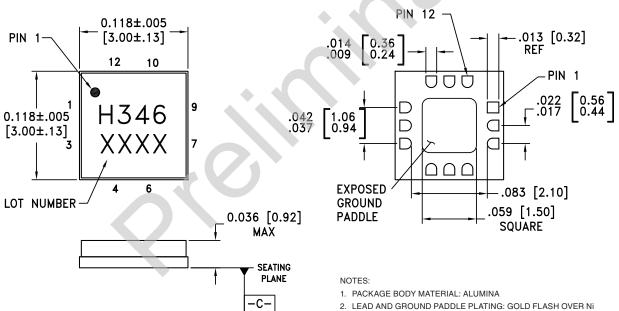
RF Input Power	+18 dBm			
Control Voltage Range	+1 to -5V			
Storage Temperature	-65 to +150 °C			
Operating Temperature	-40 to +85 °C			
ESD Sensitivity (HBM)	Class 1A			



ELECTROSTATIC SENSITIVE DEVICE **OBSERVE HANDLING PRECAUTIONS**

Outline Drawing





- 3. DIMENSIONS ARE IN INCHES [MILLIMETERS]
- 4. LEAD SPACING TOLERANCE IS NON-CUMULATIVE
- 5. PACKAGE WARP SHALL NOT EXCEED 0.05mm
- 6. ALL GROUND LEADS AND GROUND PADDLE MUST BE SOLDERED TO PCB RF GROUND

2

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