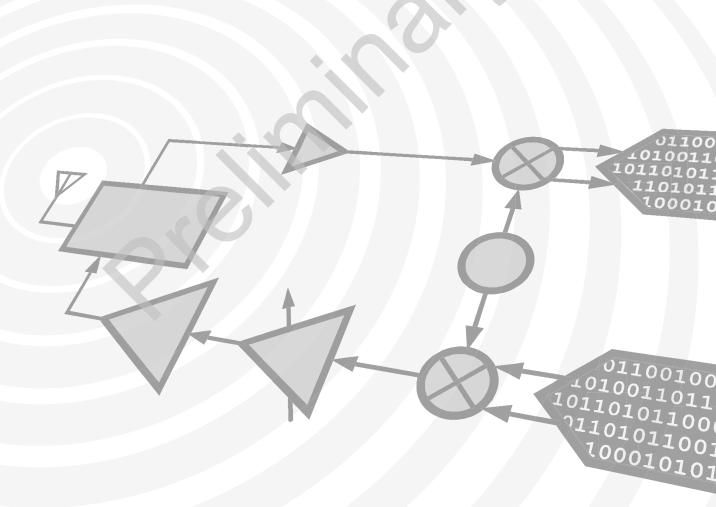




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HMC346ALP3 / 346ALP3E

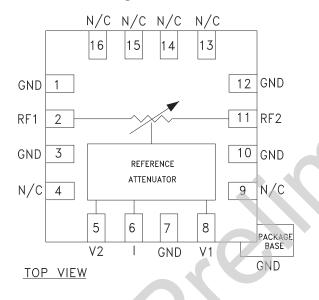
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Typical Applications

The HMC346ALP3 / HMC346ALP3E is ideal for:

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

Functional Diagram



GaAs MMIC VOLTAGE-VARIABLE ATTENUATOR, DC - 14 GHz

Features

Wide Bandwidth: DC - 14 GHz Low Phase Shift vs. Attenuation 30 dB Attenuation Range Simplified Voltage Control 3 x 3 x 1 mm SMT Package

General Description

The HMC346ALP3 & HMC346ALP3E are pabsorptive Voltage Variable Attenuators (VVA) in low cost leadless surface mount plastic packages operating from DC - 14 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. This VVA is an excellent alternative to the HMC121C8.

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

Parameter		Min	Typical	Max	Units
Insertion Loss	DC - 10 GHz DC - 14 GHz		1.7 2.8	2.2 3.3	dB dB
Attenuation Range	DC - 10 GHz DC - 14 GHz	27 22	30 27		dB dB
Return Loss	DC - 14 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 -4		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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HMC346ALP3 / 346ALP3E

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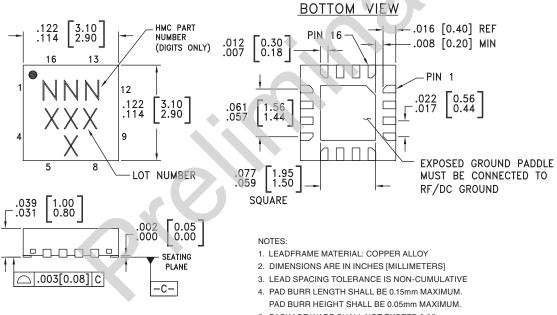
Absolute Maximum Ratings

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



- 5. PACKAGE WARP SHALL NOT EXCEED 0.05mm.
- 6. ALL GROUND LEADS AND GROUND PADDLE MUST BE SOLDERED TO PCB RF GROUND.
- 7. REFER TO HITTITE APPLICATION NOTE FOR SUGGESTED LAND PATTERN.