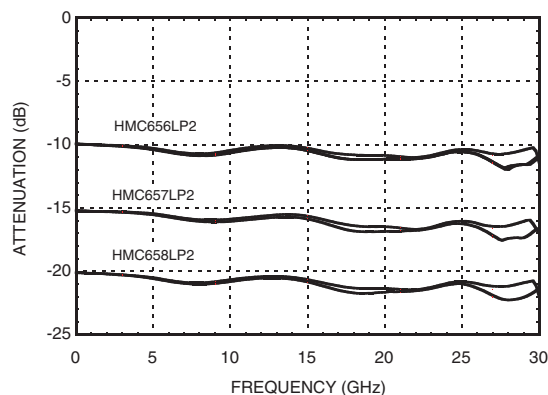
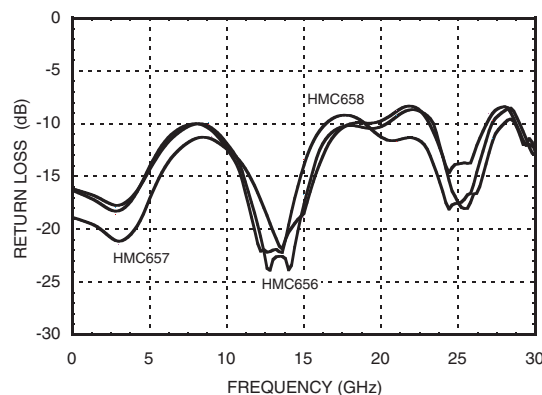


WIDEBAND FIXED ATTENUATOR FAMILY, DC - 25 GHz HMC656LP2E / HMC657LP2E / HMC658LP2E

Attenuation vs. Temperature



Return Loss



Absolute Maximum Ratings

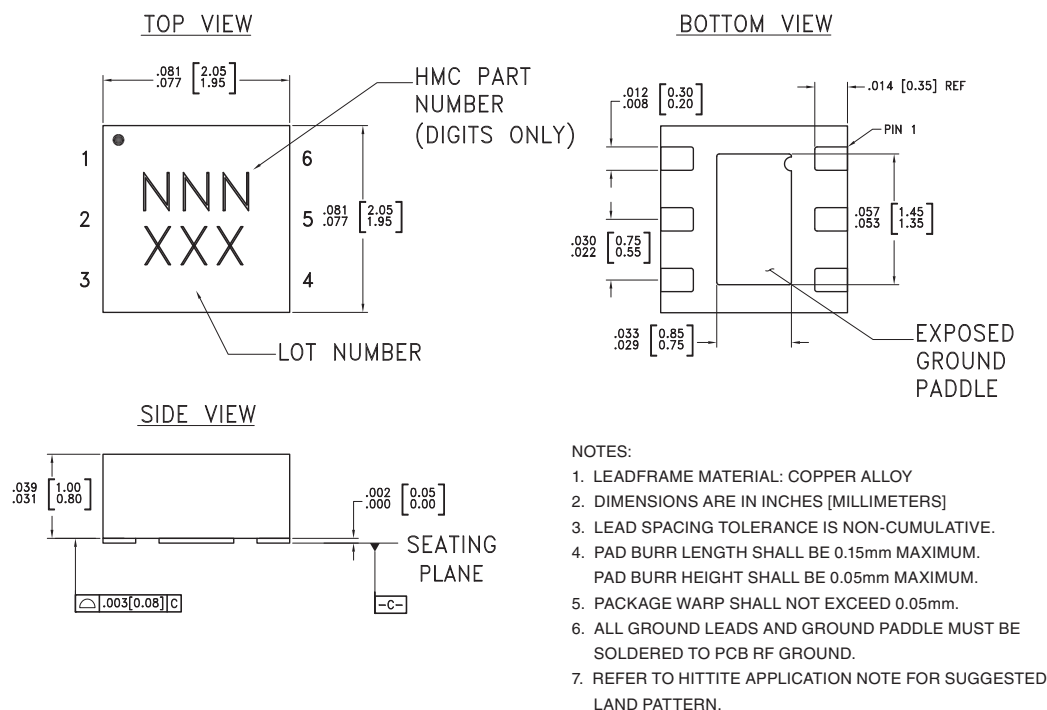
| Part Number | HMC656LP2E | HMC657LP2E | HMC658LP2E | Units |
|-----------------------|-------------|------------|------------|-------|
| RF Input Power (CW) | 25 | 25 | 25 | dBm |
| DC Voltage Terminated | 4.9 | 4.4 | 4.8 | V |
| DC Voltage Open | 5.3 | 4.6 | 4.9 | V |
| Storage Temperature | -65 to +150 | | | °C |
| Operating Temperature | -40 to +85 | | | °C |
| ESD Sensitivity (HBM) | Class 1B | Class 1B | Class 1B | |



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

WIDEBAND FIXED ATTENUATOR FAMILY, DC - 25 GHz HMC656LP2E / HMC657LP2E / HMC658LP2E

Outline Drawing



Package Information


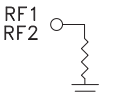
| Part Number | Package Body Material | Lead Finish | MSL Rating | Package Marking [3] |
|-------------------------------|--|---------------|------------|---------------------|
| HMC656LP2 through HMC658LP2 | Low Stress Injection Molded Plastic | Sn/Pb Solder | MSL1 [1] | NNN XXX |
| HMC656LP2E through HMC658LP2E | RoHS-compliant Low Stress Injection Molded Plastic | 100% matte Sn | MSL1 [2] | NNN XXX |

[1] Max peak reflow temperature of 235 °C

[2] Max peak reflow temperature of 260 °C

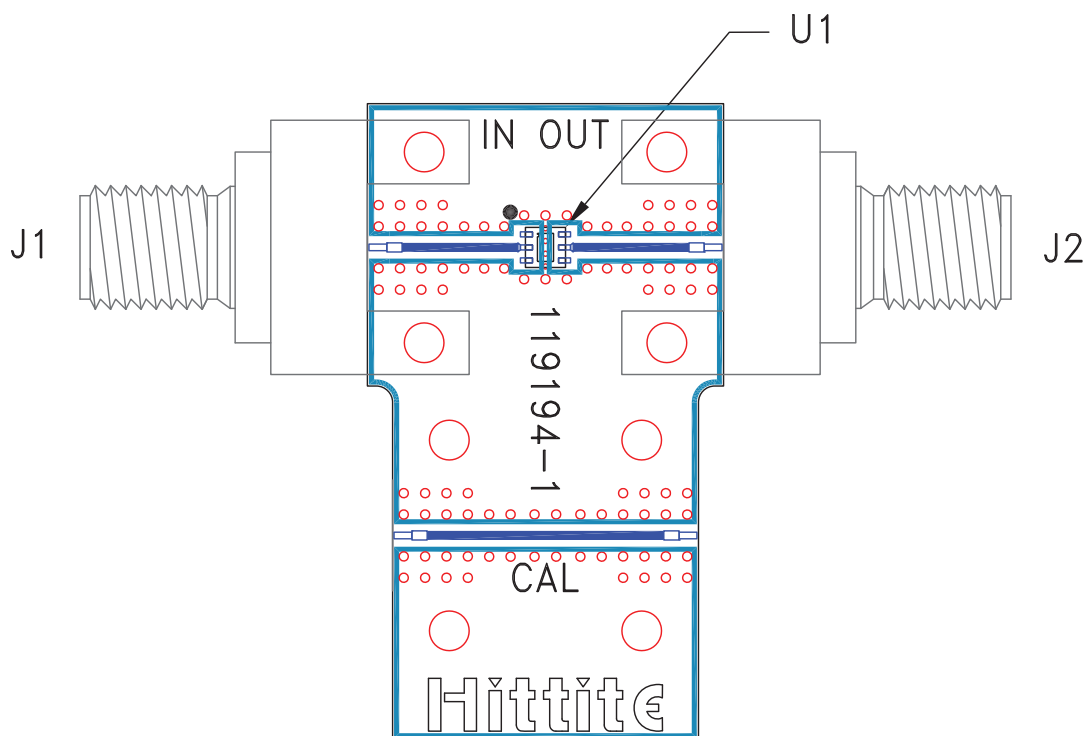
[3] 3-Digit lot number XXX

Pin Descriptions

| Pin Number | Function | Description | Interface Schematic |
|------------|----------|--|---|
| 1, 3, 4, 6 | GND | Package bottom must be connected to RF/DC ground. |  |
| 2, 5 | RF1, RF2 | This pin is DC coupled and matched to 50 Ohms. Use DC Blocking capacitors if the input / output signals have non-zero DC potential |  |

**WIDEBAND FIXED ATTENUATOR FAMILY, DC - 25 GHz
HMC656LP2E / HMC657LP2E / HMC658LP2E**

Evaluation PCB



List of Materials for Evaluation PCB 119197 [1]

| Item | Description |
|---------|--|
| J1 - J2 | PCB Mount SMA Connector |
| U1 | HMC656LP2E through HMC658LP2E Passive Attenuator |
| PCB [2] | 119194 Evaluation PCB |

[1] Reference this number when ordering complete evaluation PCB

[2] Circuit Board Material: Rogers 4350

The circuit board used in the final application should be generated with proper RF circuit design techniques. Signal lines at the RF port should have 50 ohm impedance and the package ground leads and exposed paddle should be connected directly to the ground plane similar to that shown above. The evaluation circuit board shown above is available from Hittite Microwave Corporation upon request.