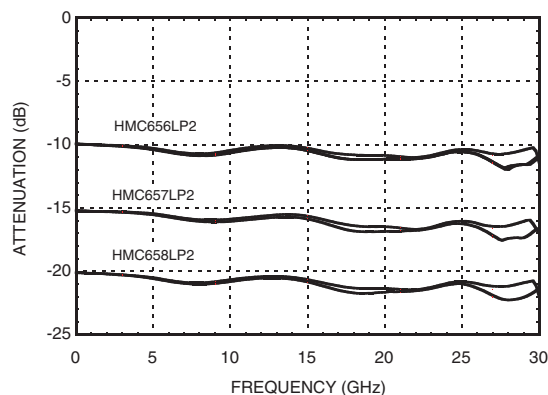
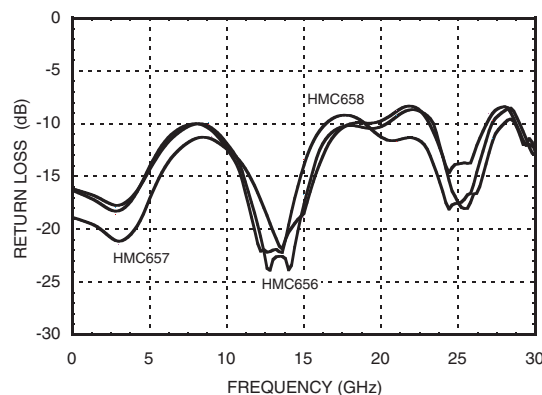


## WIDEBAND FIXED ATTENUATOR FAMILY, DC - 25 GHz HMC656LP2E / HMC657LP2E / HMC658LP2E

### Attenuation vs. Temperature



### Return Loss



### Absolute Maximum Ratings

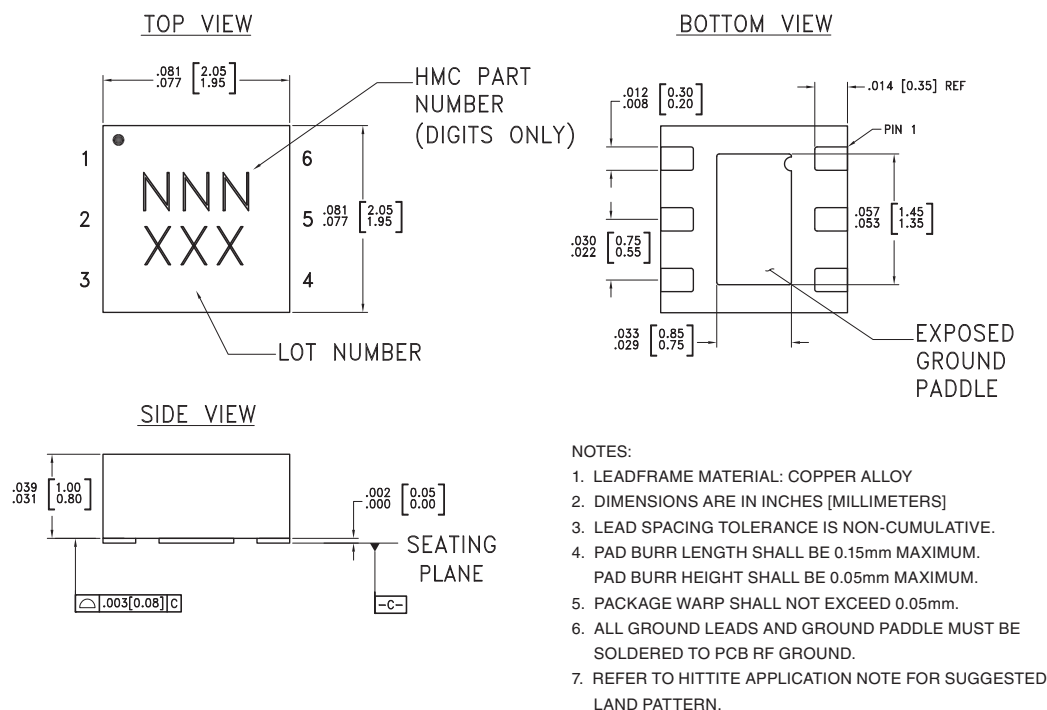
Part Number	HMC656LP2E	HMC657LP2E	HMC658LP2E	Units
RF Input Power (CW)	25	25	25	dBm
DC Voltage Terminated	4.9	4.4	4.8	V
DC Voltage Open	5.3	4.6	4.9	V
Storage Temperature	-65 to +150			°C
Operating Temperature	-40 to +85			°C
ESD Sensitivity (HBM)	Class 1B	Class 1B	Class 1B	



**ELECTROSTATIC SENSITIVE DEVICE**  
**OBSERVE HANDLING PRECAUTIONS**

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

### Outline Drawing



### Package Information


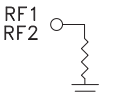
Part Number	Package Body Material	Lead Finish	MSL Rating	Package Marking [3]
HMC656LP2 through HMC658LP2	Low Stress Injection Molded Plastic	Sn/Pb Solder	MSL1 [1]	NNN XXX
HMC656LP2E through HMC658LP2E	RoHS-compliant Low Stress Injection Molded Plastic	100% matte Sn	MSL1 [2]	NNN XXX

[1] Max peak reflow temperature of 235 °C

[2] Max peak reflow temperature of 260 °C

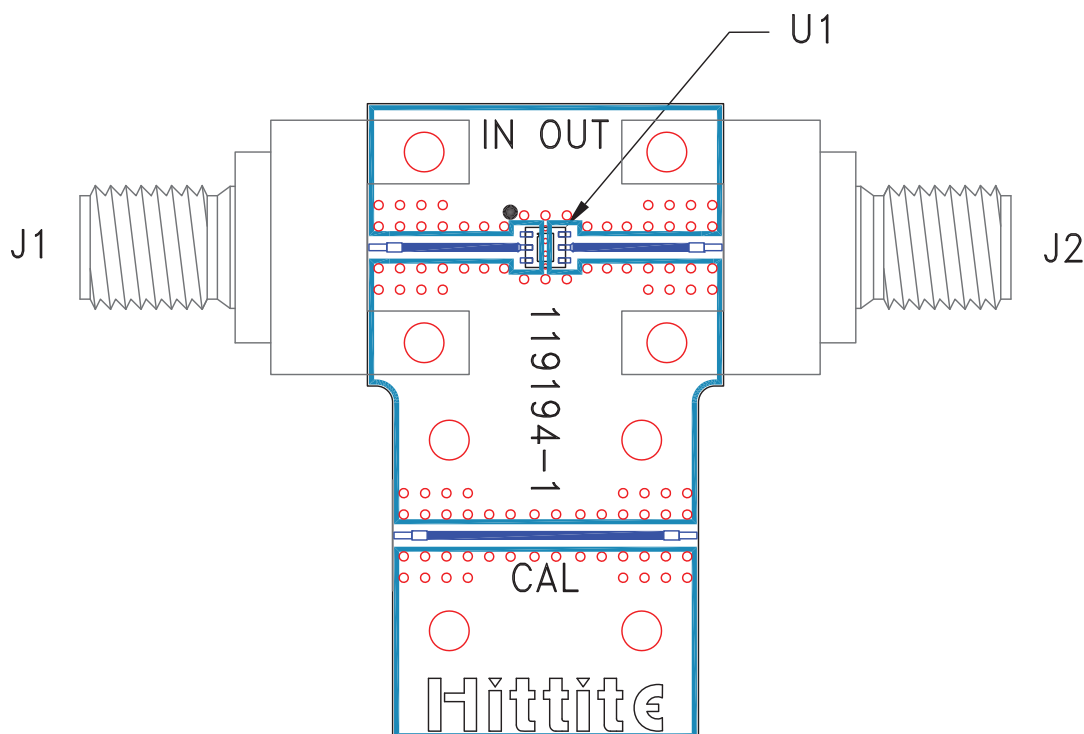
[3] 3-Digit lot number XXX

### 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 <sup>[1]</sup>

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.