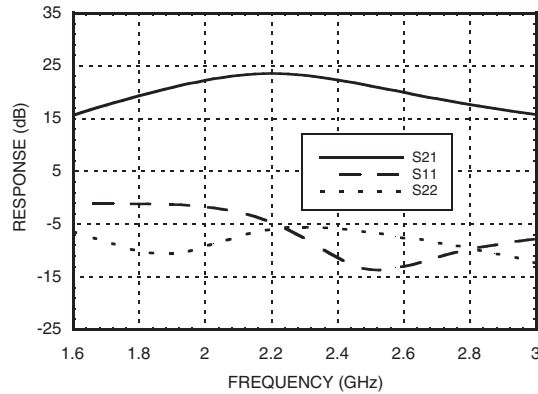


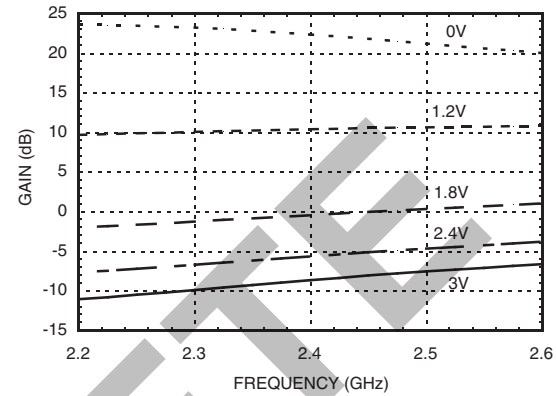
**GaAs MMIC LOW NOISE AMPLIFIER
with AGC, 2.3 - 2.5 GHz**



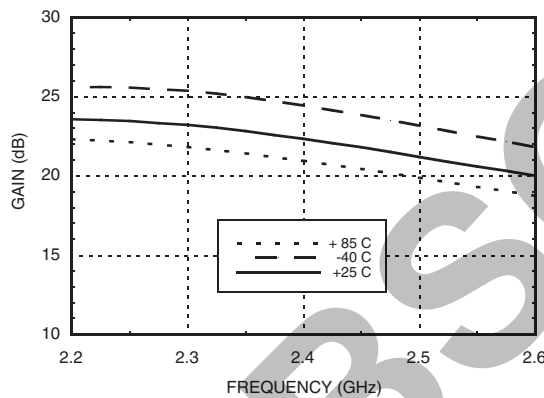
**Broadband Gain
& Return Loss, $V_{ctl} = 0V$**



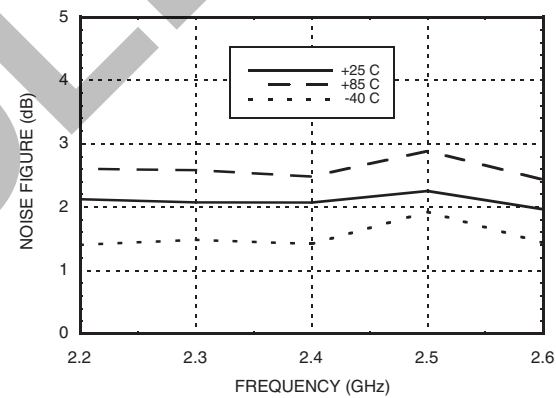
Gain Over Control Voltage Range



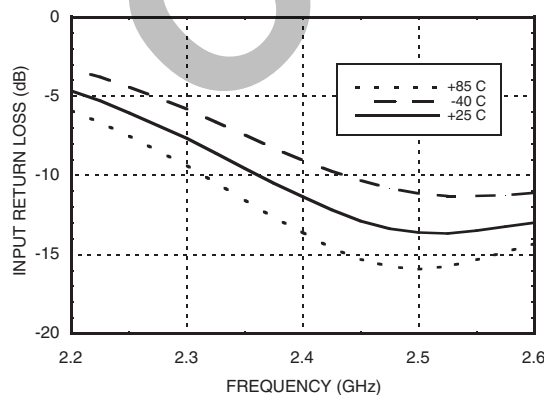
Gain vs. Temperature, $V_{ctl} = 0V$



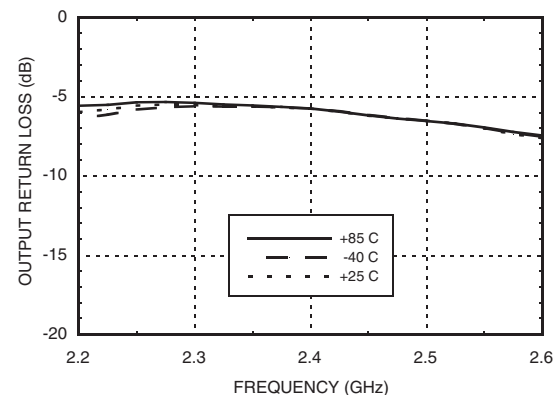
**Noise Figure
vs. Temperature, $V_{ctl} = 0V$**



**Input Return Loss
vs. Temperature, $V_{ctl} = 0V$**



**Output Return Loss
vs. Temperature, $V_{ctl} = 0V$**



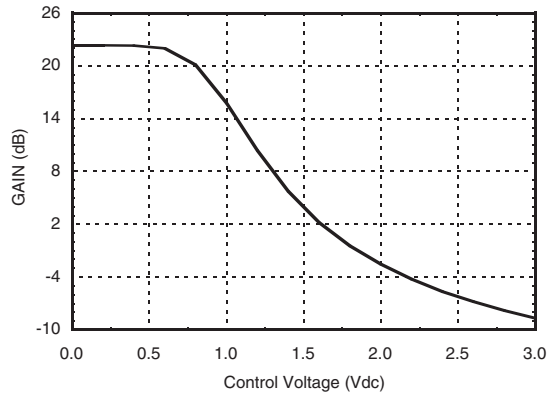


**GaAs MMIC LOW NOISE AMPLIFIER
with AGC, 2.3 - 2.5 GHz**

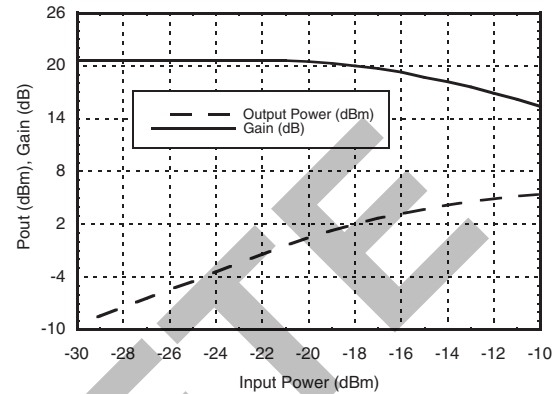
4

LOW NOISE AMPLIFIERS - SMT

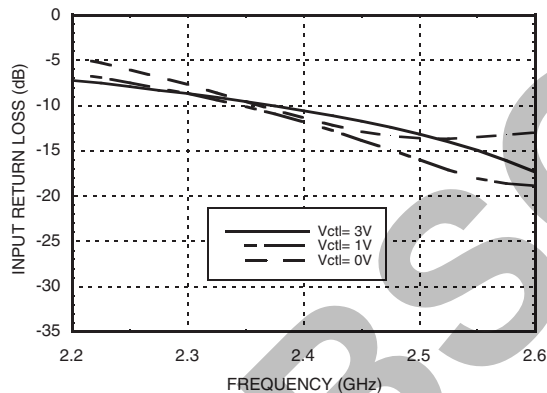
Gain vs. Control Voltage @ 2.4 GHz



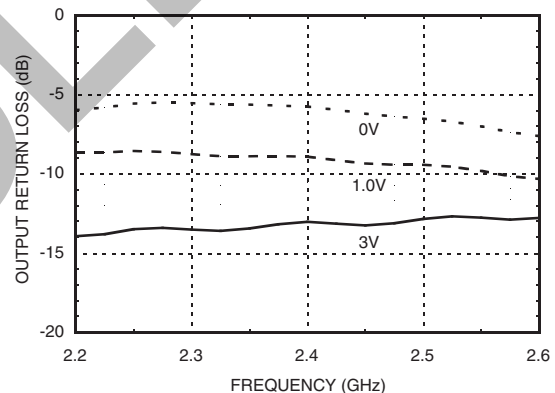
Power Compression @ 2.4 GHz, Vctl = 0V



**Input Return Loss
Over Control Voltage Range**



**Output Return Loss
Over Control Voltage Range**

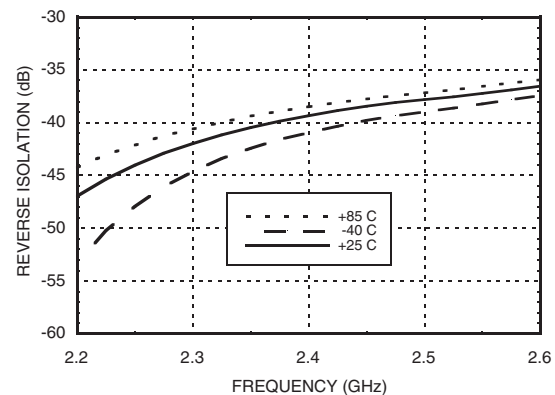


**Noise Figure and
Output IP3 vs. Control Voltage**

Frequency = 2.4 GHz		
VCTL	Noise Figure	OIP3 (dBm)*
0V	2.5	7.1
1.7V	4.0	-4.4
3.0V	10.0	-12.9

* Two-tone input power = -30 dBm per tone.

**Reverse Isolation
vs. Temperature, Vctl = 0V**



GaAs MMIC LOW NOISE AMPLIFIER with AGC, 2.3 - 2.5 GHz



Absolute Maximum Ratings

Drain Bias Voltage (Vdd)	+7 Vdc
Control Voltage Range (Vctl)	-0.2V to Vdd
RF Input Power (RFIN)(Vdd = +3 Vdc)	-7 dBm
Channel Temperature	150 °C
Continuous P _{diss} (T = 85 °C) (derate 5.62 mW/°C above 85 °C)	0.365 W
Thermal Resistance (channel to lead)	178 °C/W
Storage Temperature	-65 to +150 °C
Operating Temperature	-40 to +85 °C

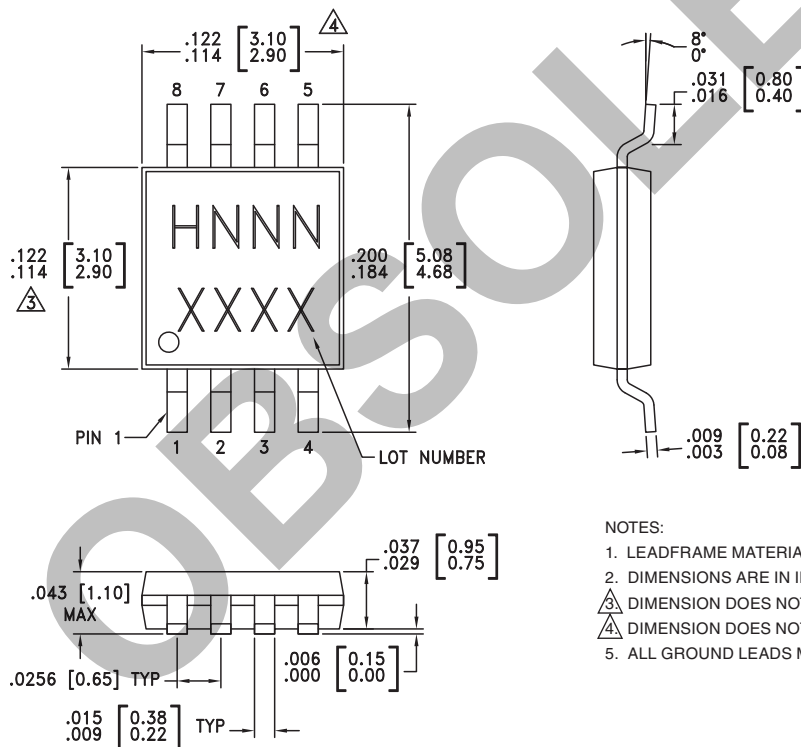
Gain Control

Vctl (Vdc)	Gain State	Typical Ictl (uA)
0.0	Maximum	25
1.5	Middle	25
Vdd	Minimum	25



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Outline Drawing



Package Information

Part Number	Package Body Material	Lead Finish	MSL Rating	Package Marking ^[3]
HMC287MS8	Low Stress Injection Molded Plastic	Sn/Pb Solder	MSL1 ^[1]	H287 XXXX
HMC287MS8E	RoHS-compliant Low Stress Injection Molded Plastic	100% matte Sn	MSL1 ^[2]	H287 XXXX

[1] Max peak reflow temperature of 235 °C

[2] Max peak reflow temperature of 260 °C

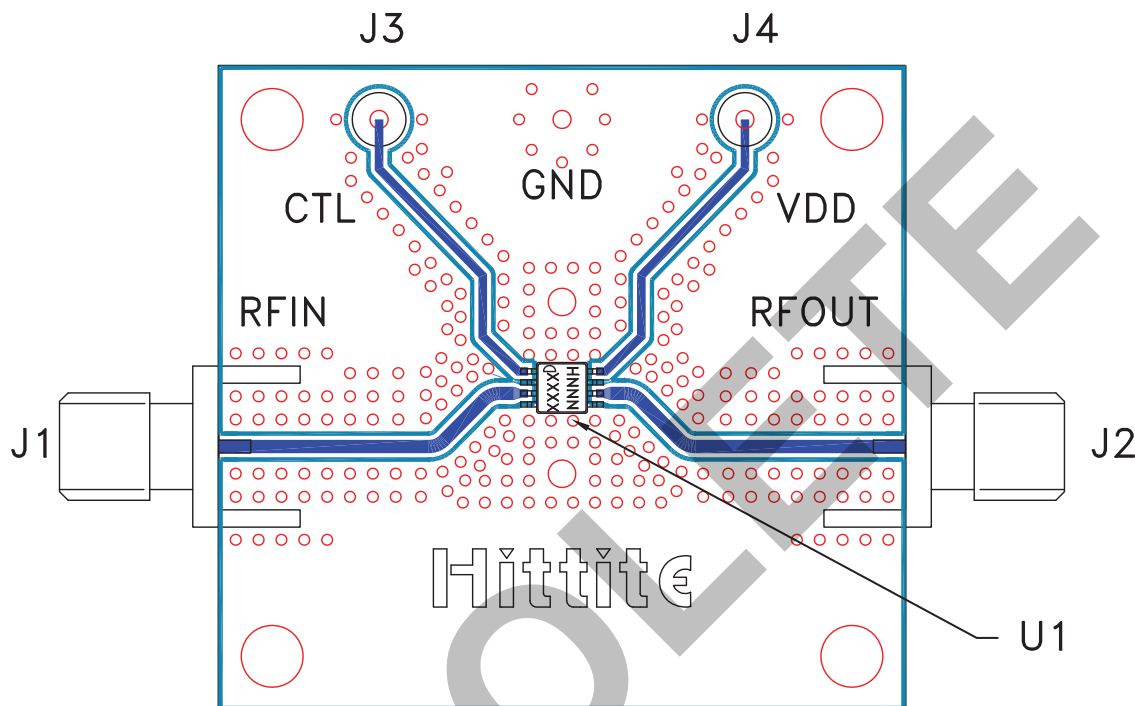
[3] 4-Digit lot number XXXX

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Evaluation PCB



List of Materials for Evaluation PCB 103739 [1]

Item	Description
J1, J2	PCB Mount SMA Connector
J3, J4	DC Pin
U1	HMC287MS8 / HMC287MS8E Amplifier
PCB [2]	Evaluation Board 1.6" x 1.5"

[1] Reference this number when ordering complete evaluation PCB

[2] Circuit Board Material: Rogers 4350

The circuit board used in the final application should use RF circuit design techniques. Signal lines should have 50 ohm impedance while the package ground leads and exposed paddle should be connected directly to the ground plane similar to that shown. A sufficient number of via holes should be used to connect the top and bottom ground planes. The evaluation circuit board shown is available from Hittite upon request.

Notes:

OBSOLETE