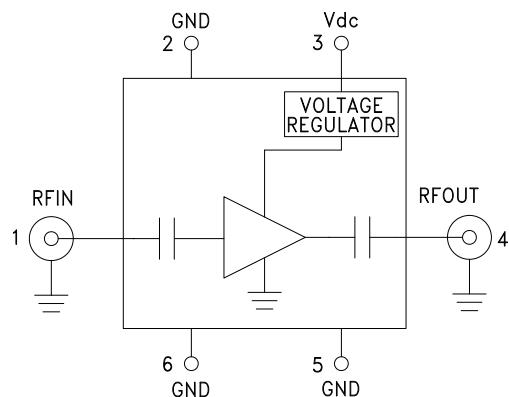


Typical Applications

The HMC-C048 LNA is ideal for:

- Telecom Infrastructure
- Microwave Radio & VSAT
- Military & Space
- Test Instrumentation

Functional Diagram



Electrical Specifications, $T_A = +25^\circ C$, $Vdc = +12V$

Parameter	Min.	Typ.	Max.	Units
Frequency Range		5 - 9		GHz
Gain	18.5	22.5		dB
Gain Variation Over Temperature		0.015		dB/ $^\circ C$
Noise Figure		1.75	2.3	dB
Input Return Loss		14		dB
Output Return Loss		15		dB
Output Power for 1 dB Compression (P1dB)	12	14.8		dBm
Saturated Output Power (Psat)		16.7		dBm
Output Third Order Intercept (IP3)		25		dBm
Supply Current		105	140	mA

HMC-C048* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

DOCUMENTATION

Application Notes

- AN-1363: Meeting Biasing Requirements of Externally Biased RF/Microwave Amplifiers with Active Bias Controllers

Data Sheet

- HMC-C048 Data Sheet

TOOLS AND SIMULATIONS

- HMC-C048 S-Parameter

DESIGN RESOURCES

- HMC-C048 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all HMC-C048 EngineerZone Discussions.

SAMPLE AND BUY

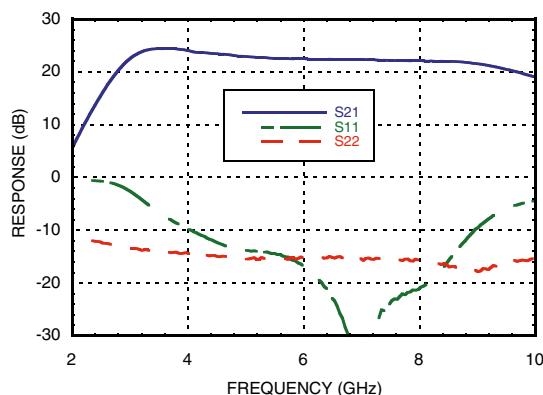
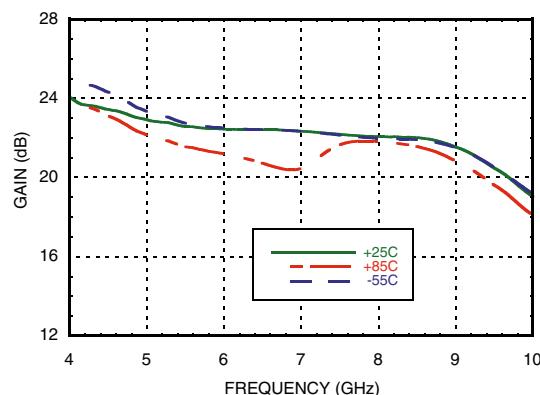
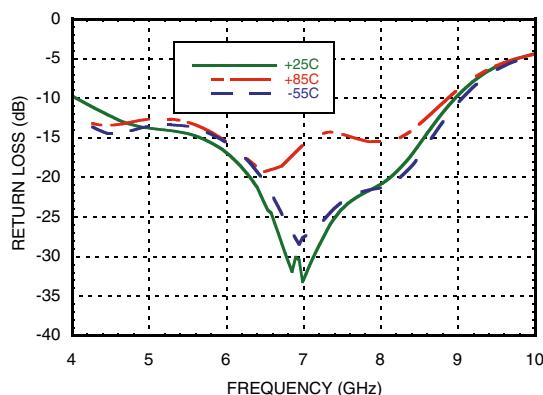
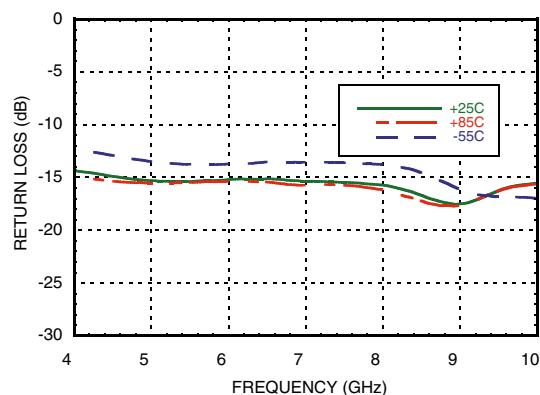
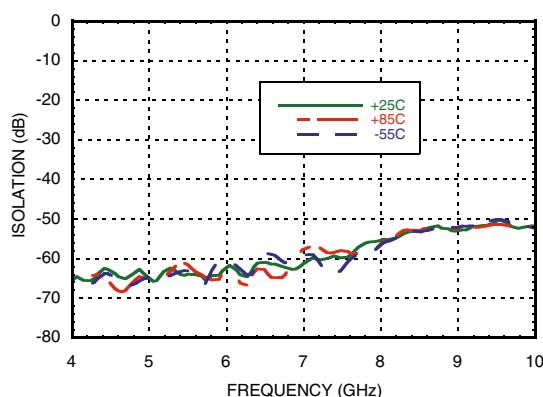
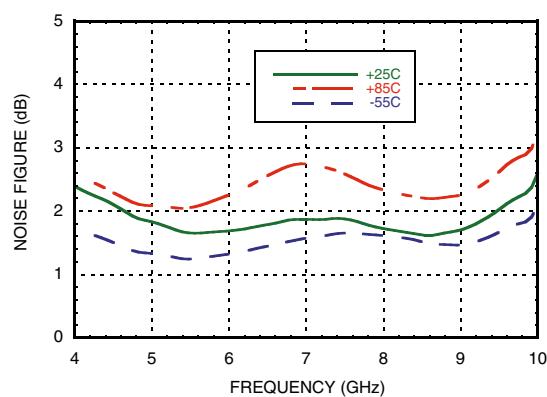
Visit the product page to see pricing options.

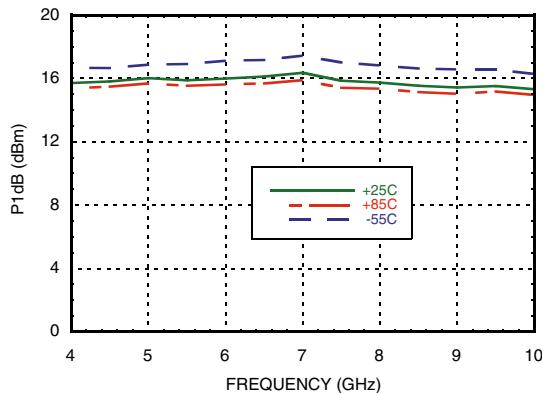
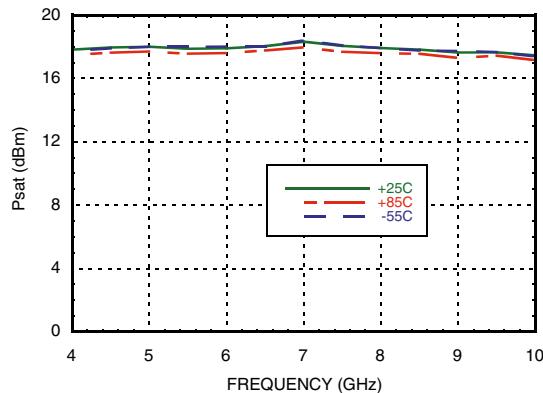
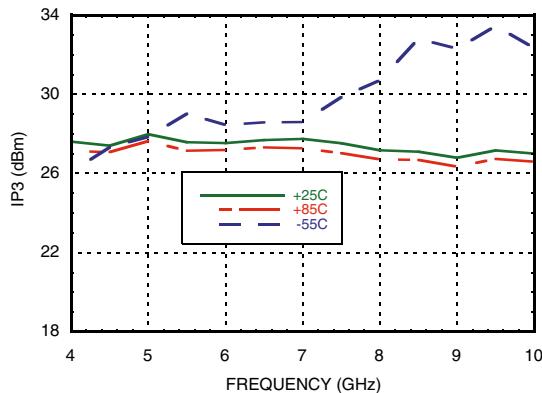
TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

DOCUMENT FEEDBACK

Submit feedback for this data sheet.

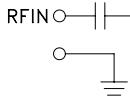
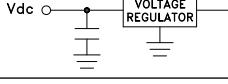
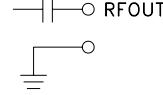

**LOW NOISE AMPLIFIER
MODULE, 5 - 9 GHz**
Broadband Gain & Return Loss

Gain vs. Temperature

Input Return Loss vs. Temperature

Output Return Loss vs. Temperature

Reverse Isolation vs. Temperature

Noise Figure vs. Temperature


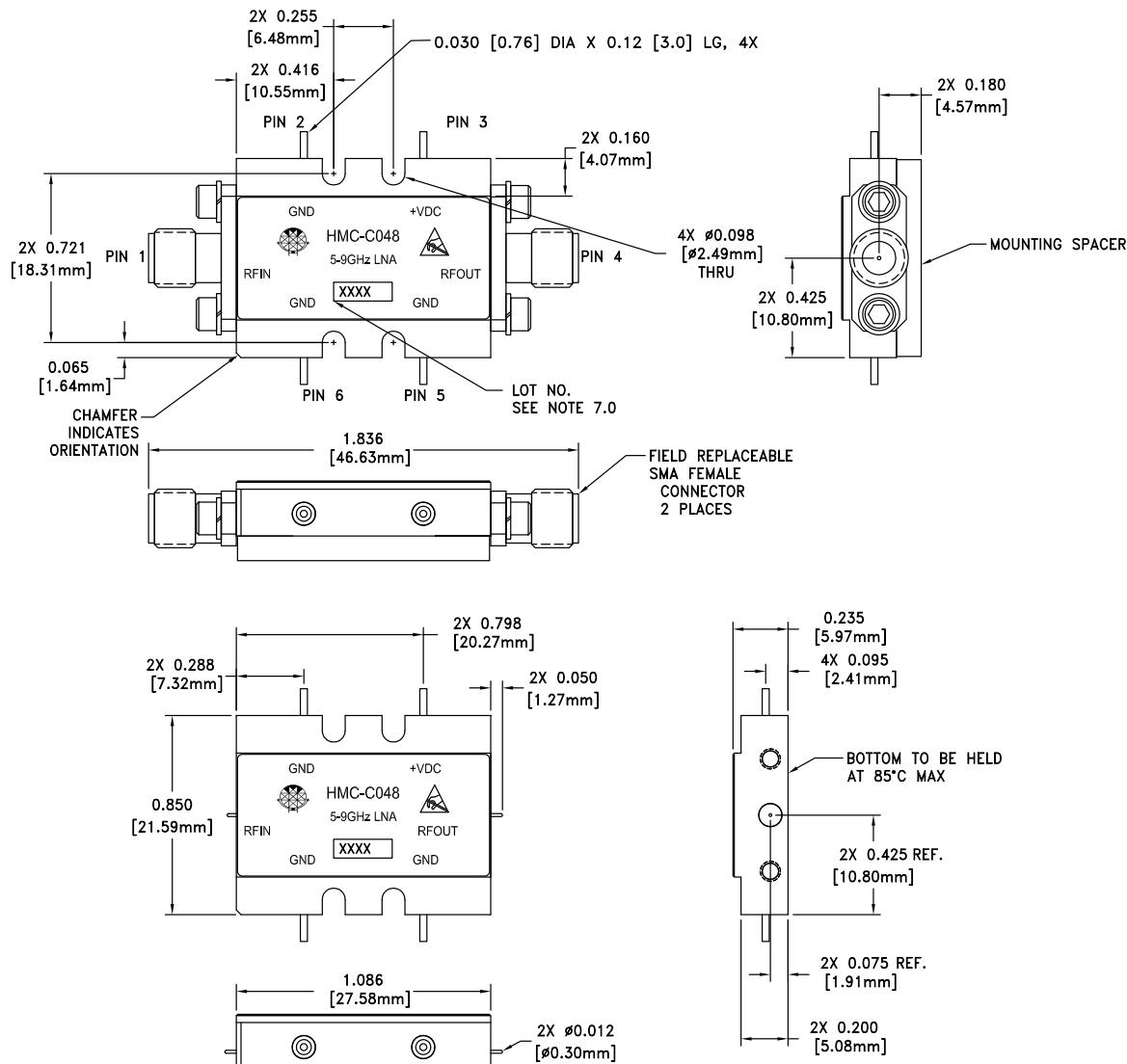

**LOW NOISE AMPLIFIER
MODULE, 5 - 9 GHz**
AMPLIFIERS
Output P1dB vs. Temperature

Psat vs. Temperature

Output IP3 vs. Temperature

Absolute Maximum Ratings

Bias Supply Voltage (Vdc)	+16 Vdc
RF Input Power (RFIN)	+0 dBm
Storage Temperature	-65 to +150 °C
Operating Temperature	-55 to +85 °C


**ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS**


**LOW NOISE AMPLIFIER
MODULE, 5 - 9 GHz**
Pin Descriptions

Pin Number	Function	Description	Interface Schematic
1	RFIN & RF Ground	RF input connector, coaxial female, field replaceable. This pin is AC coupled and matched to 50 Ohms.	
2, 5, 6	GND	One of these pins must be connected to power supply ground.	
3	Vdc	Power supply voltage for the amplifier.	
4	RFOUT & RF Ground	RF output connector, coaxial female, field replaceable. This pin is AC coupled and matched to 50 Ohms.	


**LOW NOISE AMPLIFIER
MODULE, 5 - 9 GHz**
Outline Drawing


VIEW SHOWN WITH CONNECTORS AND MOUNTING SPACER REMOVED

Package Information

Package Type	C-10
Package Weight [1]	18.7 gms [2]
Spacer Weight	3.3 gms [2]

[1] Includes the connectors

[2] ± 1 gms Tolerance

NOTES:

1. PACKAGE, LEADS, COVER MATERIAL: KOVARTTM
2. FINISH: GOLD PLATE OVER NICKEL PLATE
3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]
4. TOLERANCES:
 - 4.1 .XX = ± 0.02
 - 4.2 .XXX = ± 0.010
5. FIELD REPLACEABLE SMA CONNECTORS

**LOW NOISE AMPLIFIER
MODULE, 5 - 9 GHz****Notes:**