Part Number
A229001-1

SHF Amplifier / Up-Converter

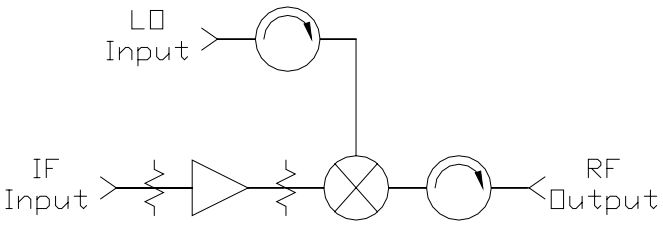
Product Description

The A229001-1 is a high performance multi-function device that first amplifies and then converts an IF signal between 680MHz to 720MHz up to the RF frequency range of 7900MHz to 8400MHz, using an LO signal ranging between 7200MHZ and 7700MHz. Conversion gain is typically 0dB and 0.5dB flat over the operating frequency range. LO to RF Isolation is greater than 40dB. Isolators are included at both the LO and RF ports to provide excellent return losses of greater than 15dB at both ports. The hermetically-sealed SHF up-converter is intended for use in high reliability military applications.

Product Features

- X-Band Up-Converter
- Integral IF Amplifier
- Integral RF & LO Isolators
- LO to RF Isolation > 40dB
- Return Loss > 15dB at All Ports
- Conversion Gain Flatness Typically < 0.5dB
- High Reliability Military Application

Functional Block Diagram



Electrical Specifications

Parameters	Units	Typical
IF Frequency Range	MHz	680 to 720
RF Frequency Range	MHz	7900 to 8400
LO Frequency Range	dB	7200 to 7900
Return Loss (All Ports)	dB	> 15
Conversion Gain	dB	0
Conversion Gain Flatness	dB	< 0.5dB
Output P1dB	dBm	> -2
LO to RF Isolation	dB	> 40
DC Bias	VDC	+15 @ 25mA
Operating Temperature Range	^{o}C	-55 to +75

Rev - 12/6/06

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Micro-Con
MICROWAVE CONCEPTS, INC.

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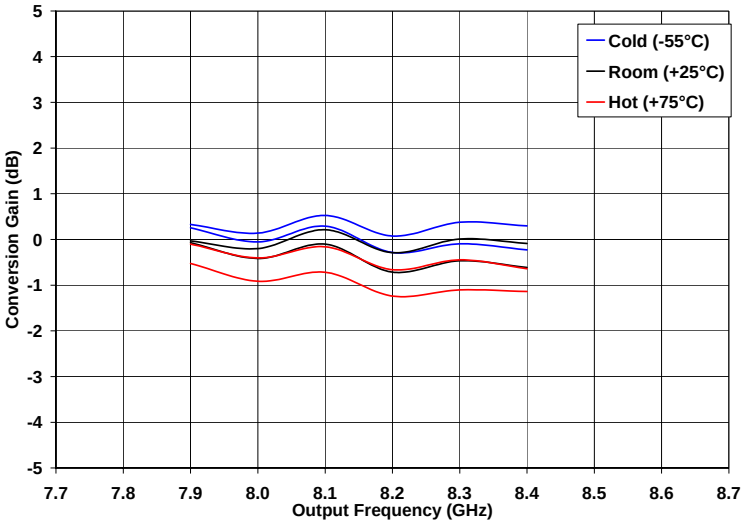
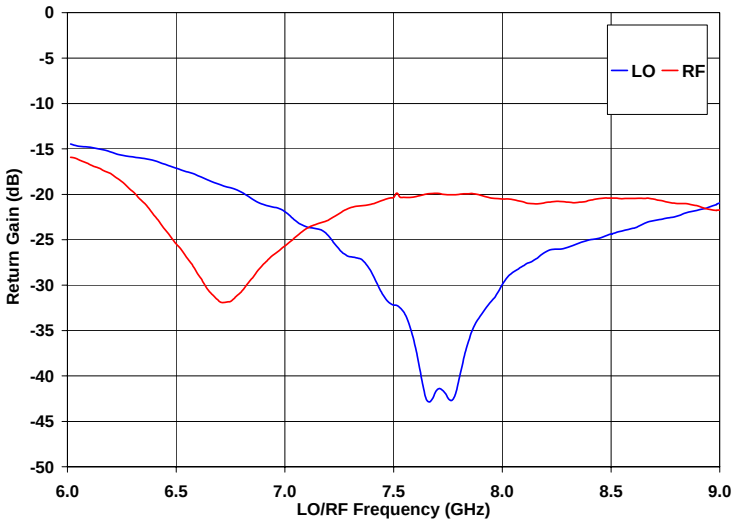
Typical Electrical Performance

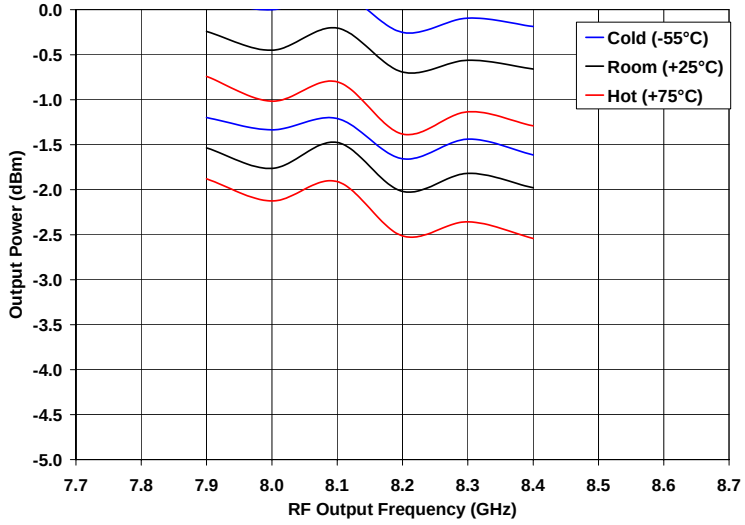
Conversion Gain @ P_{LO}= +9dBm & +15dBm



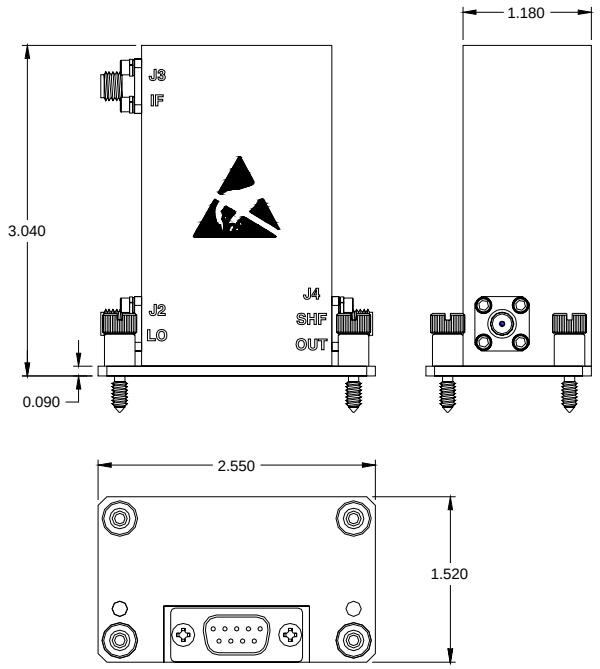
LO and RF Return Gain



Output P_{1dB} @ P_{LO}= +9dBm & +15dBm



Outline



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