



**HITTITE
MICROWAVE
CORPORATION**

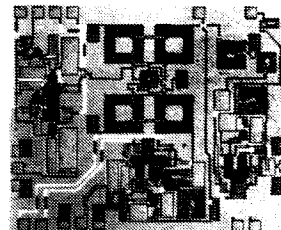
**GaAs MMIC
2.5 to 6 GHz
Up - Converter**

HMC113

PRELIMINARY DATA SHEET, DECEMBER 1991

Features

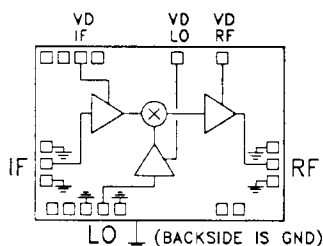
- CONVERSION GAIN: 18dB
- NOISE FIGURE: 8 dB
- RF AND LO BANDWIDTH: 2.5 -6 GHz



General Description

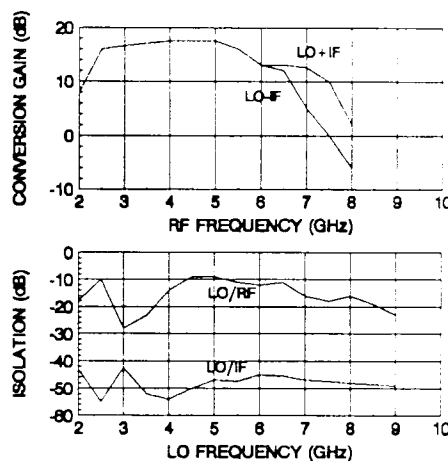
The HMC113 chip is a complete 2.5 to 6 GHz upconverter with on-chip RF, LO, and IF amplifiers. The chip operates on a single +5V DC supply and provides 18 dB gain with only 8dB noise figure; requiring only +5dBm LO drive.

Schematic



Typical Performance

at a Fixed 0.5GHz IF



Electrical Performance

PARAMETER	Typ.	Units
Frequency Range, RF & LO	2.5 - 6	GHz
Frequency Range, IF	0.4 - 1.5	GHz
Conversion Gain	18	dB
Noise Figure	8	dB
LO to RF Isolation	10	dB
LO to IF Isolation	45	dB
Local Oscillator Drive Level	5	dBm
Supply Voltage	5	Volts
Supply Current	270	mA
Operating Temperature	-55 to +125	deg. C
Size	2.0 x 2.5	mm