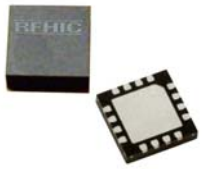
Active Up Mixer MO4Q

Product Features

- Integrated Monolithic GaAs MESFET
- Active Mixer Packages Module
- Pb-free 3mm 16-pin QFN package
- Lower Manufacturing Cost
- Higher Productivity and Reliability
- Very Low Noise Figure & Low Distortion

Applications

- Repeater
- Base Station



Package Type : QFN-3

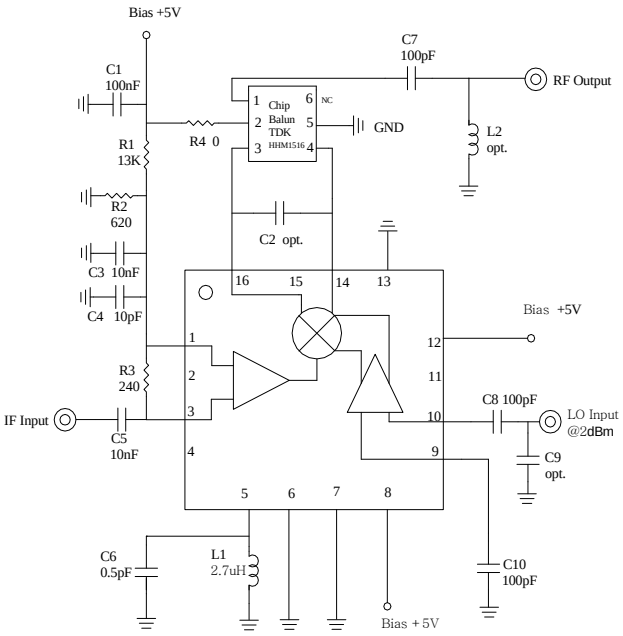
Description

The IC operates from a positive +5V rail consuming 145 mA of current while only requiring a 2 dBm LO drive.
The MCM is implemented with reliable and mature GaAs MESFET technology.

Electrical Specifications (Typical Performance at -30°C ~ 80°C)

RF Frequency	LO Frequency	IF Frequency	Conversion Gain	OIP3	LO to IF Leakage	IF to RF Leakage	Vdd / Idd
(MHz)	(MHz)	(MHz)	(dB)	(dBm)	(dBm)	(dBm)	(V / mA)
1850	1780	70	6	24	-15	-60	5 / 130
1950	1880		6	24	-15	-60	5 / 130
2140	2070		6	24	-15	-60	5 / 130
2160	2090		6	24	-15	-60	5 / 130

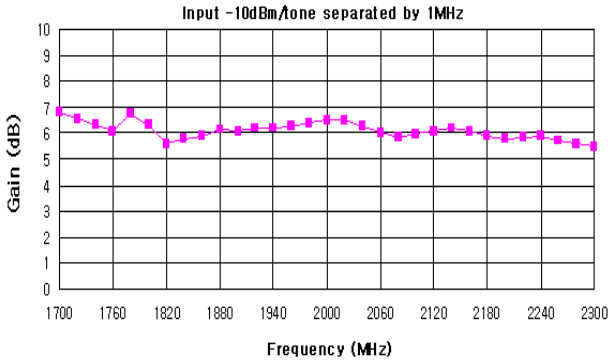
Application Circuit : Matched externally for IMT



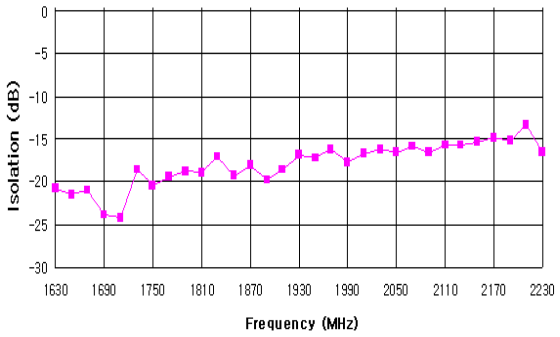
Typical Performance @ 25℃ : PCS, IMT

Test Condition : IF = 70MHz, LO = 1630~2230MHz@2dBm, RF = 1700~2300MHz

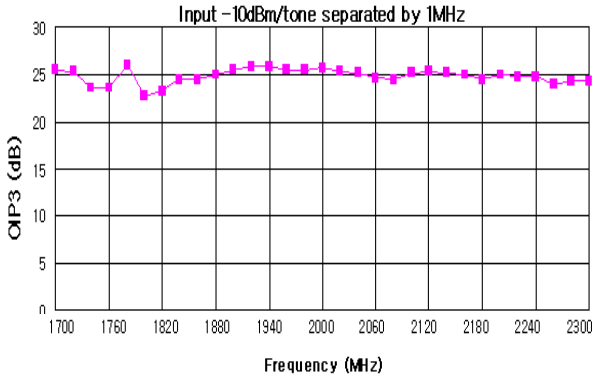
Gain vs MO4Q



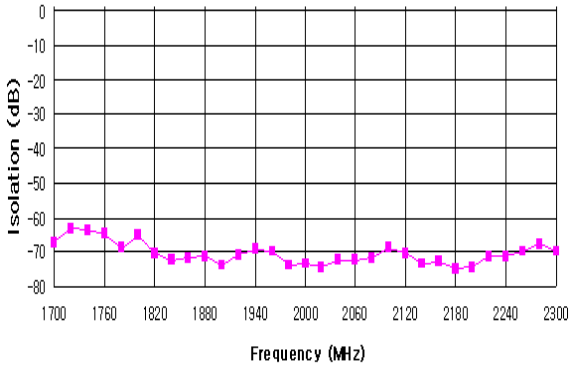
Isolation of LO to RF



OIP3 vs MO4Q

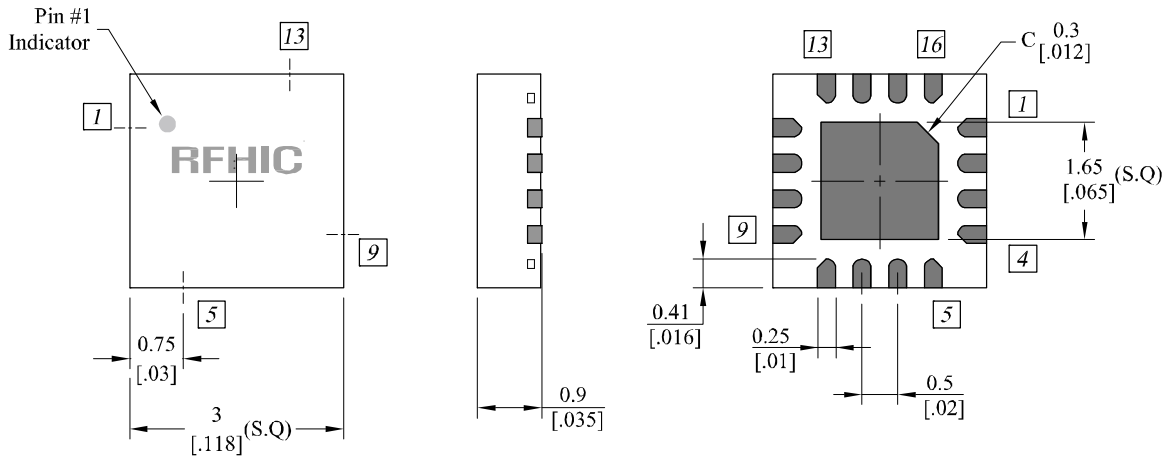


Isolation of 1F to RF



Package Dimensions (Type: QFN3x3)

* Unit: mm[inch] | Tolerance: ±0.2[.008]



▲ Top View ▲ Side View ▲ Bottom View

Pin Description							
Pin No	**Function**	**Pin No**	**Function**	**Pin No**	**Function**	**Pin No**	**Function**
1	IFN In	5	CUR	9	LON_In	13	Ground
2	NC	6	Ground	10	LO_In	14	RF Out
3	IF In	7	Ground	11	NC	15	NC
4	NC	8	Bias	12	Bias	16	RFN Out

*** Mounting Configuration Notes**

1. Ground / thermal via holes are critical for the proper performance of this device.
2. Add as much copper as possible to inner and outer layers near the part to ensure optimal thermal performance.
3. Mounting screws can be added near the part to fasten the board to a heatsink. Ensure that the ground / thermal via hole region contacts the heatsink.
4. Do not put solder mask on the backside of the PCB in the region where the board contacts the heatsink.
5. RF trace width depends upon the PCB material and construction.
6. Use 1 oz. Copper minimum.

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
MO4Q	2013.1.8	8.2	Change by a new dimension form	-
MO4Q	2012.2.18	8.1	-	-

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