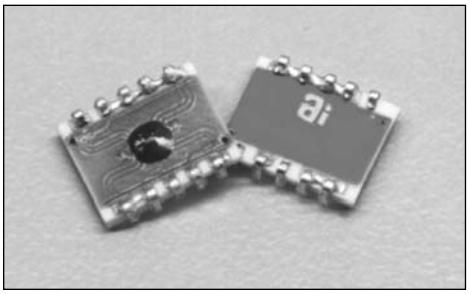
Leaded Surface Mount Mixer

SKYWORKS

M25L

Features

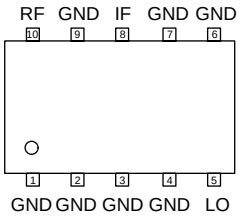
- Low Conversion Loss 5.0 dB (Typ.)
- High Isolation 25 dB (Typ.)
- Low Profile 0.085 (Max.)
- Stress Relieved Leaded Package
- High Performance Diode Ring Mixer



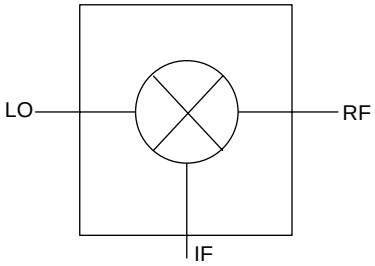
Description

The M25L is designed to be used in wireless systems that are targeted for low-cost/high volume applications. It is a hybrid mixer utilizing the best of Alpha's semiconductor, circuit design and manufacturing capabilities. A custom silicon MMIC is complimented by a rugged thick-film ceramic circuit which doubles as the surface mount package. Wrap-around stress relieving leads ease installation and inspection as well as solve thermal expansion mismatch problems.

Pin Out



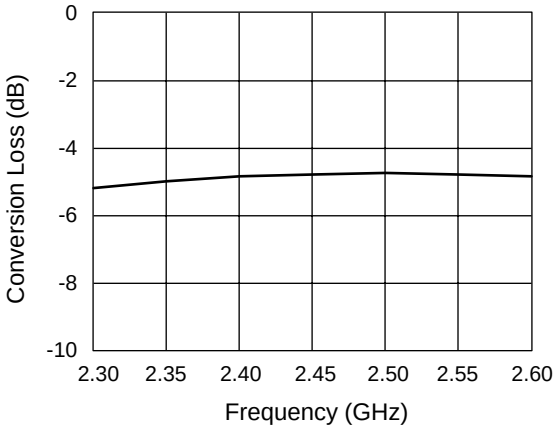
Block Diagram



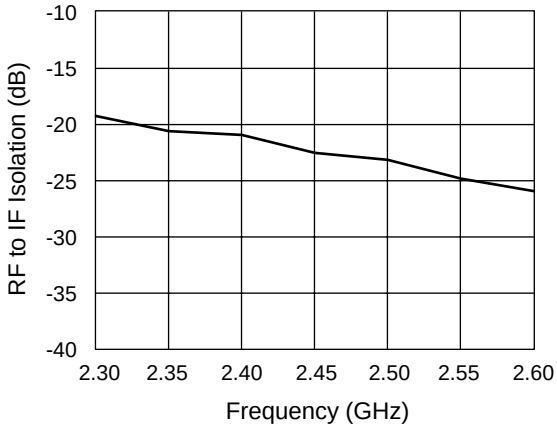
Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
RF Frequency Range	2.3		2.6	GHz
LO Frequency Range	2.3		2.6	GHz
IF Frequency Range	DC		0.4	GHz
LO Power		+7		dBm
Conversion Loss		5.0	7.0	dB
LO to RF Isolation	25	30		dB
LO to IF Isolation	12	15		dB
RF to IF Isolation	18	23		dB
RF VSWR		1.3:1	2.5:1	
LO VSWR		1.5:1	2.5:1	
IF VSWR		1.5:1	2.0:1	
Input Compression Pt.	+0	+2		dBm
IP3	+9	+11		dBm

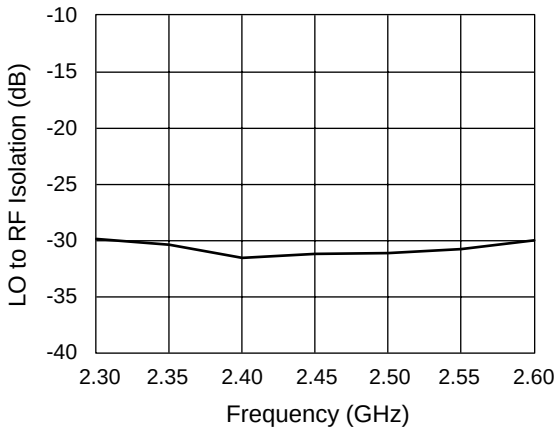
Typical Performance Data



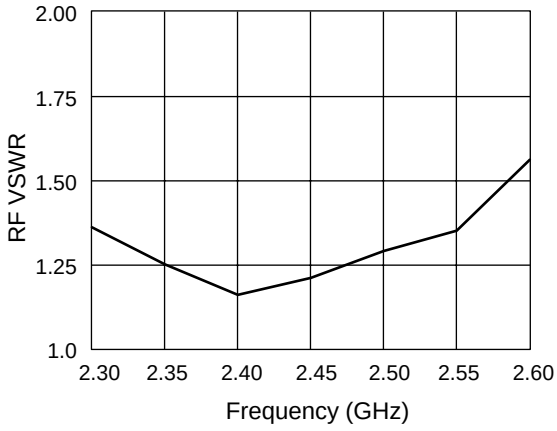
Conversion Loss vs. Frequency



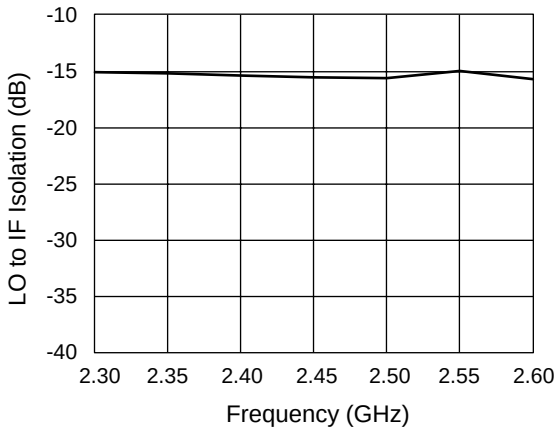
RF to IF Isolation vs. Frequency



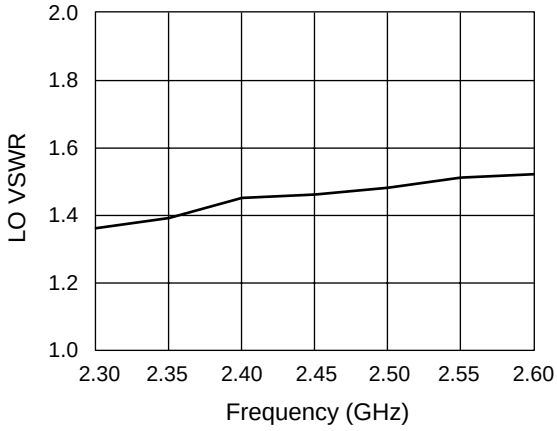
LO to RF Isolation vs. Frequency



RF VSWR vs. Frequency

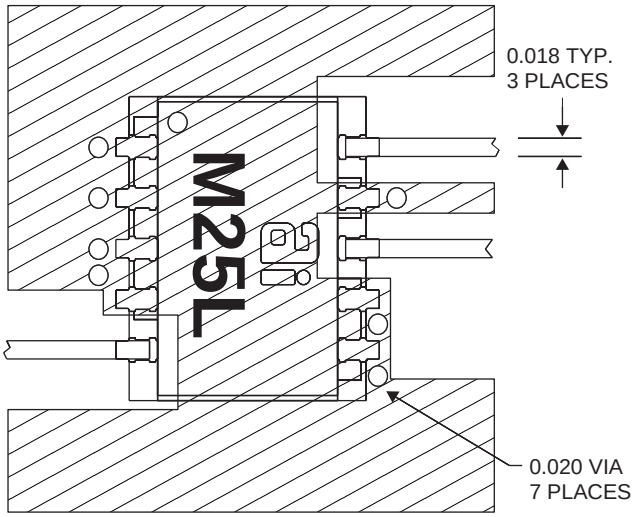


LO to IF Isolation vs. Frequency



LO VSWR vs. Frequency

Recommended Board Layout



Ckt. Material is 10 mil FR4

M25L