



SMJ500-13A

Quad-Diode Mixer

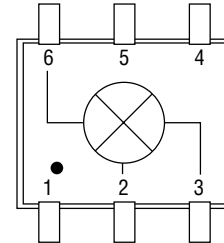
The Communications Edge™

Preliminary Product Information

Product Features

- Input IP3 +20 dBm
- RF Frequency 2-500 MHz
- LO Frequency 2-500 MHz
- IF Frequency DC-500 MHz
- LO Drive Level +13 dBm

Functional Diagram



Function	Pin No.
Ground	1
IF	2
RF	3
Ground	4-5
LO	6

Specifications

Parameter	Units	Minimum	Typical	Maximum	Condition
RF Frequency	MHz	2		500	
LO Frequency	MHz	2		500	
IF Frequency	MHz	DC		500	
SSB Conversion Loss	dB		6.0		
L-R Isolation	dB		44		
L-I Isolation	dB		36		
IIP3	dBm	+15	+20		
LO Drive	dBm		+13		
RF Return Loss	dB		12		
LO Return Loss	dB		14		
IF Return Loss	dB		12		

Test conditions unless otherwise noted.
 1. Tested in a 50 Ohm System, low side LO.

Recommended Maximum Ratings

Parameter	Rating
Operating Temperature	-40 to +70°C
Storage Temperature	-65 to +100°C
RF Input Power at 25°C (continuous)	+17 dBm

Ordering Information

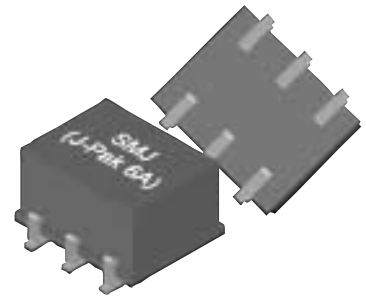
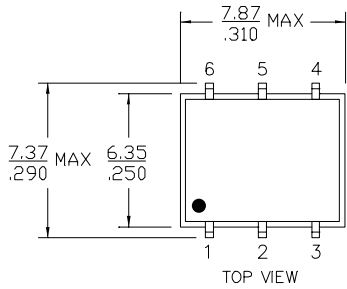
Part No.	Description
SMJ500-13A	Diode Mixer (Available in tape and reel)
SMJ500-13A-PCB	Fully Assembled Application Circuit

The document contains information on a new product.
 Specifications and information are subject to change without notice.

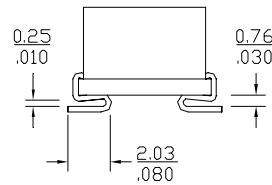
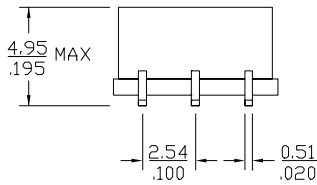
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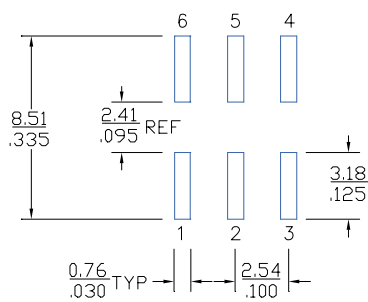
Outline Drawing



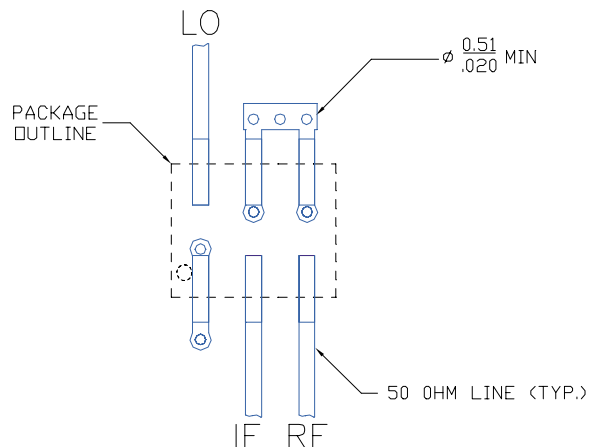
mm
inch



Land Pattern



Mounting Configuration



FUNCTION	PIN NO.
GROUND	1
IF	2
RF	3
GROUND	4-5
LO	6

- Notes:
1. Ground vias are critical for RF grounding considerations.
 2. If your PCB design rules allow, ground vias should be placed under the land pattern for better RF performance. Otherwise ground vias should be placed as close land pattern as possible.
 3. Trace width depends on PC board.