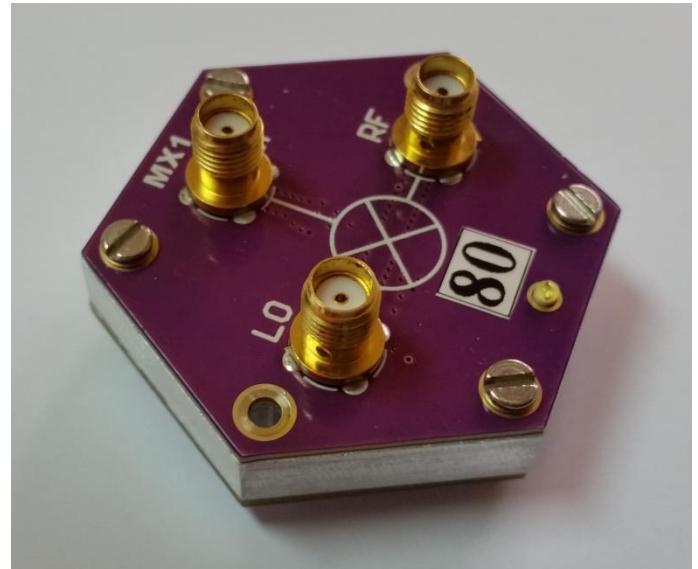


MX1

Description

MX1 is a high performance, Wide band Microwave double balanced passive mixer that can be used for frequency upconversion or downconversion.



Features

- Wide Band RF: 2 GHz to 14 GHz
- Wide Band IF : 10 MHz to 6 GHz
- Up Conversion or Down Conversion
- P1dB Output Power: 15 dBm @ 6 GHz
- Input IP3: +24 dBm @ 6 GHz
- Conversion loss : 8 dB @ 6 GHz
- Integrated LO Buffer : 0 dBm LO drive power
- LO Frequency Doubler option
- 50 Ohm Matched ports

Applications

- Cellular/3G & LTE/WiMAX/4G
- Microwave Radio
- Test & Measurement Equipment

Electrical Specifications.

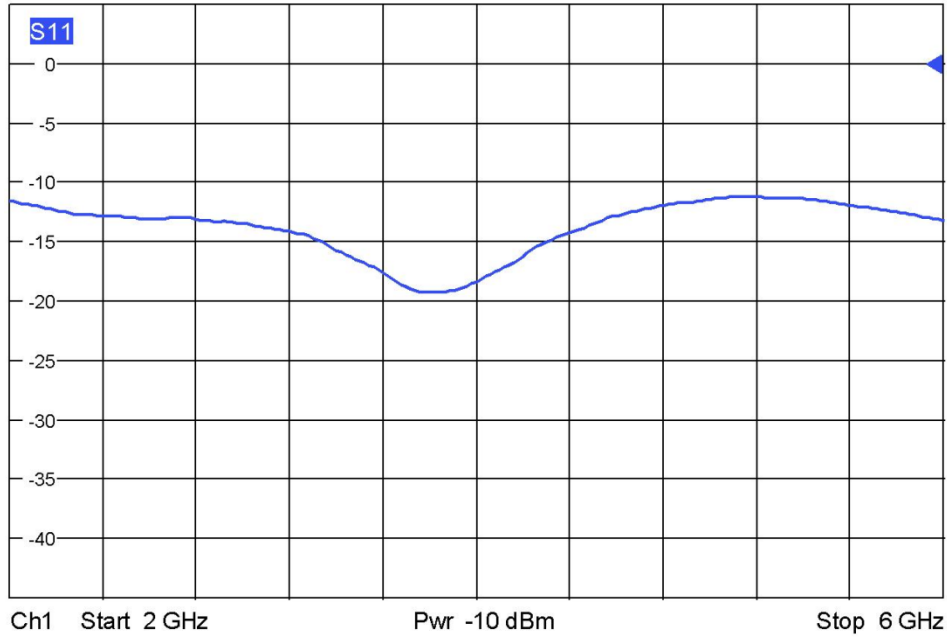
Parameter		Min.	Typ.	Max.	Units
Frequency Range	RF	2		14	GHz
	LO	1		12	GHz
	IF	10		6000	MHz
Return Loss	RF	-25	-12	-9	dB
	LO	-25	-15	-5	dB
	IF	-17	-10	-5	dB
LO to RF Leakage				-25	dBm
LO to IF Leakage				-25	dBm
RF to IF Isolation		40			dB
Conversion Loss @ 6 GHz RF input			8		dB
SSB Noise Figure @ 6 GHz			8		dB
IIP3 @ 6 GHz			24		dBm
Input 1 dB compression @ 6 GHz			15		dBm

Max. Ratings

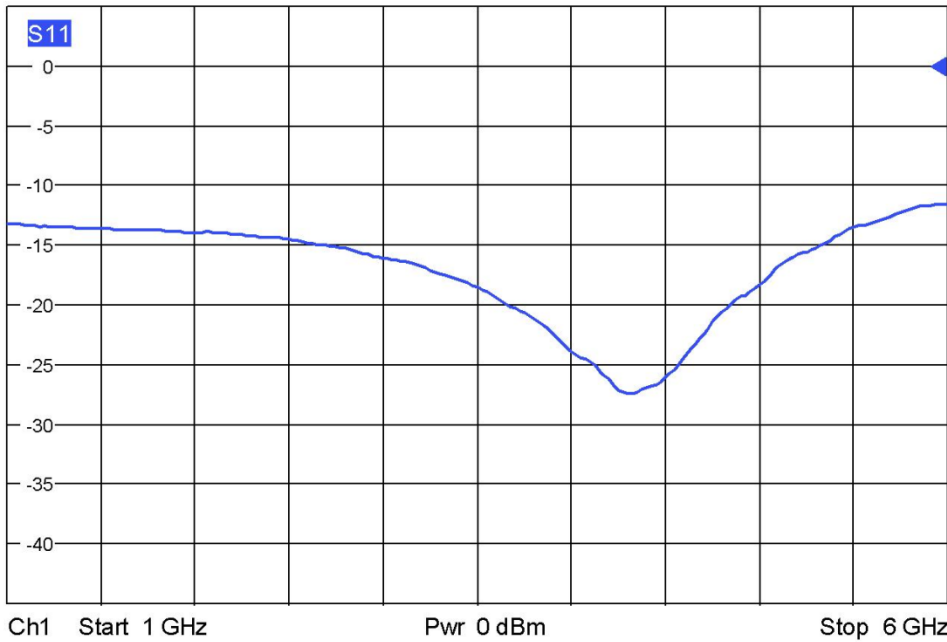
DC Voltage at input or output	25 Volt
RF and IF input power	20 dBm
LO input power	10 dBm
Operating Temperature	-40°C to 85°C

Exceeding any of the limits of this section may lead to permanent damage to the device. Furthermore, extended operation at these maximum ratings may reduce the life of this device.

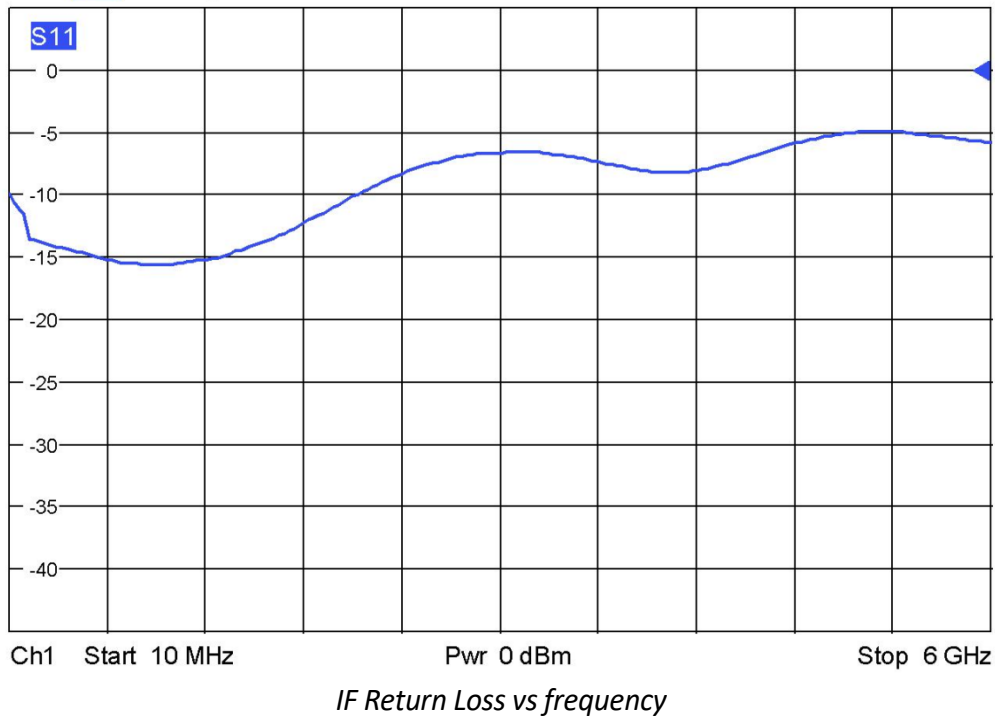
Typical Characteristics



RF Return Loss vs frequency



LO Return Loss vs frequency



MATLAB Code Example

```

sys=serial('COM113','BaudRate',1000000,'DataBits',8,'Parity','none','Flow
Control','none','Timeout',1);

fopen(sys); % open COM port

MX1_address = 80;

ION_ON(sys,MX1_address); % turn module ON

pause(0.01); % wait 10 msec

MX1(sys,MX1_address,1); % enable LO doubler

fclose(sys); % close COM port
    
```