

## Features

- Ultra Wide Band Mixer
- High Dynamic Range



## Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT  
Fiber Optics

Parameters	Min	Typ.	Max	Units
RF Input Frequency	20		60	GHz
LO Input Frequency	20		60	GHz
IF Output Frequency	DC		20	GHz
LO Power		15		dBm
Conversion Loss		15		dB
Input 1dB Compression (P1dB)		9		dBm
Input Third Order Intercept (IIP3)		20		dBm
LO-RF Isolation		35		dB
LO-IF Isolation		40		dB
IF-RF Isolation		25		dB
Weight	0.5 Max.			ounces
Impedance	50			$\Omega$
RF / LO & IF Connectors	1.85mm-Female / SMA-Female			
Frequency Relationship	RF=(IF+LO)			
Finish	Gold Plated			
Material	Aluminum			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

**Ordering Information**

Part No.	Description
SMXBI206015A	20GHz-60GHz Ultra Wide Band Mixer (Bi-Directional)

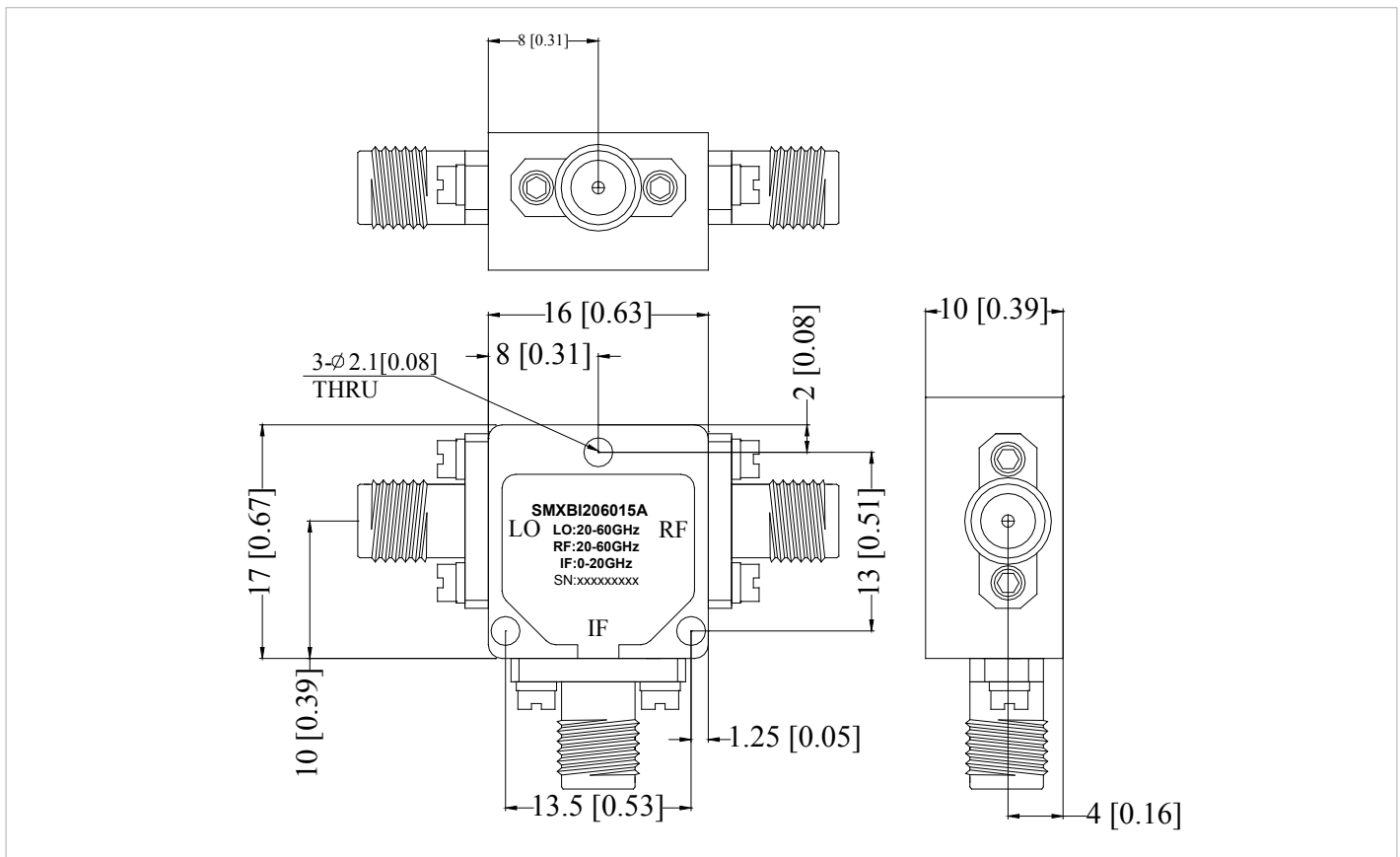
**Environmental Specifications**

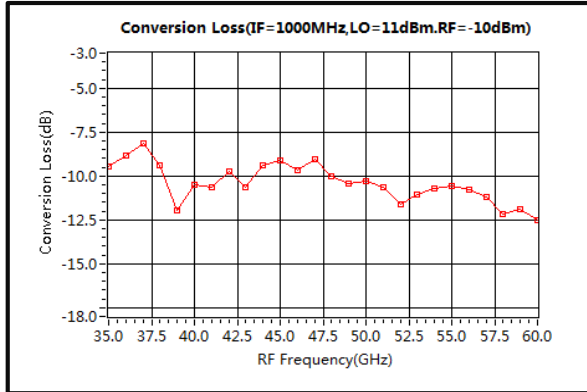
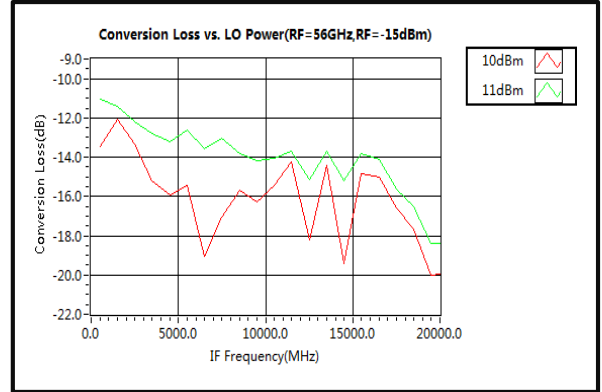
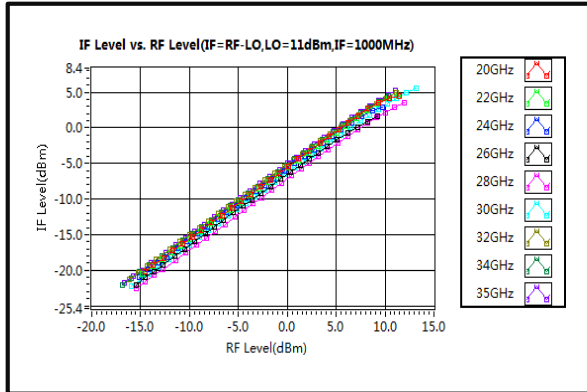
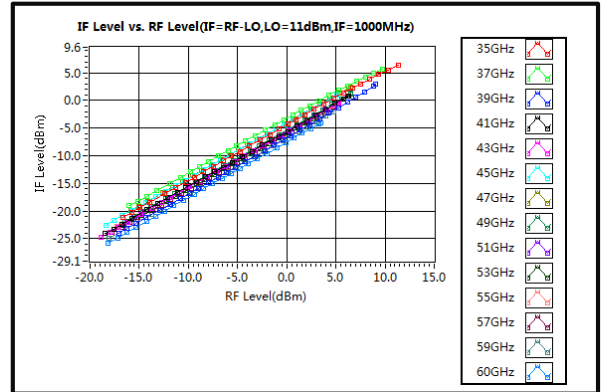
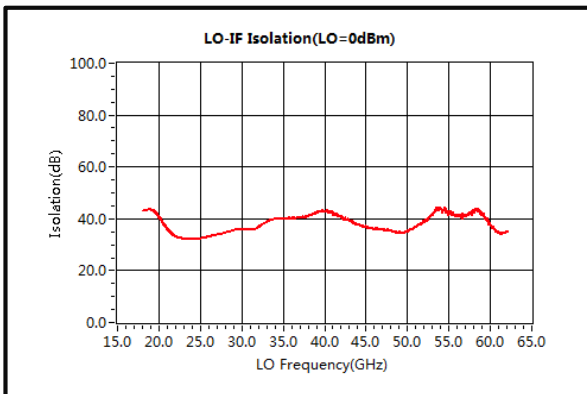
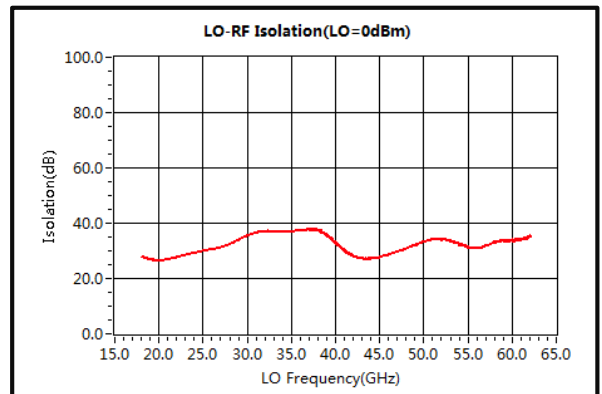
Operational Temperature	-40°C~+85°C(Case Temperature)
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave,3 axis both directions

**Outline Drawing:**

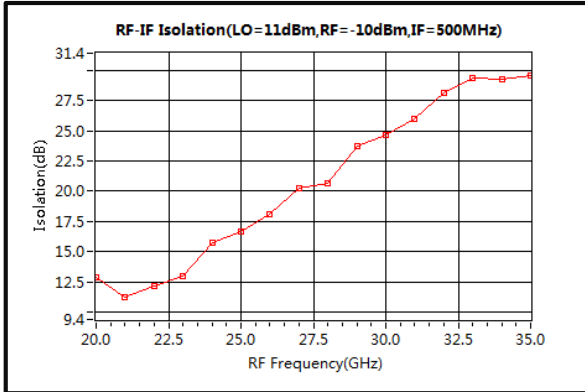
All Dimensions in mm (inches)

Housing Tolerances ± 0.1 (0.004)

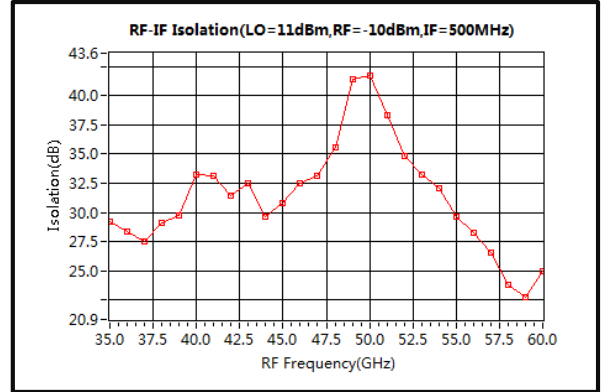


**Conversion Loss**

**Conversion Loss vs. LO Power**

**IF Level vs. RF Level(IF=RF-LO)(20-35GHz)**

**IF Level vs. RF Level(IF=RF-LO)(35-60GHz)**

**LO-IF Isolation**

**LO-RF Isolation**


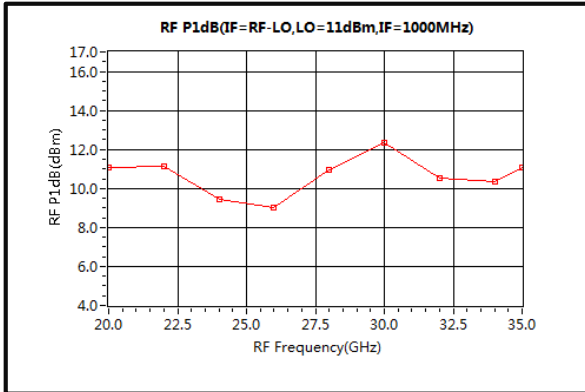
**RF-IF Isolation(20-35GHz)**



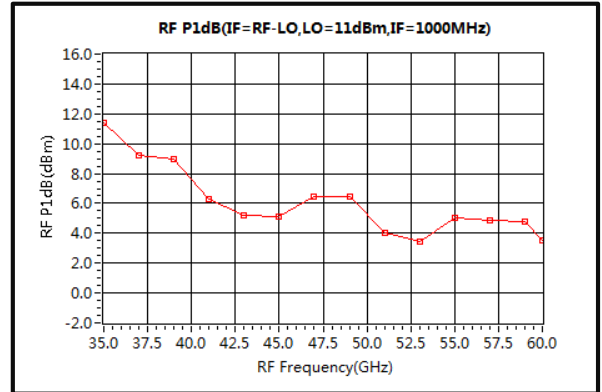
**RF-IF Isolation(35-60GHz)**



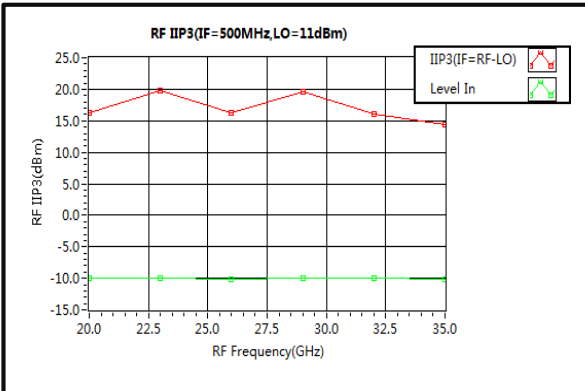
**RF P1dB(20-35GHz)**



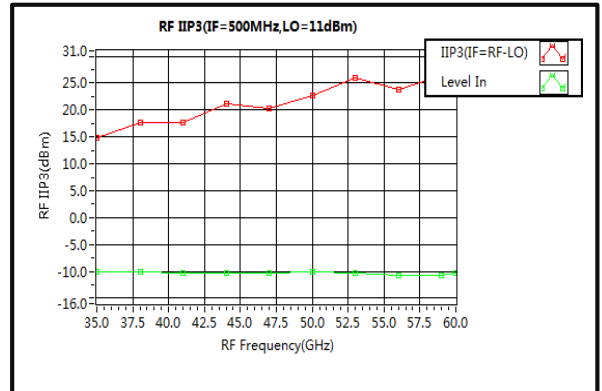
**RF P1dB(35-60GHz)**



**RF IIP3 (20-35GHz)**



**RF IIP3 (35-60GHz)**



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