

# DOUBLE BALANCE MIXER

## 6.0 to 18.0 GHz

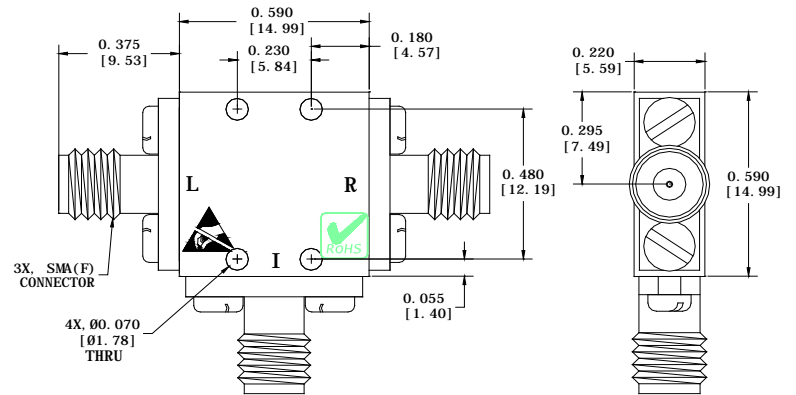
MODEL NO: J6018LZ

## PRODUCT FEATURE

- †Broadband Frequency Application
- †Excellent Conversion Loss
- †High Isolation
- †Frequency Converter Application

## ABSOLUTE MAXIMUM RATING:

Operating Temperature:	-54°C to +100°C
Storage Temperature:	-65°C to +100°C
Peak Input Power for any Single Port:	+23 dBm Peak
Max RF Input Power:	200mWCW@+25°C
Peak Input Current @ 25°C:	100 mA



Parameters	SPECIFICATION				
	FREQ. (GHz)	MIN (dB)	TYPICAL (dB)	MAX (dB)	CONDITONS
CONVERSION LOSS					
RF INPUT	6.0 to 18.0		5.5	7.5	IF= 500MHz
LO INPUT	6.0 to 18.0		6.0	7.8	IF=2000MHz
IF OUTPUT	DC to 4.0		6.5	8.5	IF=4000MHz
VSWR	6.0 to 18.0		2.5:1		
ISOLATION					
LO-RF	6.0 to 18.0	23	35		
LO-IF	6.0 to 18.0	23	35		
RF-IF	DC to 4.0	25	35		
1 dB Compression Point			+5 dBm		
LO Drive			+7dBm		
Third-Order Input Intercept Point			+11 dBm		RF1:9.00 GHz @-6 dBm RF2:9.01 GHz @-6 dBm LO: 9.25 GHz @+10 dBm

## NOTES:

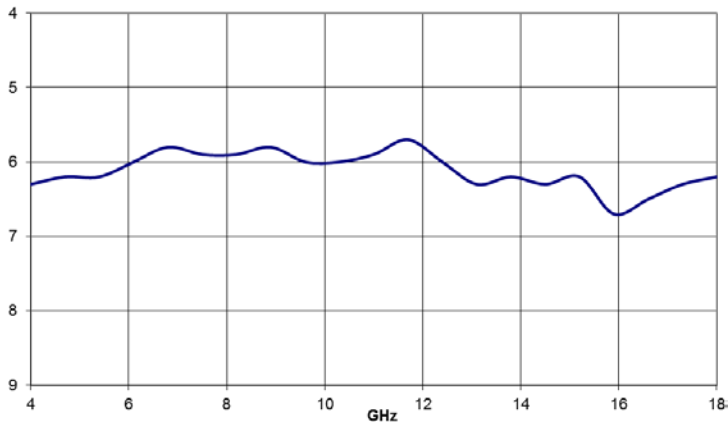
- Measured in a 50-ohm system with nominal LO drive and downconverter application only, unless otherwise specified. The I-Port frequency range extends to DC for phase detection, pulse modulation, or attenuator applications. I-Port VSWR degrades from a 50-ohm system at lo IF frequencies.
- Typical values are measured at +25°C and are not guaranteed

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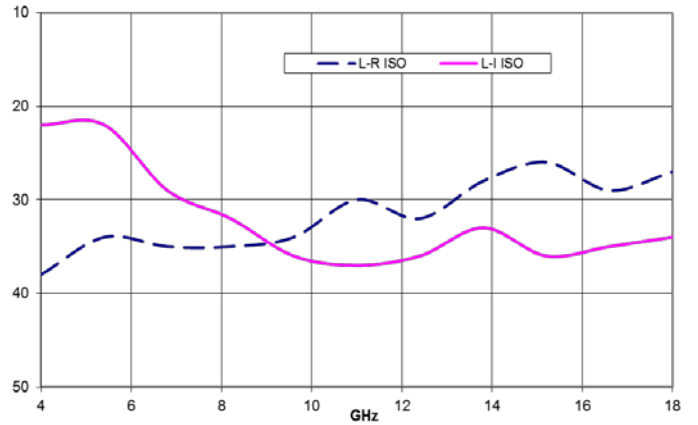
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Typical Performance @ 25°C , LO Drive = +7 dBm

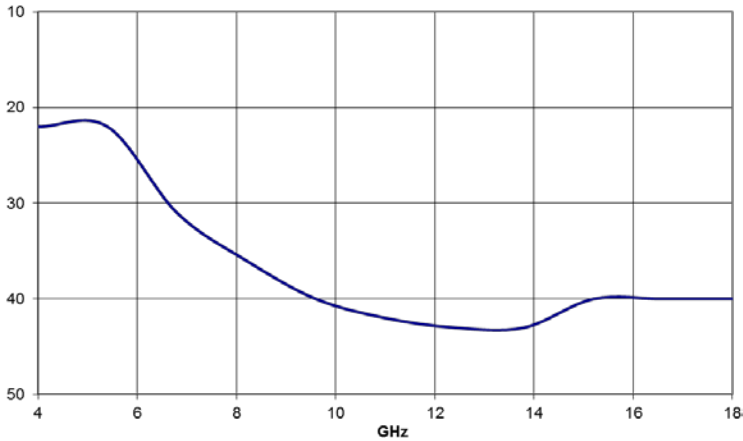
CONVERSION LOSS - dB (IF = 0.5 GHz)



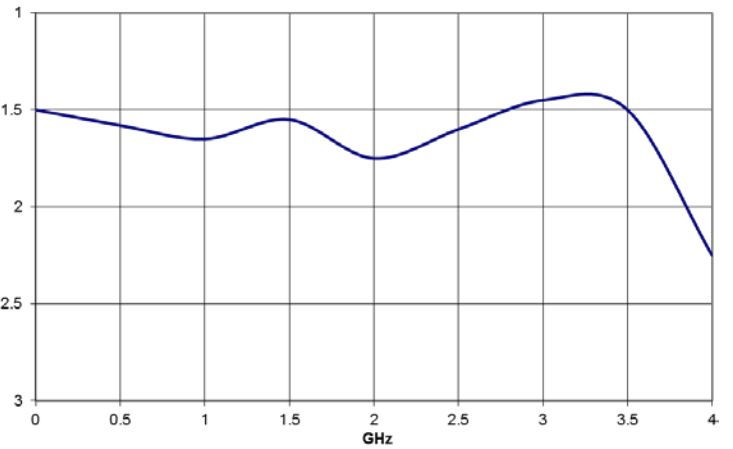
ISOLATIONS - dB



R-I ISOLATIONS - dB



IF VSWR



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### SINGLE-TONE SPURIOUS

#### SPUR LEVEL (-dBc): $nRF \times mLO$

Spurious suppression is decreased (increased) for lower (higher) RF power levels by  $(n-1)$ . Adjusting LO drive level may not affect the spurious level of the mixer.

Example:

- RF = -10 dBm, 2RFx1LO spur of mixer = -45 dBc
- RF = -20 dBm, 2RFx1LO spur of mixer = -55 dBc
- RF = 0 dBm, 2RFx1LO spur of mixer = -35 dBc

Test Conditions:

- Downconversion Application
- Frequencies: Mid-band RF, LO, IF
- RF Input = -10 dBm, LO Drive = +10 dBm

Spurious Suppression (Typical) for Double Balanced Mixer

$\begin{matrix} m \\ \backslash \\ n \end{matrix}$	1	2	3	4	5
1		35	14	25	20
2	45	55	45	50	50
3	50	60	55	70	60
4	80	95	95	>95	90
5	>95	>95	90	>95	95