



TWO-TONE-TERMINATOR MIXER/LO-AMPLIFIER

T3A-03

The T3A-03 is a versatile and robust, broadband Two-Tone-Terminator mixer integrated with a high performance square-wave amplifier. The T3A-03 employs the most sophisticated mixer circuit on the market today and offers unparalleled performance when compared to all other mixer technologies. The T3A-03 delivers exceptional IMD suppression with low conversion loss.



Features

- High Two-Tone Intercept for low LO Drive
- Integrated LO Buffer Amplifier
- LO/RF 10 to 3400 MHz
- IF 1 to 3400 MHz
- 6.5 dB Typical Conversion Loss
- Ultra-Broadband RF, LO, and IF

Electrical Specifications - Specifications guaranteed from -30 to +70°C, measured in a 50Ω system.

Parameter	LO (MHz)	RF (MHz)	IF (MHz)	Min	Typ	Max
Conversion Loss (dB)	10-3400 10-3400	10-3400 10-3400	1-500 1-3400		6.5 7.0	8.0 9.5
LO Drive Level (dBm)				+10		+15
LO Leakage (dBm)						
LO-RF	10-3400	10-3400			-7	
LO-IF	10-3400	10-3400			-7	
RF-IF Isolation (dB)	10-3400	10-3400			25	
Input 1 dB Compression (dBm)	10-3400	10-3400			+20	
Input Two-Tone Third Order Intercept Point (dBm)	10-3400	10-3400			See Plot	
Bias Requirements (mA) ¹						
+5.0 Volts DC					200	250
-5.0 Volts DC					10	20

¹It is required that the negative bias be applied before or concurrent with the positive bias to avoid damage.

Part Number Options

Please specify diode level and package style by adding to model number.	
Package Style(s) ^{1,2}	Example
EZ , EZIP	T3A-03 EZIP

¹Connectorized test fixtures available for most carrier and surface mount packages. Consult factory.

²For non-connectorized packages, specify I-port configuration by adding -1 or -2 suffix to model number. Default is -2 configuration when not specified.

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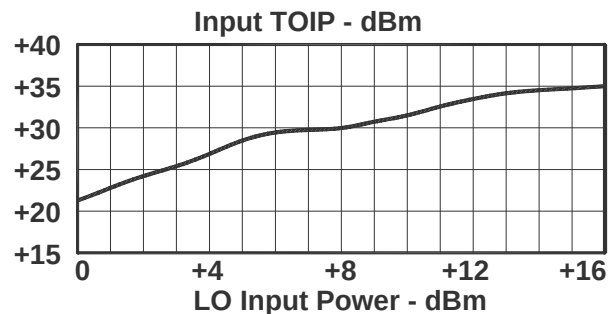
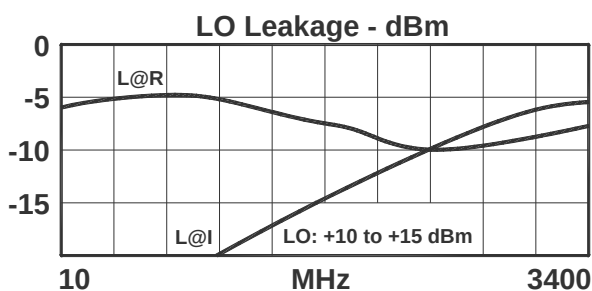
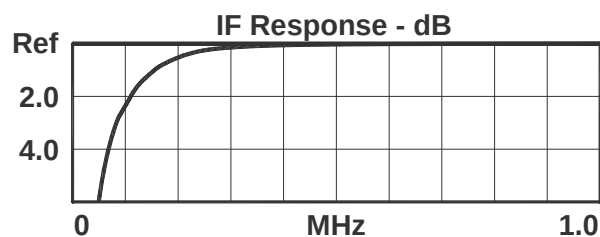
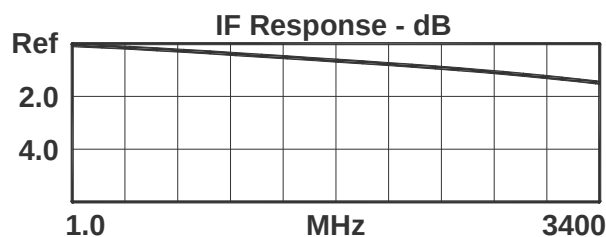
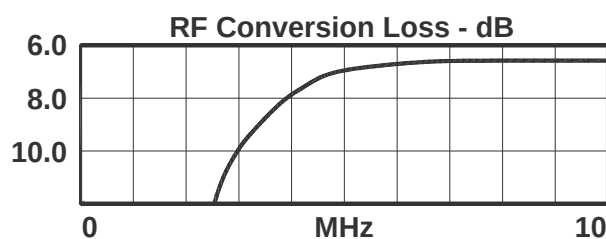
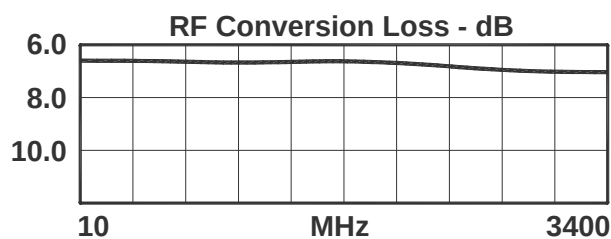
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LO/RF 10 to 3400 MHz
IF 1 to 3400 MHz

Typical Performance



DATA SHEET NOTES:

1. Mixer Conversion Loss Plot IF frequency is 100 MHz.
2. Mixer Noise Figure typically measures within 0.5 dB of conversion loss for IF frequencies greater than 5 MHz.
3. Conversion Loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
4. Maximum LO input power is +20 dBm.
5. Maximum RF input power is +25 dBm.
6. Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.
7. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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