MZ5010 / MZ5010C



Triple-Balanced Mixer

Rev. V3

Features

- LO 2 TO 26 GHz
- RF 2 TO 26 GHz
- IF 1 TO 15 GHz
- LO DRIVE +10 dBm (nominal)
- MINIATURE PACKAGE
- **VERY WIDE BANDWIDTH**
- AVAILABLE WITH FIELD REPLACEABLE **CONNECTORS**

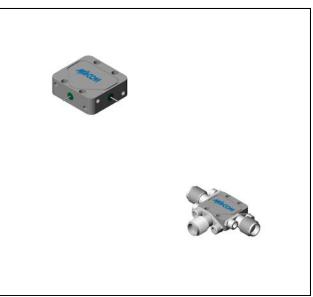
Description

The MZ5010 is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package		
MZ5010	Versapac		
MZ5010C	SMA Connectorized		

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +10 dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
raiameter rest conditions		Units		+25°C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 3 to 18 GHz, fL = 3.5 to 18 GHz, fI = 4 to 12 GHz fR = 2.5 to 26 GHz, fL = 2.5 to 24 GHz, fI=4 to 12 GHz fR = 2 to 26 GHz, fL = 2 to 26 GHz, fI = 1 to 15 GHz	dB dB dB	7.5 8.5 10.5	9.5 10.5 13.0	10.0 11.0 13.5
Isolation, L to R (min)	fL = 2 to 4 GHz fL = 4 to 26 GHz	dB dB	30 35	15 18	13 16
Isolation, L to I (min)	fL = 2 to 4 GHz fL = 4 to 26 GHz	dB dB	20 35	12 17	10 15
1 dB Conversion Comp.	fL = +10 dBm	dBm	+5		
Input IP3	fR1 = 18 GHz at -10 dBm, fR2 = 18.01 GHz at -10 dBm, fL = 14 GHz at +10 dBm fR1 = 5 GHz at -5 dBm, fR2 = 5.01 GHz at -5 dBm, fL = 7 GHz at +10 dBm	dBm dBm	+16 +16		

Commitment to produce in volume is not guaranteed.

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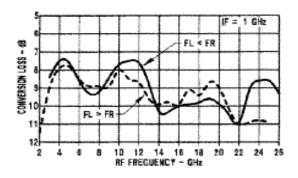


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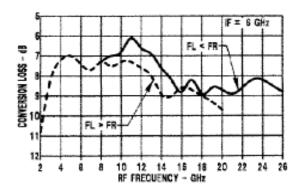
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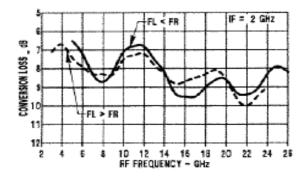
Typical Performance Curves

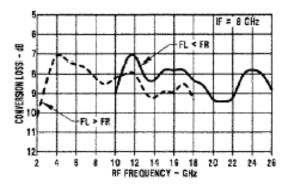
Conversion Loss vs. Frequency

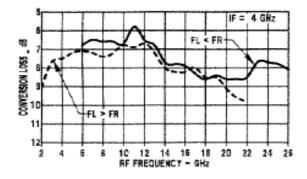


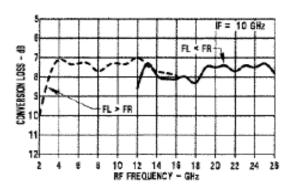
Conversion Loss vs. Frequency











PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make Commitment to produce in volume is not guaranteed.

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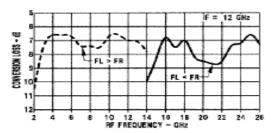
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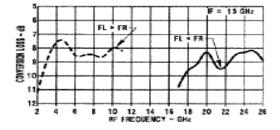
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Absolute Maximum Ratings

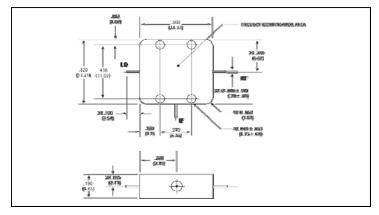
Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+26 dBm max @ +25°C +22 dBm max @ +100°C		
Peak Input Current	mA DC		

Conversion Loss vs. Frequency



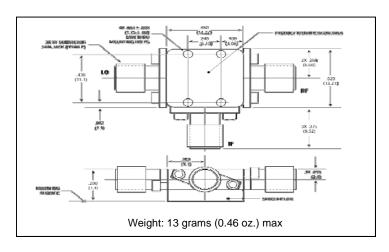


Outline Drawing: Versapac



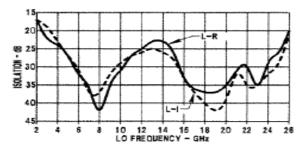
Weight: 4 grams (0.14 oz.) max

Outline Drawing: SMA Connectorized *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Isolation



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