MZ7410 / MZ7410C

Double-Balanced Mixer



- LO 4 TO 18 GHz
- RF 6 TO 18 GHz
- IF DC TO 3 GHz
- LO DRIVE: +10 dBm (NOMINAL)
- MINIATURE PACKAGE
- WIDE BANDWIDTH
- AVAILABLE WITH FIELD REPLACEABLE CONNECTORS

Description

The MZ7410 is a double balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric and ferrite baluns to attain excellent performance. This mixer can also be used as a phase detector and/or bi-phase modulator since the IF port is DC coupled to the diodes. 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
MZ7410	Versapac
MZ7410C	SMA Connectorized

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

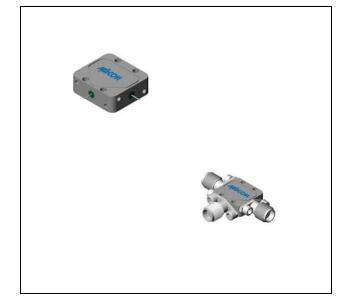
Parameter	Test Conditions	Units	Typical	Guaranteed	
Farameter Test Conditions		Units		+25⁰C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 6 to 15 GHz, fL = 4 to 16 GHz, fI = 0.03 to 3 GHz fR = 15 to 18 GHz, fL = 16 to 18 GHz, fI = 0.03 to 3 GHz	dB dB	6.0 7.0	8.0 9.0	8.5 9.5
Isolation, L to R (min)	fL = 4 to 14 GHz fL = 14 to 18 GHz	dB dB	36 32	23 18	21 16
Isolation, L to I (min)	fL = 4 to 18 GHz	dB	35	20	18
1 dB Conversion Comp.	fL = +10 dBm	dBm	+4		
Input IP3	fR1 = 13 GHz at –6 dBm, fR2 = 13.01 GHz at –6 dBm, fL = 14 GHz at +10 dBm	dBm	+14		

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Europe Tel: +353.21.244.6400
India Tel: +91.80.4155721
China Tel: +86.21.2407.1588

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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. Commitment to produce in volume is not guaranteed. M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.







Rev. V3

MZ7410 / MZ7410C



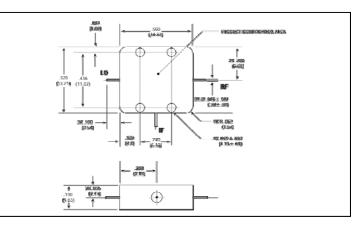
Double-Balanced Mixer

Rev. V3

Absolute Maximum Ratings

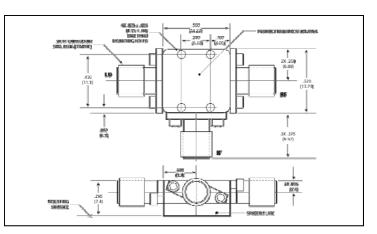
Parameter	Absolute Maximum		
Operating Temperature	-54º C to +100ºC		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C		
Peak Input Current	100 mA DC		

Outline Drawing: Versapac



Weight: 4 grams (0.14 oz.) max

Outline Drawing: SMA Connectorized



Weight: 13 grams (0.46 oz.) max

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

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