MZ7407 / MZ7407C

MACOM™

Double-Balanced Mixer

Rev. V3

Features

- LO 3.5 TO 18 GHz
- RF 6 TO 18 GHz
- IF DC TO 3 GHz
- LO DRIVE: +7 dBm (NOMINAL)
- MINIATURE PACKAGE
- WIDE BANDWIDTH
- AVAILABLE WITH FIELD REPLACEABLE CONNECTORS

Description

The MZ7407 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.

Product Image
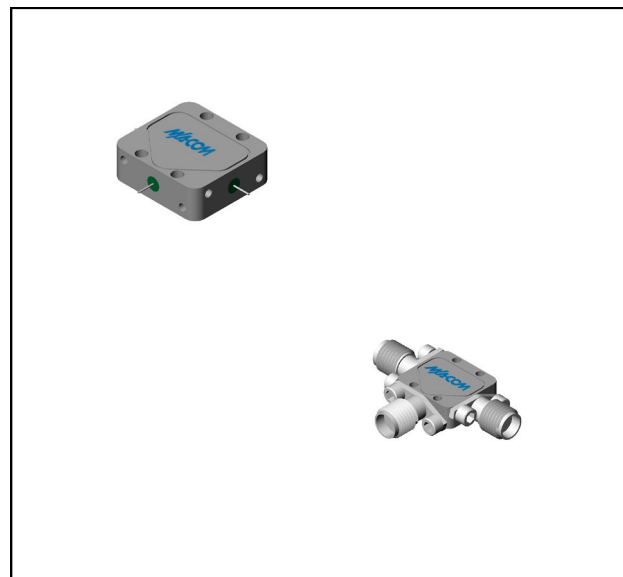
Ordering Information

Part Number	Package
MZ7407	Versapac
MZ7407C	SMA Connectorized

Electrical Specifications: $Z_0 = 50\Omega$ Lo = +7 dBm (Downconverter application only)

| Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 7 to 15 GHz, fL = 6 to 13.5 GHz, fI = 3 to 10 GHz fR = 6 to 18 GHz, fL = 4 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 14 GHz fL = 8 to 18 GHz	dB dB	25 35	16 23	14 21
1 dB Conversion Comp.	fL = +7 dBm	dBm	+3		
Input IP3	fR1 = 13 GHz at –10 dBm, fR2 = 13.01 GHz at –10 dBm, fL = 14 GHz at +10 dBm	dBm	+10		

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Absolute Maximum Ratings

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

Outline Drawing: Versapac *
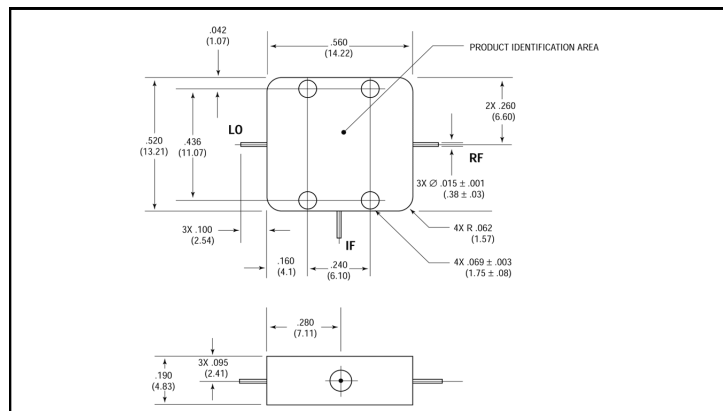
Weight: 4 grams (0.14 oz.) max

Outline Drawing: SMA Connectorized *
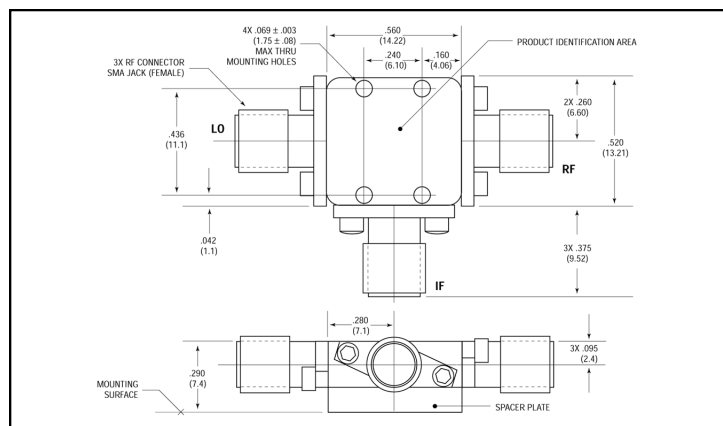
Weight: 13 grams (0.46 oz.) max

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

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