

Downconverter Image Reject Mixers¹

Wideband Image Reject Mixer/Quadrature IF Mixer

Model	LO/RF Frequency GHz	IF Frequency MHz	Conversion Loss dB		Image Rejection ³ dB		L-R Isolation dB		L-I Isolation dB		Input IP3 Typ. ² (dBm)	Package Type ¹¹	Outline Figure
			Typ. ²	Max. ⁴	Typ. ²	Min. ⁴	Typ. ²	Min. ⁴	Typ. ²	Min. ⁴			
M38D-00 ^{5,6}	6.0 to 18.0	5 to 15	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-15	6.0 to 18.0	10 to 20	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-30	6.0 to 18.0	20 to 40	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-60	6.0 to 18.0	40 to 80	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-120	6.0 to 18.0	80 to 160	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-150	6.0 to 18.0	100 to 200	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-240	6.0 to 18.0	160 to 320	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38D-400	6.0 to 18.0	300 to 500	6.5	8.5	25	17	33	18	32	18	15.0	MPAC	DK
M38DC-00 ^{5,6}	6.0 to 18.0	5 to 15	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-15	6.0 to 18.0	10 to 20	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-30	6.0 to 18.0	20 to 40	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-60	6.0 to 18.0	40 to 80	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-120	6.0 to 18.0	80 to 160	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-150	6.0 to 18.0	100 to 200	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-240	6.0 to 18.0	160 to 320	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ
M38DC-400	6.0 to 18.0	300 to 500	6.5	8.5	25	17	33	18	32	18	15.0	SMA	DJ

Upconverter Image Reject Mixers⁷

Wideband Single-Sideband Upconverter/Quadrature IF Upconverter

Model	LO/RF Frequency GHz	IF Frequency MHz	Conversion Loss dB		Sideband Suppression dB		Carrier Suppression dB		Intermodulation Suppression			Package Type ¹¹	Outline Figure
			Typ. ²	Max. ⁴	Typ. ²	Min. ⁴	Typ. ²	Min. ⁴	LO ± 2IF dBc		LO ± 3IF dBc		
M38U-00 ^{6,9,10}	6.0 to 18.0	5 to 15	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-15	6.0 to 18.0	10 to 20	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-30	6.0 to 18.0	20 to 40	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-60	6.0 to 18.0	40 to 80	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-120	6.0 to 18.0	80 to 160	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-150	6.0 to 18.0	100 to 200	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-240	6.0 to 18.0	160 to 320	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38U-400	6.0 to 18.0	300 to 500	6.75	9.5	25	15	25	15	40	25	35	MPAC	DK
M38UC-00 ^{6,9,10}	6.0 to 18.0	5 to 15	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-15	6.0 to 18.0	10 to 20	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-30	6.0 to 18.0	20 to 40	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-60	6.0 to 18.0	40 to 80	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-120	6.0 to 18.0	80 to 160	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-150	6.0 to 18.0	100 to 200	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-240	6.0 to 18.0	160 to 320	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ
M38UC-400	6.0 to 18.0	300 to 500	6.75	9.5	25	15	25	15	40	25	35	SMA	DJ

- NOTES: 1. Typical and guaranteed specifications measured in a 50-ohms system at center IF frequency with the nominal LO power at +10 dBm and RF power of -10 dBm.
2. Typical values are measured at +25°C and are not guaranteed.
3. Image rejection is referenced to the desired output signal.
4. Maximum conversion loss, minimum image rejection and isolation measured at +25°C and guaranteed.
5. Quadrature IF downconverter (-00):
 $RF_{in} < LO$ when IF1 (-90°); IF2 (0°)
 $RF_{in} > LO$ when IF1 (0°); IF2 (-90°)
6. Option "-00" are tested with external hybrid.

7. Typical and guaranteed specifications measured in a 50-ohms system at center IF frequency with the nominal LO power at +10 dBm and IF power of 0 dBm.
8. Maximum conversion loss and minimum carrier suppression, sideband suppression, and intermodulation suppression are measured at +25°C and guaranteed.
9. Quadrature IF upconverter (-00):
 $RF_{out} < LO$ when IF1 (-90°); IF2 (0°);
 $RF_{out} > LO$ when IF1 (0°); IF2 (-90°);
10. For the "-00" option, specification apply only when both signal inputs match within +4.0 dB in amplitude and +2.0° in quadrature phasing.
11. MPAC (Minpac); SMA (SMA connectorized)

Specifications subject to change without notice.

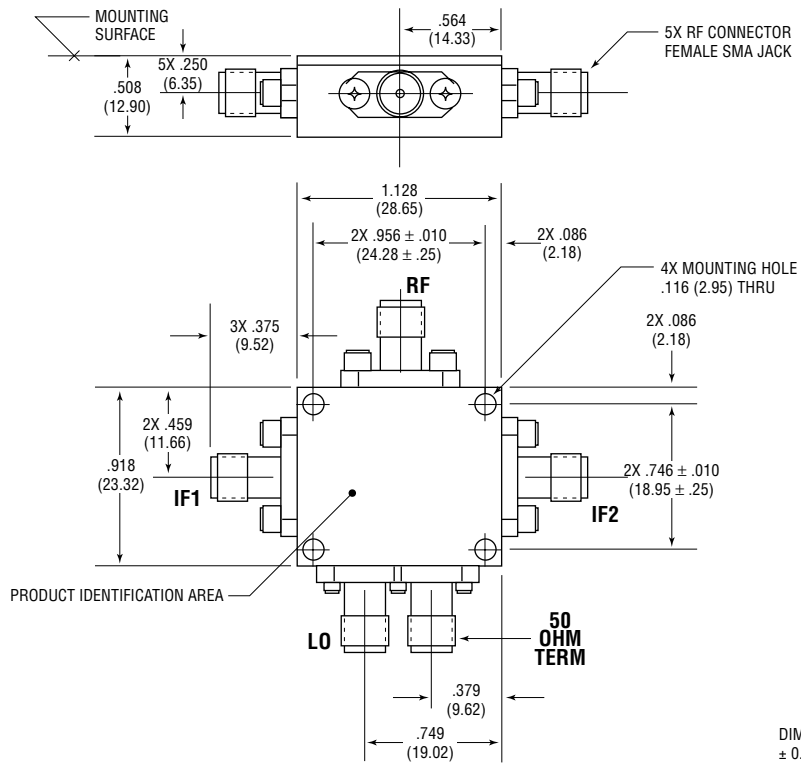
- North America: Tel. (800) 366-2266, Fax (800) 618-8883
- Asia/Pacific: Tel. +61-44-844-6296, Fax +61-44-844-8298
- Europe: Tel. +44 (1344) 596, Fax +44 (1344) 300 020

Visit www.macom.com for additional data sheets and product information.



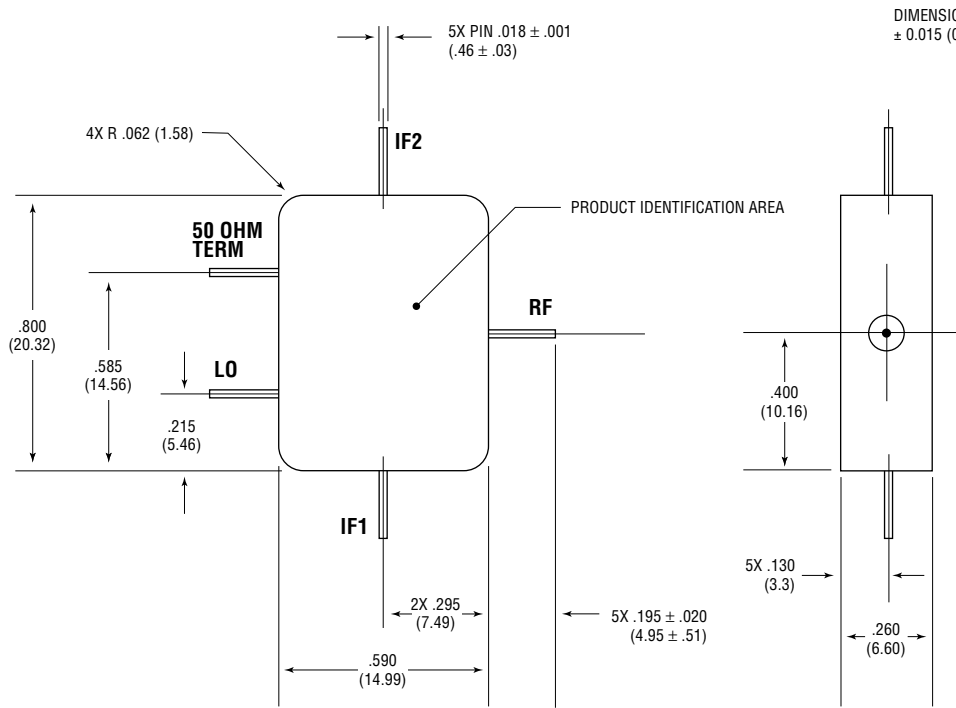
DJ

35 grams (1.23 oz.) max



DIMENSIONS ARE IN INCHES (MILLIMETERS) ± 0.015 (0.38) UNLESS OTHERWISE SPECIFIED

MINPAC



DIMENSIONS ARE IN INCHES (MILLIMETERS) ± 0.015 (0.38) UNLESS OTHERWISE SPECIFIED

DK

7 grams (0.25 oz.) max

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