DTF-A Series DOUBLE BALANCED MIXER

1 to 3500 MHz / +10 to +15 dBm LO / HiRel Hermetic Package

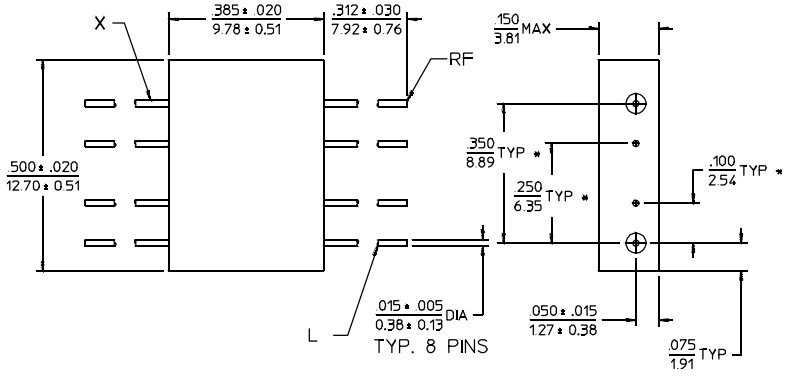
PRINCIPAL SPECIFICATIONS

Model Number	RF/LO Frequency, MHz	LO Drive, Nom.	Operating Range, MHz	Conversion Loss, dB, Max.	Conversion Loss, dB, Typ.	Port Isolation, Min. L-R dB	Port Isolation, Min. L-X dB	Port Isolation, Min. R-X dB	1 dB Compr. Point	Input Intercept Point	1 dB Desens. Level
DTF-2A-1250	1 - 3500	+10 dBm	10 - 200	7.5	6.5	30	30	30	+7	+14	+5
			200 - 2500	8.5	7.0	25	25	23	dBm	dBm	dBm
			1 - 3500	9.5	8.0	25	25	20	(typ.)	(typ.)	(typ.)
DTF-4A-1250	1 - 3500	+15 dBm	10 - 200	7.5	6.5	35	30	30	+13	+20	+11
			200 - 2500	8.5	7.0	30	25	25	dBm	dBm	dBm
			1 - 3500	9.5	8.0	28	25	20	(typ.)	(typ.)	(typ.)

All specifications are as measured in a 50Ω system, at nominal LO power in a down converter application

Package Outline

NOTES:
1. Tolerance on 3 place decimals ±.010(.25) except as noted.
2. Dimensions in inches over millimeters.
3. Dimensions marked with * apply only at body.
4. All unmarked pins are case ground.



GENERAL SPECIFICATIONS

IF Frequency Range:	1 - 1000 MHz
Impedance:	50 Ω nom.
Third Order Intermodulation Ratio Degradation:	3 dB typ. for IF VSWR of 3.0:1
Useful LO Drive Range:	± 3 dB of nominal
SSB Noise Figure:	Within ±1 dB of Conversion Loss
Weight, nominal:	0.15 oz (4.2 g)
Operating Temperature:	– 55° to +85°C

General Notes:

1. The DTF-A series Termination Insensitive Mixers cover the frequency range of 1 to 3500 MHz using transmission line hybrid junction techniques to isolate the diode rings from termination mismatch-induced reflections. This means the intermodulation ratio is independent of the IF port load impedance, so this unit is ideal for applications where a high performance mixer must drive a reactive load (e.g., filter) at the IF port. The DTF-A series and related models are available in PC, SMD and connectorized packages.

2. Merrimac offers a broad selection of Double Balanced Mixers ideal for a variety of signal processing functions with frequencies ranging from 20 kHz to 20 GHz and for applications from routine to very special.

3. Merrimac mixers comply with MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space specifications requiring the highest reliability.

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