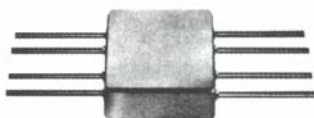




DBM-183
High Level
Subminiature
Flatpack Double
Balanced Mixer
10-4000 MHz



DESCRIPTION

DBM-183 is a high performance double balanced mixer that offers extremely wide bandwidth while maintaining a high intercept point and isolations. The IF port is typically down only 1 dB at 4 GHz making it an ideal up/down convertor in wideband applications. The linearity is virtually constant over the entire bandwidth due to unique transformer design and the use of beam lead Schottky diodes. The subminiature package is sealed, RFI shielded and constructed to withstand severe environment.

Each DBM-183 is individually tested to S.M.D.I.'s demanding quality and performance specifications.

GUARANTEED MINIMUM PERFORMANCE DATA

TEST CONDITION:

LO + 13 dBm (High side LO)
RF - 10 dBm
IF 100 MHz

NOTE:

Specifications below, guaranteed with IF from 50 to 400 MHz. For higher IF frequencies, consult IF response curve for typical rolloff.

OVERALL FREQUENCY RANGE IN MHz:

L	R	X
10-4000	10-4000	5-4000

FREQUENCY BANDS IN MHz:

	10-50	50-1000	1000-2500	2500-4000
Conversion Loss	8.5	8.0	8.5	10.5
L-R Isolation	25	27	25	20
L-X Isolation	15	20	20	20
R-X Isolation	15	20	25	15

ABSOLUTE MAXIMUM RATINGS:

Operating Temp. - 54 to +100°C
Total Input Power 400 mW @ +25°C
Derate linearly to 100 mW @ 100°C

Specifications subject to change without notice.

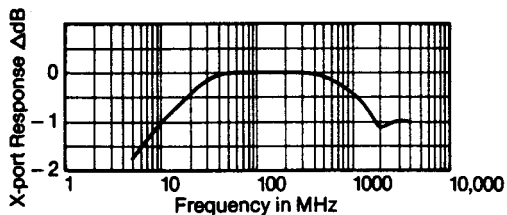
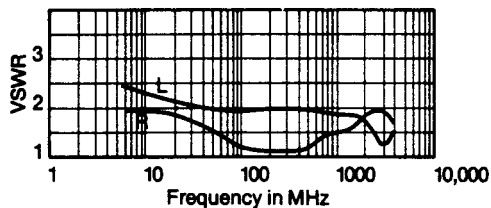
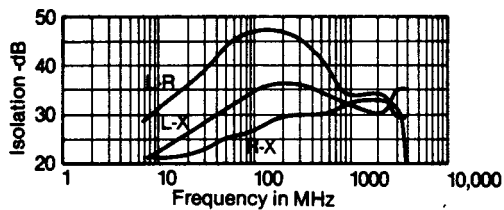
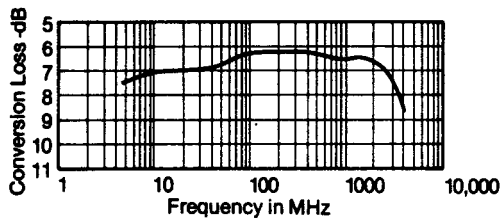
8.10.04 Rev. A

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TYPICAL PERFORMANCE

Impedance: All ports 50 ohms
 1 dB Compression Point: +6 dBm
 1 dB Desensitization Point: +4 dBm
 3rd Order Intercept Point: +20 dBm
 Noise Figure is within 1 dB of conversion loss
 LO Power Range: +10 to +20 dBm



Specifications subject to
 change without notice.

ENVIRONMENTAL CONDITIONS

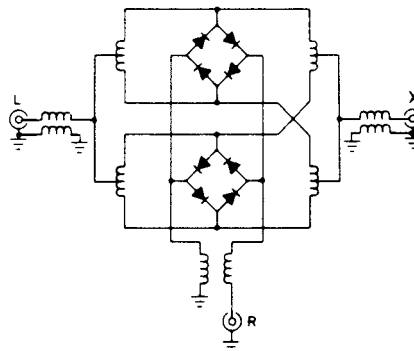
GUARANTEED ENVIRONMENTAL PERFORMANCE:

All units are designed to meet their specifications over -54°C to +100°C and after exposure to any or all of the following tests per MIL-STD-202E.

Exposure	Method	Test Condition
Thermal Shock	107D	B
Altitude	105C	G
H.F. Vibration	204C	D
Mechanical Shock	213B	C
Random Vibration	214	IIF
(15 minutes per axis)		
Solderability	208C	
Terminal Strength	211A	C
Resistance to Soldering Heat	210A	B

Sealed units, meet the requirements of Method 106D of MIL-STD-202E when exposed to humidity.

FUNCTIONAL SCHEMATIC



PACKAGE

CASE MATERIAL:

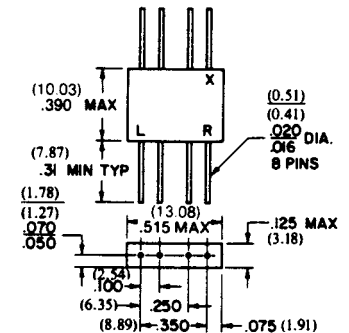
F15 Kovar per ASTM Standard F-15-68, (Chemical Composition per MIL-STD-1276, Type K)

FINISH:

Plating, all metal parts: gold per MIL-G-45204, Type I, Grade A, Class 1, over nickel per MIL-C-26074, Class 1

LEADS:

Kovar per MIL-STD-1276, Type K



ALL UNLABELED PINS ARE
 CASE GROUND
 TOL. .XXX ±.010