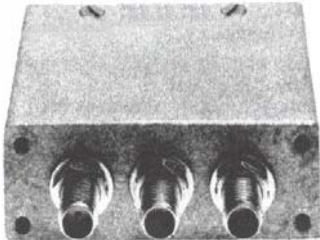




DBM-400
 Microwave
 Double
 Balanced
 Mixer
 .01-3.0 GHz



DESCRIPTION

DBM-400 is SMA connector-equipped double balanced mixer offering exceptional bandwidth in a very rugged package. High uniform isolations and extremely wide bandwidth make this mixer particularly suitable for swept heterodyne systems. Three rugged coaxial transformers and a quad of matched Schottky diodes are packaged in a cast housing. The housing is magnetically shielded and the circuitry is designed to withstand severe environments.

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

GUARANTEED MINIMUM PERFORMANCE DATA

TEST CONDITION:

LO + 7 dBm (High side LO)
 RF - 10 dBm
 IF 100 MHz

NOTE:

Specifications below, guaranteed with IF from 10 to 500 MHz. For higher IF frequencies, consult IF response curve for typical rolloff.

OVERALL FREQUENCY RANGE IN GHz:

L	R	X
.01-3	.01-3	.005-.8

FREQUENCY BANDS IN GHz:

	.01-2.0	2-3
Conversion Loss	9	12
L-R Isolation	30	25
L-X Isolation	25	25
R-X Isolation	20	20

ABSOLUTE MAXIMUM RATINGS:

Operating Temp. - 54 to + 100°C
 Total Input Power 200 mW @ + 25°C
 Derate linearly to 50 mW @ 100°C

Specifications subject to change without notice.

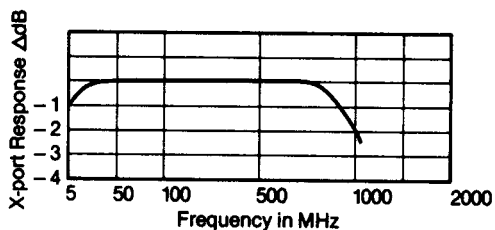
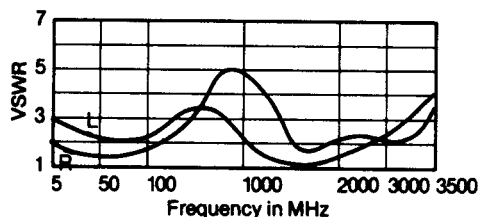
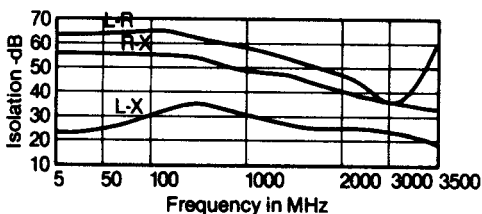
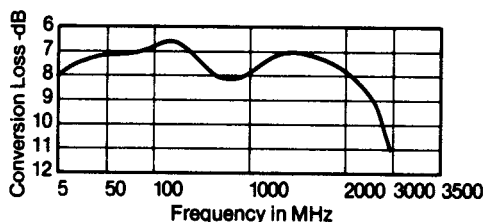
8.10.04 Rev. A

DBM-400
Microwave
Double
Balanced
Mixer
.01-3.0 GHz



TYPICAL PERFORMANCE

Impedance: All ports 50 ohms
1 dB Compression Point: 0 dBm
1 dB Desensitization Point: -2 dBm
3rd Order Intercept Point: +10 dBm
Noise Figure is within 1 dB of conversion loss
LO Power Range: +4 to +13 dBm



Specifications subject to
change without notice.

ENVIRONMENTAL CONDITIONS

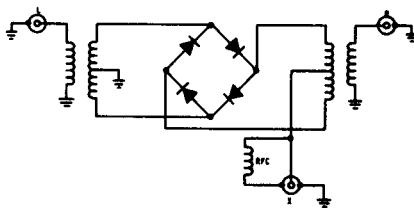
GUARANTEED ENVIRONMENTAL PERFORMANCE:

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)

FUNCTIONAL SCHEMATIC

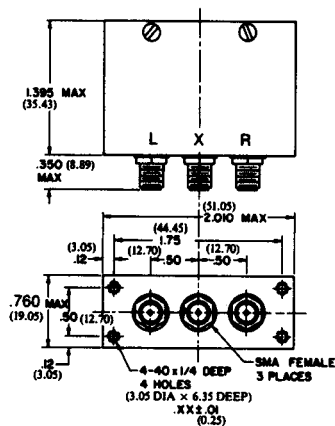


PACKAGE MATERIAL:

Case and Cover: Cast Aluminum Alloy 40E
Connector body: Stainless Steel per QQ-S-764, Class 303, Cond. A
Contacts: Beryllium Copper per QQ-C-530, Half hard
Dielectrics: Polytetrafluorethylene per MIL-P-19468
Federal Spec. L-P-403

FINISH:

Case and Cover: Bright nickel per QQ-N-290, Class 1, Grade F, Form SB
Connectors: Per paragraph 4.6, 11 of MIL-C-39012
Pins: Gold per MIL-G-45204, Type 1, Grade C, Class 2



8.10.04 Rev. A