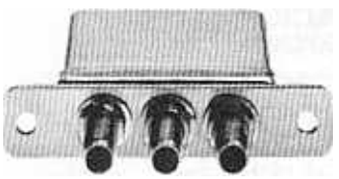
VARI-L



DESCRIPTION

DBM-601 is a high performance connectorized double balanced mixer that offers low conversion loss over the 1-5 GHz band at reasonable cost. The wide bandwidth and flat conversion loss make it suitable for swept systems in the 1-5 GHz band.

Low uniform conversion loss and low intermodulation production make DBM-601 a good choice in communications applications in the 2 GHz and 3.7-4.2 GHz bands where system performance depends heavily on first mixer behavior. The SMA connectorized package is RFI shielded and internally constructed to withstand severe environments.

Each DBM-601 mixer is individually tested to Vari-L's demanding quality and performance specifications.

LIMITED WARRANTY

Vari-L Company, Inc. warrants its products against defects in parts and workmanship for a period of one year.

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 5 to 1000 MHz. For higher IF frequencies, consult IF response curve for typical rolloff.

OVERALL FREQUENCY RANGE IN GHz:

L	R	X
.5-8	.5-8	.005-5

FREQUENCY BANDS IN GHz:

	.5-1	1-4	4-8
Conversion Loss	10	7.5	10.5
L-R Isolation	13	15	17
L-X Isolation	15	17	17
R-X Isolation	17	20	17

ABSOLUTE MAXIMUM RATINGS:

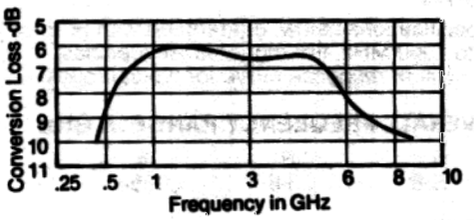
Operating Temp. − 54 to + 100°C
Total Input Power 400 mW @ + 25°C
Derate linearly to 100 mW @ 100°C

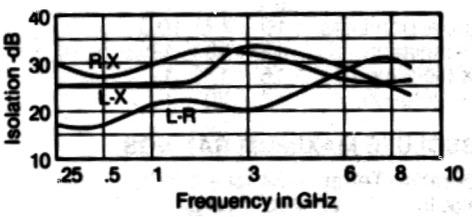
DBM-601 Miniature Connectorized Double Balanced Mixer .5-8.0 GHz

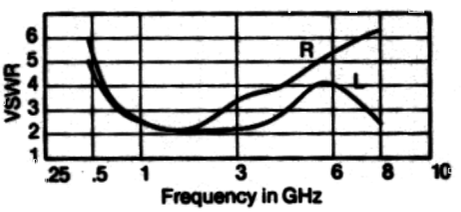
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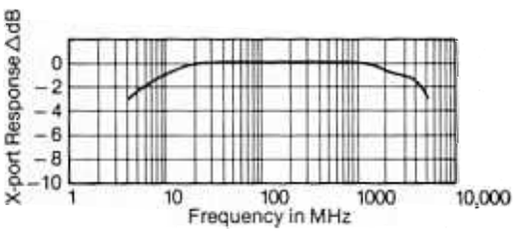
TYPICAL PERFORMANCE

Impedance: All ports 50 ohms
1 dB Compression Point: +6 dBm
1 dB Desensitization Point: +4 dBm
3rd Order Intercept Point: +16 dBm
Noise Figure is within 1 dB of conversion loss
LO Power Range: +10 to +20 dBm









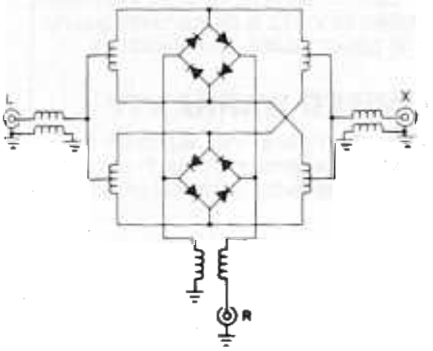
ENVIRONMENTAL CONDITIONS

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

FUNCTIONAL SCHEMATIC



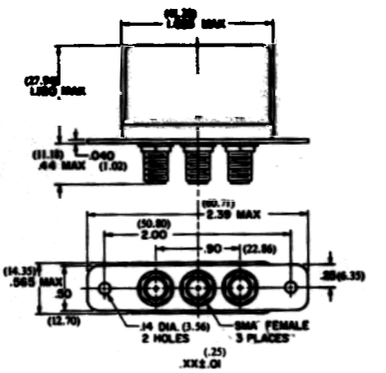
PACKAGE

MATERIAL:

Header and Plate: CRS per QQ-S-698
Cover: Terne Coated Steel per Federal Standard Specifications QQ-T-191b, Class 1, Type 2, Grade B
Base material conforms to QQ-S-698
Connector body: Stainless Steel per QQ-S-764, Class 303, Cond. A
Contacts: Beryllium Copper per QQ-C-530, Half hard
Dielectric: Polytetrafluorethylene per MIL-P-19468
Federal Specification L-P-403

FINISH:

Header, Plate, and Cover: bright nickel per QQ-N-290A, Class 1, Grade F, Form SB over copper per MIL-C-14550A, Class 3
Connector: Per paragraph 4,6,11 of MIL-C-39012
Pin: Gold per MIL-G-45204, Type 1, Grade C, Class 2



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