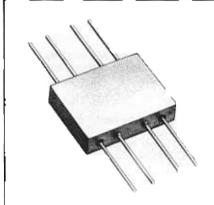
**DBM-700H High Level** Subminiature Mismatch Insensitive Flatpack Double **Balanced Mixer** 1-3500 MHz

**MIXERS** 



# DESCRIPTION

DBM-700H is a high performance double balanced mixer that offers extremely wide bandwidth. This mixer features intermodulation performance that is virtually insensitive to mismatches on any or all of its ports. Due to almost constant linearity across its entire band, the DBM-700H's 3rd order IM products are essentially flat. This mixer is ideal to use in applications where elaborate and expensive matching networks are prohibitive. The subminiature package is sealed, RFI shielded and constructed to withstand severe environments

# 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 + 20 dBm (High side LO) RF - 10 dBm IF 100 MHz

#### NOTE:

Specifications below, guaranteed with IF from 50 to 800 MHz. For higher IF frequencies, consult IF response curve for typical rolloff.

### **OVERALL FREQUENCY RANGE IN MHz:**

L	R	X
1-3500	1-3500	5-2500

# FREQUENCY BANDS IN MHZ:

	5- 1000- 1-		
	1000 3000 3500		
Conversion Loss	7.5	8.5	9.5
L-R Isolation	30	20	20
L-X Isolation	30	15	15
<b>R-X Isolation</b>	20	15	15

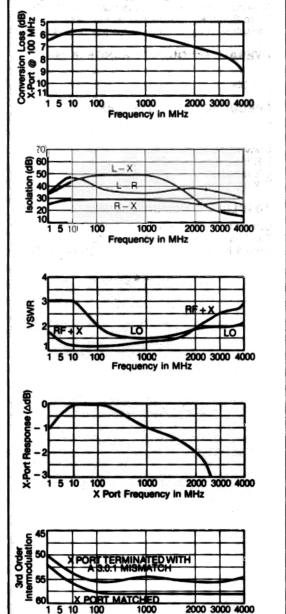
# ABSOLUTE MAXIMUM RATINGS:

Operating Temp. - 54 to + 100°C Total Input Power 1 watt @ + 25°C Derate linearly to 700 mW @ 100°C(4mW/°C)

# MIXERS

# TYPICAL PERFORMANCE

Impedance: All ports 50 ohms 1 dB Compression Point: +16 dBm 1 dB Desensitization Point: +14 dBm 3rd Order Intercept Point: +20 dBm Noise Figure is within 1 dB of conversion loss LO Power Range: +17 to +23 dBm 3rd order intermodulation Ratio Degradation 3 dB typical @ I.F.VSWR of 3.0:1



Frequency in MHz

# **V/RIL**

#### 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.

		Test
Exposure	Method	Condition
Thermal Shock	107D	В
Altitude	105C	G
H.F. Vibration	204C	D
Mechanical Shock	213B	С
(15 minutes per axis)	214	IIF
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:

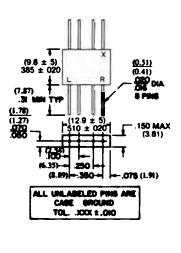
F15 Kovar per ASTM Standard F15-68, (Chemical composition per MIL-STD-1276, Type K)

## 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



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