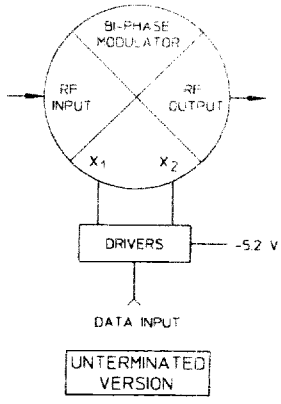
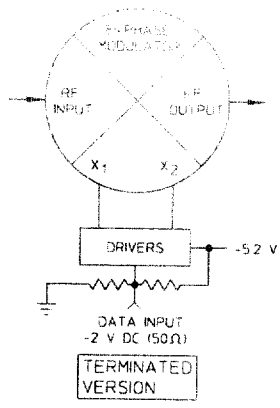
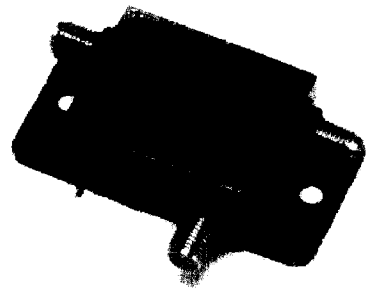
NEW DIRECTIONS

Merrimac BEM & BETM-2A Series BIPHASE MODULATORS

2 to 2000 MHz / ECL Input / Uses -5.2 Volt Power Supply / SMA Connectors



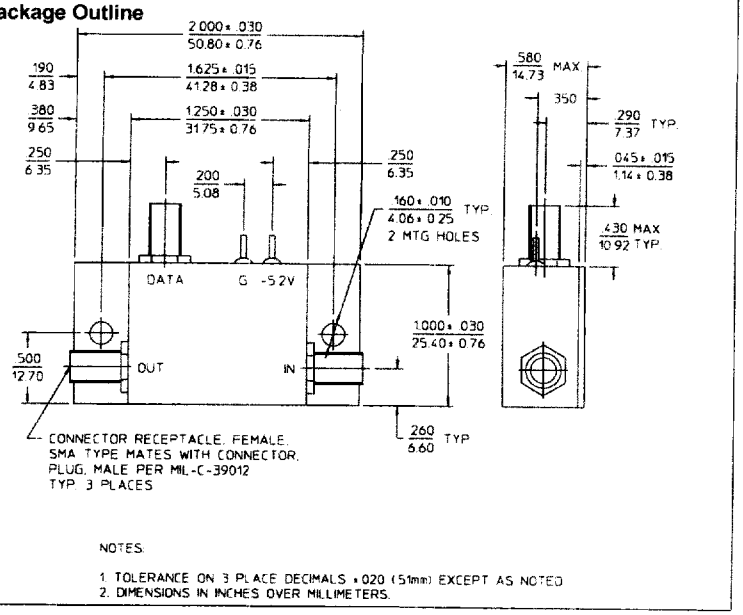




PRINCIPAL SPECIFICATIONS

Model Number, Unterminated	Model Number, Terminated	Frequency Range, MHz	Insertion Loss, dB, Max.	Insertion Loss, dB, Typ.	Amplitude Balance, dB, Max.	Amplitude Balance, dB, Typ.	Phase Balance Max.	Phase Balance Typ.	Carrier Suppression Typ.	Weight oz (g), Nom.
BEM-2A-250	BETM-2A-250	2 – 500	3.5	2.5	0.3	0.10	±4°	±2°	– 40 dBc	1.5 (42)
BEM-2A-500	BETM-2A-500	10 – 500	3	2	0.3	0.20	±3°	±1°	– 40 dBc	1.5 (42)
		500 – 1000	4	3	0.5	0.20	±4°	±2°	– 35 dBc	
BEM-2A-1500	BETM-2A-1500	1000 – 2000	5	3	0.75	0.25	±5°	±2°	– 30 dBc	1.5 (42)

Package Outline



NOTES:

1. TOLERANCE ON 3 PLACE DECIMALS ± .020 (.51mm) EXCEPT AS NOTED
2. DIMENSIONS IN INCHES OVER MILLIMETERS.

GENERAL SPECIFICATIONS

Impedance:	50 Ω nom.
RF Input Level:	– 3 dBm max.
VSWR:	2.0:1 max.
Switching Speed:	5 nS typ. (50% Control to 90% RF)
Data Signal Levels:	ECL compatible (terminated or unterminated)
Power Supplies:	– 5.2 VDC (@ 40 mA nom.)
Operating Temp:	– 55° to +85°C

AVAILABLE OPTIONS

Direct (No Driver)	As BPM series
Integral TTL Driver:	As BTM series
Other frequencies:	Up to 2500 MHz. Consult with factory

General Notes:

1. The BEM and BETM-2A series of Biphase Modulators cover the frequency range of 2 to 2000 MHz and can be driven directly by standard ECL using only a – 5.2 V supply. Custom units covering up to 2500 MHz may be obtained. Consult with the factory.
2. The BEM-2A series requires an external 50Ω logic input termination while the BETM-2A series includes an internal 50Ω logic input termination. Comparable TTL versions are available in a similar package or a non-connectorized Meri-Pac™ or flatpack (see BTF-2A series). Units without integral TTL drivers are available in the BPM-2A series.
3. Merrimac Biphase Modulators cover a variety of frequency bands while providing wide bandwidths suitable for most applications.
4. All units comply with the applicable sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.

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