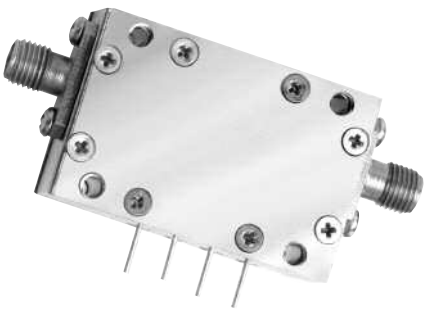
2 TO 18 GHz TTL BIPHASE MODULATOR

MODEL: BMT0218HC10MD (Modulation Driven)

FEATURES

- **RF frequency range..... 2 to 18 GHz**
- **Biphase accuracy..... ±5°**
- **Amplitude accuracy ..... ±0.5 dB**
- **Rise time ..... 10 ns**
- **Switching speed ..... 30 ns**
- **RF input..... +15 dBm (P1 dB)**



MITEQ's Model BMT0218HC10MD TTL-controlled biphase modulator is ideal for BPSK modulation over broad frequency ranges with extremely high input carrier levels (up to +20 dBm). The power handling capability is suited to simulator systems using high-level VCOs avoiding the requirement of an additional external amplifier. Since this is a TTL or modulation driven unit, the RF input-to-output power relation is linear up to the compression level.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF carrier frequency range		GHz	2		18
RF carrier VSWR		Ratio		2.8:1	3.5:1
RF carrier power (linear)	Operating Nonoperating	dBm dBm	+15	+20 +23	
TTL modulation rate		MHz	DC		30
DC power supply	±5 VDC	mA			30
TRANSFER CHARACTERISTICS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
Insertion loss		dB		4.	6
Carrier suppression		dBc	20	25	
Switching speed	50% TTL to 90% RF	ns		30	
Switching rise/fall time	10 to 90% RF	ns		10	
Phase balance (0 or 180°)		Degrees		±5	±10
Amplitude balance (0 or 180°)		dB		±0.5	±0.75
OUTPUT PARAMETERS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
Modulated RF frequency range		GHz	2		18
Modulated RF VSWR		Ratio		2.8:1	3.5:1
Video leakage	From 2 to 18 GHz	dBm		-65	

MITEQ
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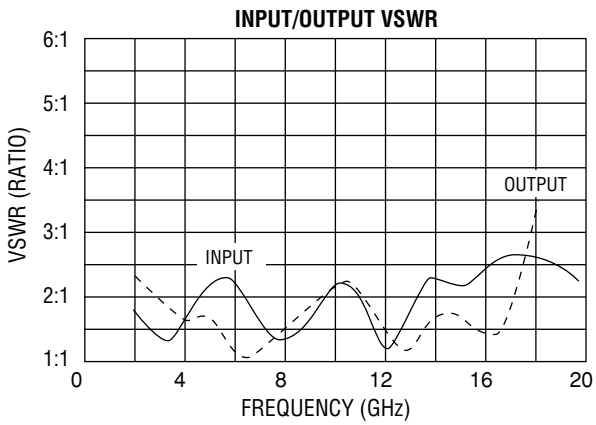
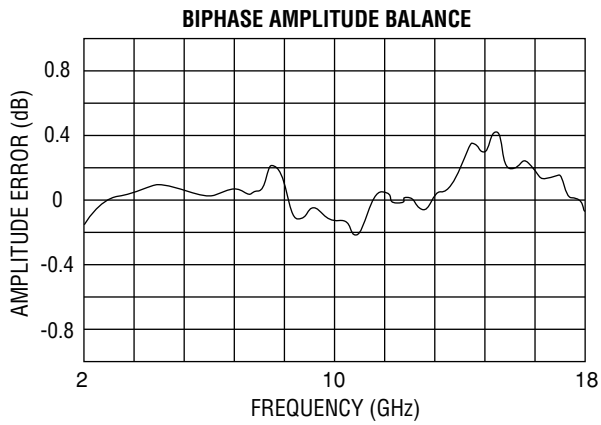
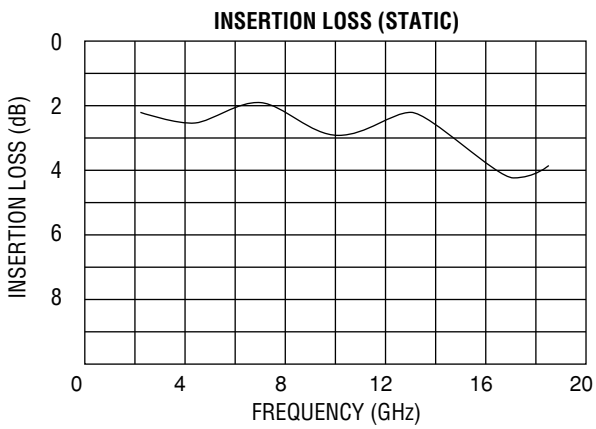
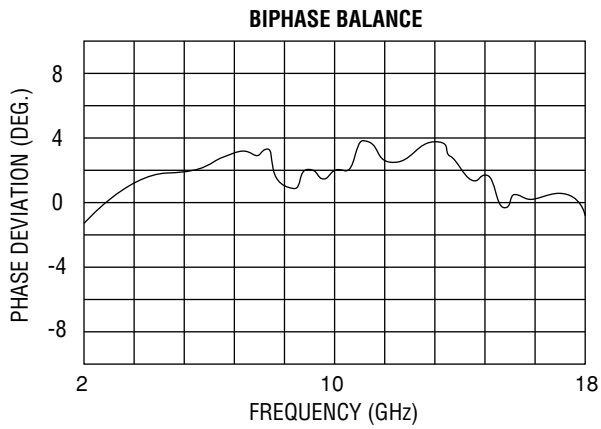
BMT0218HC10MD MODULATION DRIVEN TYPICAL TEST DATA







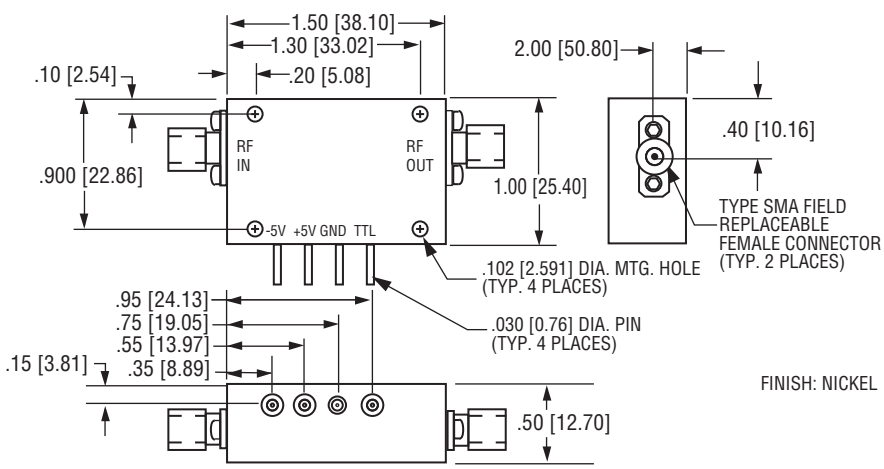


MAXIMUM RATINGS

Specification temperature ..... +25°C
Operating temperature ..... -54 to +85°C
Storage temperature ..... -65 to +125°C
Weight ..... 26 grams

NOTE: Test data supplied at 25°C; insertion loss and biphase accuracy.

OUTLINE DRAWING



NOTE: All dimensions shown in brackets [ ] are in millimeters.