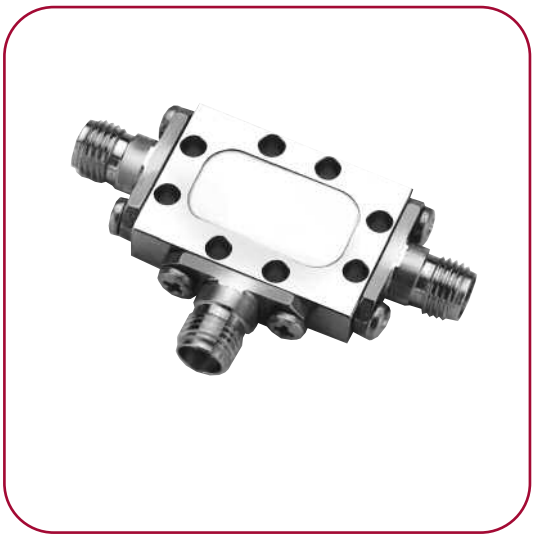
MODEL: BMA0218LA1MD (Modulation Driven)

FEATURES

- **RF frequency range..... 2 to 18 GHz**
- **Modulation bandwidth ..... DC to 0.5 GHz**
- **Biphase accuracy..... ±5°**
- **Amplitude accuracy ..... ±0.5 dB**
- **Modulator to RF isolation..... 20 dB**



This double-balanced multioctave mixer is suitable for general purpose biphase modulator applications. When the diodes are driven by the carrier power (mode 1), a 10 to 15 dB IF amplitude control is possible. In the modulation driven mode, close, biphase control of the carrier is possible over a wide RF dynamic range. The specifications shown below are for the modulation driven mode (linear RF). An optional model (-CD) can be ordered and tested in the carrier driven or linear modulation mode.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		18
RF power		dBm	Noise		+5
RF VSWR		Ratio		2:1	
IF frequency range		GHz	DC		0.5
IF current (antiparallel diode input)		mA	-10		+10
TRANSFER CHARACTERISTICS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
Biphase accuracy	2 to 18 GHz 3 to 17 GHz	Degrees		5 2	10 5
Biphase amplitude balance	IF = ±10 mA	dB		0.5	
Switch loss	IF = ±10 mA	dB		3	5
Isolation RF in to RF out IF in to RF in IF in to RF out	RF = +10, IF = Off RF = +10, IF = Off RF = +10, IF = Off	dB dB dB	18	20 15 30	
OUTPUT PARAMETERS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
RF frequency range (modulated carrier)		GHz	2		18
RF power at 1 dB compression		dBm		0	
RF VSWR		Ratio		2.5:1	

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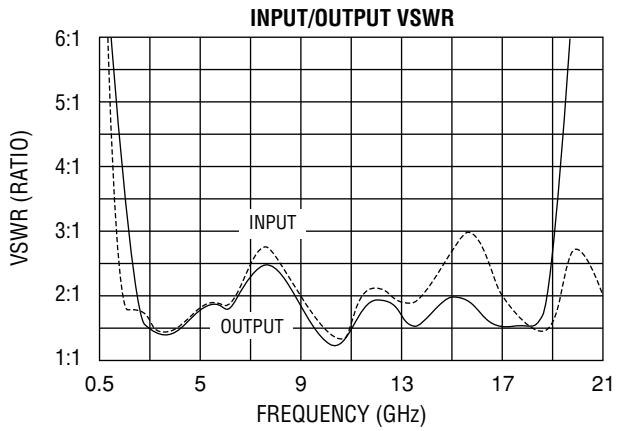
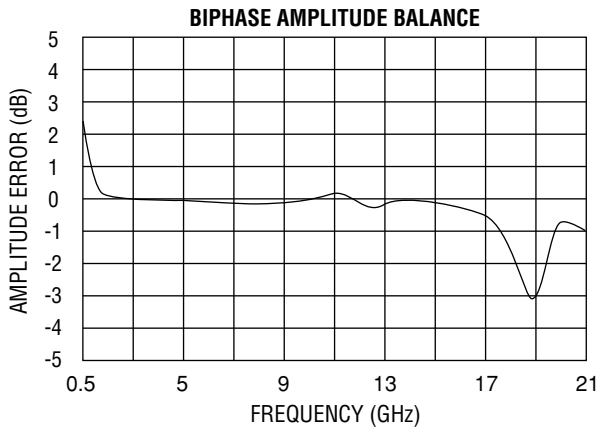
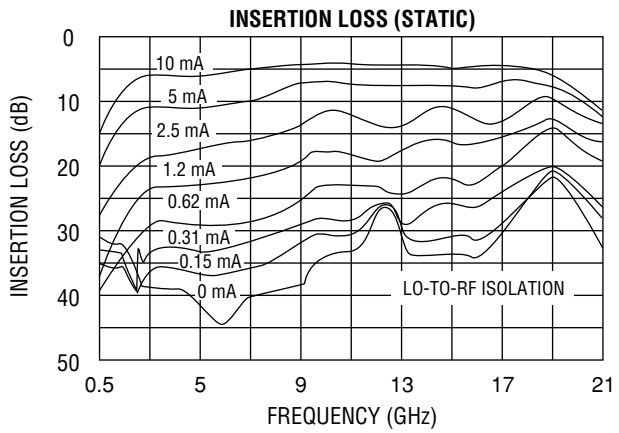
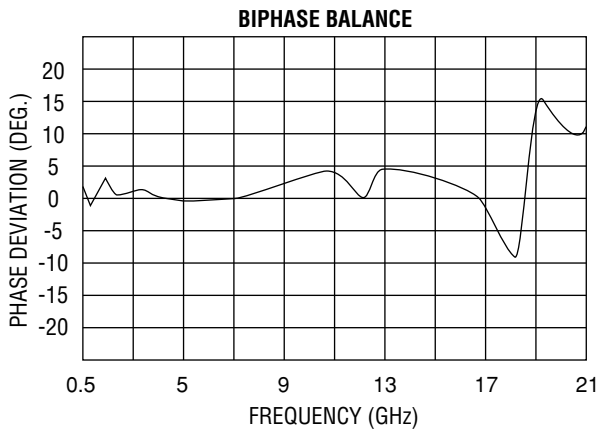
BMA0218LA1MD MODULATION DRIVEN TYPICAL TEST DATA









MAXIMUM RATINGS

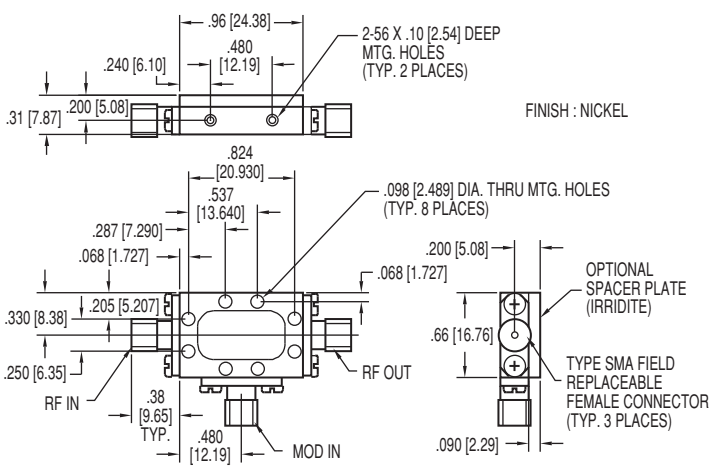
Specification temperature..... +25°C
Operating temperature ..... -54 to +85°C
Storage temperature ..... -65 to +95°C

GENERAL NOTE

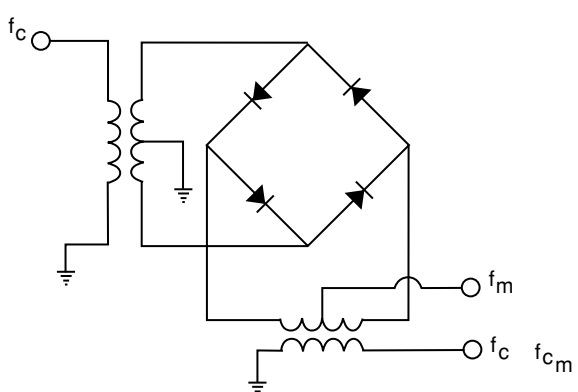
1. Linear RF or modulation driven mode (RF = 0 dBm, IF = ±10 mA).

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

OUTLINE DRAWING



BLOCK DIAGRAM



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