

Plug-In

I&Q Modulator

50Ω

66 to 73 MHz

MIQA-70M+
MIQA-70M


CASE STYLE: A06

PRICE: \$42.20 ea. QTY (1-9)

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
LO Power	50mW
I&Q Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO (carrier)	1
RF (signal)	8
I (0°)(ref.)	7
Q (90°)*	4
50Ω TERM EXTERNAL	2
GROUND	3,5,6
CASE GROUND	3,5,6

*Q= I -90° for lower sideband suppression

Features

- hermetically sealed metal case
- excellent 3rd and 5th order harmonic
- good carrier and sideband rejections

Applications

- radar
- communication system
- military, hi-rel application

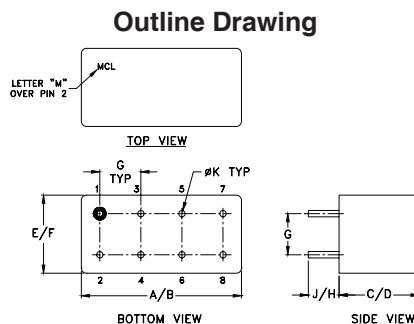
Modulator Electrical Specifications

FREQUENCY (MHz)				CONVERSION LOSS (dB)		CARRIER REJECTION (-dBc)		SIDE BAND REJECTION (-dBc)		HARMONIC SUPPRESSION (-dBc)			
RF (SIGNAL/ LO (CARRIER))		I&Q								3XI/Q		5XI/Q	
fL	fU	Min.	Max.	$\bar{x}$	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
66	73	DC	5	6.2	0.10	7.0	38	30	38	30	48	45	58

Operating LO power: 10±1dBm
 1dB Compression: 0dBm typical
 Conversion Loss: (I + Q) power, dBm - RF power, dBm
 Carrier and sideband rejections measured at -5dBm I/Q power.

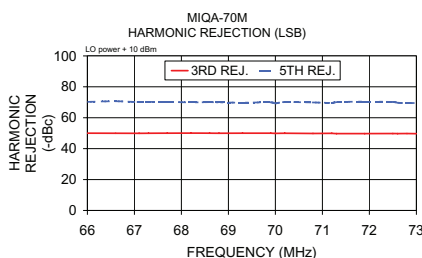
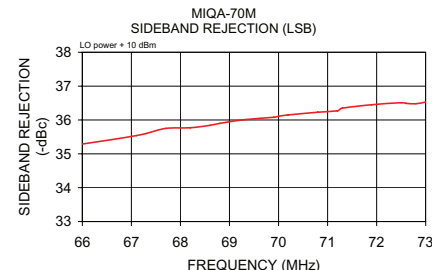
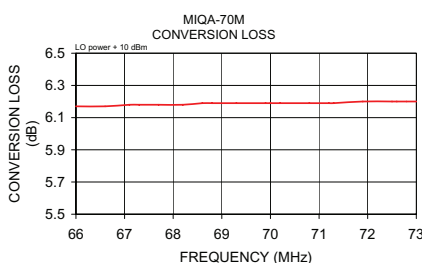
Typical Performance Data

Carrier Freq. (MHz)	Conversion Loss		Sideband Rejection ($\bar{x}$)		Carrier Rejection ($\bar{x}$)		3rd Harmonic Suppression ($\bar{x}$)		5th Harmonic Suppression ($\bar{x}$)		DC Offset ($\bar{x}$) (mV)
	$\bar{x}$ (dB)	σ (dB)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	
66.00	6.17	0.05	35.29	37.71	52.10	52.12	49.98	58.32	70.26	63.44	0.16
66.60	6.17	0.05	35.42	37.86	52.24	52.25	49.94	58.19	70.66	63.23	0.17
67.10	6.18	0.05	35.54	37.94	52.08	52.10	49.92	58.28	70.10	63.32	0.16
67.30	6.18	0.05	35.60	38.01	52.04	52.18	49.96	58.56	70.22	63.16	0.16
67.70	6.18	0.04	35.75	38.10	51.90	52.23	50.00	58.39	70.26	63.53	0.16
68.20	6.18	0.04	35.77	38.34	52.02	52.06	50.04	58.58	69.94	63.42	0.17
68.60	6.19	0.05	35.84	38.47	51.96	51.92	49.98	58.56	70.08	63.30	0.17
68.80	6.19	0.04	35.90	38.56	51.94	51.98	49.94	58.40	69.94	63.38	0.16
69.30	6.19	0.04	36.01	38.78	51.86	51.92	50.02	58.34	69.74	63.20	0.17
69.90	6.19	0.05	36.08	38.87	51.70	51.83	50.00	58.31	69.98	63.15	0.17
70.00	6.19	0.05	36.11	38.94	51.84	52.10	49.86	58.20	69.30	63.12	0.17
70.20	6.19	0.04	36.15	38.88	51.74	51.75	49.96	58.31	70.10	63.29	0.17
70.80	6.19	0.04	36.23	38.93	51.83	51.91	49.83	58.19	69.89	63.33	0.17
71.20	6.19	0.05	36.27	39.08	51.72	51.81	49.92	58.05	69.58	63.05	0.17
71.30	6.19	0.05	36.35	39.13	51.61	51.85	49.71	58.23	70.09	63.13	0.17
71.90	6.20	0.04	36.45	39.21	51.62	51.79	49.72	57.95	70.46	63.29	0.17
72.50	6.20	0.04	36.51	39.21	51.59	51.58	49.75	57.72	70.21	62.82	0.17
72.60	6.20	0.04	36.49	39.35	51.45	51.67	49.71	57.71	69.69	62.77	0.17
72.80	6.20	0.04	36.48	39.38	51.33	51.56	49.75	57.66	69.45	62.84	0.17
73.00	6.20	0.04	36.53	39.39	51.37	51.38	49.67	57.66	69.55	62.98	0.17

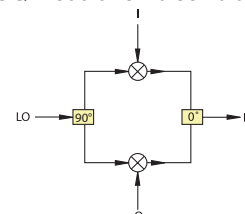


Outline Dimensions (inch)

A	B	C	D	E	F
.770	.800	.285	.310	.370	.400
19.56	20.32	7.24	7.87	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	



I&Q modulation block diagram



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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