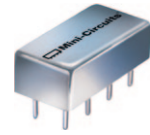


Plug-In I&Q Demodulator

50Ω

66 to 73 MHz

MIQA-70D+
MIQA-70D



CASE STYLE: A06
PRICE: \$52.20 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/RF 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 EXT.	2
GROUND	3,5,6
CASE GROUND	3,5,6

* Q= I+90° for LO>RF
Q= I-90° for LO<RF

Features

- hermetically sealed metal case
- excellent 3rd and 5th order harmonic suppression
- good amplitude and phase unbalance

Applications

- radar and communication systems
- military, hi-rel applications

Demodulator Electrical Specifications

FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)		HARMONIC SUPPRESSION (dBc)					
RF (SIGNAL)		LO (CARRIER)		I&Q		$\bar{x}$	σ	Max.	Typ.	Max.	with reference to 90°		3XI/Q		5XI/Q	
f_L	f_U	Min.	Max.	Min.	Max.						Typ.	Max.	Typ.	Min.	Typ.	Min.
66	73	DC	3			6.2	0.10	7.0	0.15	0.5	0.7	3.0	56	45	58	55

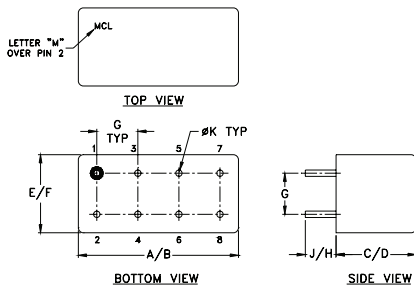
Note:

1. Operating LO Power: 10±0.5 dBm
2. 1 dB Compression at +4 dBm RF input
3. DC offset 1mV typ.
4. Conversion Loss=RF power, dBm - (I+Q) power, dBm

Typical Performance Data

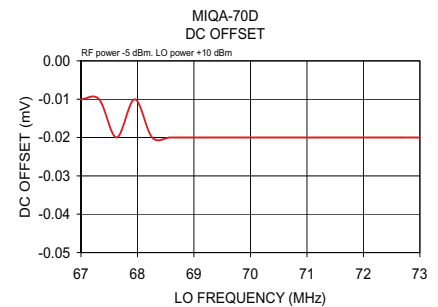
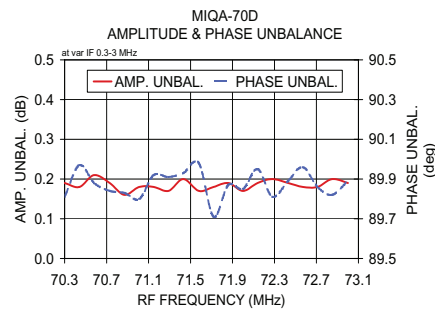
Frequency (MHz)		Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
LO=70MHz	RF				LO	RF	
70.30	0.30	6.10	0.19	89.81	67.00	67.10	-0.01
70.44	0.44	6.08	0.18	89.97	67.32	67.42	-0.01
70.58	0.58	6.13	0.21	89.88	67.63	67.73	-0.02
70.73	0.73	6.12	0.19	89.84	67.95	68.05	-0.01
70.87	0.87	6.13	0.16	89.83	68.26	68.36	-0.02
71.01	1.01	6.07	0.18	89.80	68.58	68.68	-0.02
71.15	1.15	6.10	0.18	89.92	68.89	68.99	-0.02
71.29	1.29	6.10	0.17	89.91	69.21	69.31	-0.02
71.43	1.43	6.13	0.20	89.93	69.53	69.63	-0.02
71.58	1.58	6.12	0.17	89.98	69.84	69.94	-0.02
71.72	1.72	6.10	0.18	89.71	70.16	70.26	-0.02
71.86	1.86	6.10	0.19	89.87	70.47	70.57	-0.02
72.00	2.00	6.09	0.17	89.85	70.79	70.89	-0.02
72.14	2.14	6.10	0.19	89.95	71.11	71.21	-0.02
72.28	2.28	6.11	0.20	89.81	71.42	71.52	-0.02
72.43	2.43	6.10	0.19	89.89	71.74	71.84	-0.02
72.57	2.57	6.11	0.18	89.96	72.05	72.15	-0.02
72.71	2.71	6.11	0.18	89.86	72.37	72.47	-0.02
72.85	2.85	6.10	0.20	89.82	72.68	72.78	-0.02
73.00	3.00	6.11	0.19	89.89	73.00	73.10	-0.02

Outline Drawing

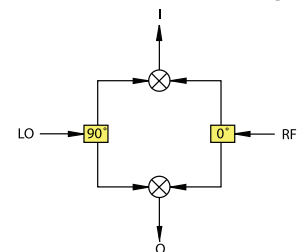


Outline Dimensions (inch/mm)

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 demodulation block diagram



Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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