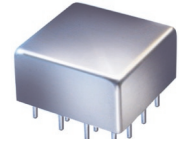


Plug-In I&Q Demodulator

50Ω 67 to 73 MHz

MIQY-70D+ MIQY-70D



CASE STYLE: C07
PRICE: \$ 22.20 ea. QTY (1-49)

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)	13
RF (signal)	1
I (0°)(ref.)	8
Q (90°)*	5
ISOLATE**	10,11
GROUND	2,3,4,6,7,9,12,14,15,16
CASE GROUND	2,3,4,6,7,9,12,14,15,16

*Q= I+90° for LO<RF
Q= I-90° for LO>RF
**external variable capacitors can be connected at pins 10&11 to ground for improvement of phase unbalance.

Features

- good amplitude and phase unbalance
- excellent 3rd and 5th harmonic suppression

Applications

- radar
- communication systems

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Demodulator Electrical Specifications

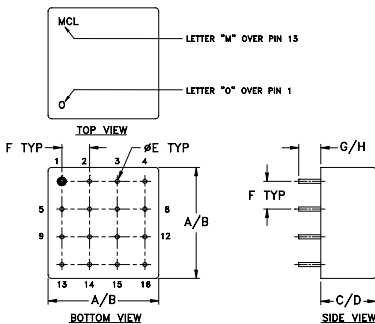
FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)		HARMONIC SUPPRESSION (dBc)					
RF (SIGNAL)		LO (CARRIER)		I&Q		\bar{x}	σ	Max.	Typ.	Max.	with reference to 90°		3XI/Q		5XI/Q	
fL	fU	Min.	Max.	Min.	Max.						Typ.	Min.	Typ	Min.	Typ	Min.
67	73	DC	5	5.5	0.25	7.0	0.10	0.6	0.5	3.0	52	40	66	50		

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

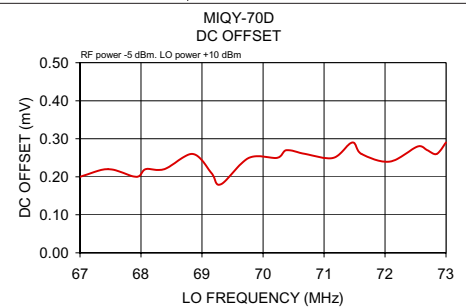
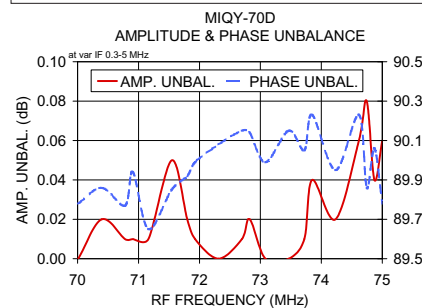
Frequency (MHz)		Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
RF	I&Q				LO	RF	
70.01	0.30	5.60	0.00	89.78	67.00	67.10	0.20
70.39	0.66	5.59	0.02	89.86	67.46	67.56	0.22
70.78	1.03	5.59	0.01	89.77	67.92	68.02	0.20
70.91	1.15	5.58	0.01	89.94	68.08	68.18	0.22
71.16	1.38	5.58	0.01	89.65	68.39	68.49	0.22
71.55	1.75	5.58	0.05	89.85	68.85	68.95	0.26
71.80	1.99	5.59	0.02	89.92	69.15	69.25	0.21
71.93	2.11	5.59	0.01	89.99	69.31	69.41	0.18
72.31	2.47	5.59	0.00	90.08	69.77	69.87	0.25
72.70	2.83	5.59	0.01	90.15	70.23	70.33	0.25
72.83	2.96	5.59	0.02	90.14	70.39	70.49	0.27
73.08	3.19	5.59	0.00	89.99	70.69	70.79	0.26
73.47	3.56	5.60	0.00	90.15	71.15	71.25	0.25
73.72	3.79	5.58	0.01	90.05	71.46	71.56	0.29
73.85	3.92	5.60	0.04	90.23	71.62	71.72	0.26
74.23	4.27	5.59	0.02	89.95	72.08	72.18	0.24
74.62	4.64	5.59	0.06	90.23	72.54	72.64	0.28
74.74	4.75	5.59	0.08	89.86	72.69	72.79	0.27
74.87	4.88	5.59	0.04	90.06	72.85	72.95	0.26
75.00	5.00	5.59	0.06	89.78	73.00	73.10	0.29

Outline Drawing

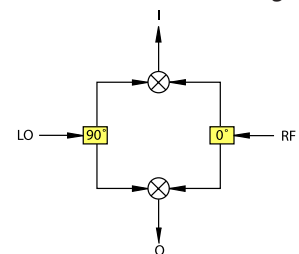


Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	wt
.770	.810	.380	.410	.030	.200	.20	.14	grams
19.56	20.57	9.65	10.41	0.76	5.08	5.08	3.56	11.0



I&Q demodulation block diagram



For detailed performance specs & shopping online see web site

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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