

Coaxial I&Q Demodulator

ZFMIQ-10D

50Ω

9 to 11 MHz



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.	

Coaxial Connections

LO (carrier)	1
RF (signal)	3
I (0°)(ref.)	S
Q (90°)*	2

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

Features

- rugged, shielded case
- excellent 3rd and 5th order harmonics suppression
- good phase and amplitude unbalance

Applications

- radar and communication systems

CASE STYLE: J17			
Connectors	Model	Price	Qty.
SMA	ZFMIQ-10D	\$89.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

Demodulator Electrical Specifications

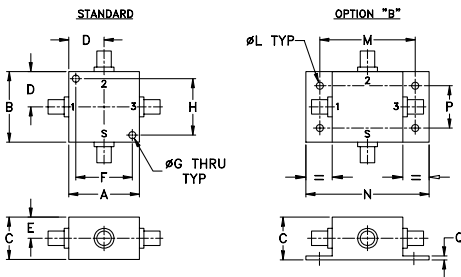
FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.) with reference to 90°		HARMONIC SUPPRESSION (dBc)					
RF (SIGNAL)		LO (CARRIER)		I&Q		\bar{x}	σ	Max.	Typ.	Max.	Typ.	Max.	3X1/Q		5X1/Q	
f_L	f_U	Min.	Max.										Typ.	Min.	Typ.	Min.
9	11	DC	2	6.0	0.10	7.0		0.15	0.3	1.0	3.0	50	35	65	55	

- Notes:
 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

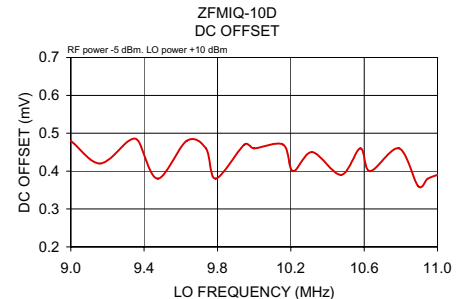
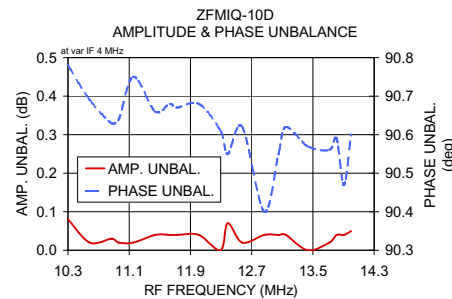
Frequency (MHz)		Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
LO=10MHz	RF				LO	RF	
10.30	0.30	5.85	0.08	90.78	9.00	9.10	0.48
10.59	0.59	5.82	0.02	90.69	9.16	9.26	0.42
10.87	0.87	5.80	0.03	90.63	9.32	9.42	0.48
10.96	0.96	5.80	0.02	90.64	9.37	9.47	0.48
11.15	1.15	5.83	0.02	90.75	9.47	9.57	0.38
11.44	1.44	5.78	0.04	90.66	9.63	9.73	0.48
11.63	1.63	5.77	0.04	90.68	9.74	9.84	0.46
11.72	1.72	5.77	0.04	90.67	9.79	9.89	0.38
12.01	2.01	5.75	0.04	90.68	9.95	10.05	0.47
12.29	2.29	5.73	0.00	90.61	10.00	10.10	0.46
12.39	2.39	5.73	0.07	90.55	10.16	10.26	0.47
12.58	2.58	5.72	0.02	90.62	10.21	10.31	0.40
12.86	2.86	5.71	0.04	90.40	10.32	10.42	0.45
13.05	3.05	5.70	0.04	90.55	10.47	10.57	0.39
13.15	3.15	5.69	0.04	90.62	10.58	10.68	0.46
13.43	3.43	5.67	0.00	90.57	10.63	10.73	0.40
13.72	3.72	5.63	0.02	90.56	10.79	10.89	0.46
13.81	3.81	5.62	0.04	90.59	10.90	11.00	0.36
13.91	3.91	5.61	0.04	90.47	10.95	11.05	0.38
14.00	4.00	5.61	0.05	90.60	11.00	11.10	0.39

Outline Drawing

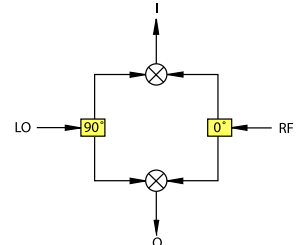


Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	wt
1.25	1.25	.75	.63	.38	1.000	.125	1.000	--	--	.125	1.688	2.18	.75	.07	grams
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40	--	--	3.18	42.88	55.37	19.05	1.78	75.0



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

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

REV. OR
 M97747
 MFMIQ-10D
 DJ/VV/CP
 080310