

# 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

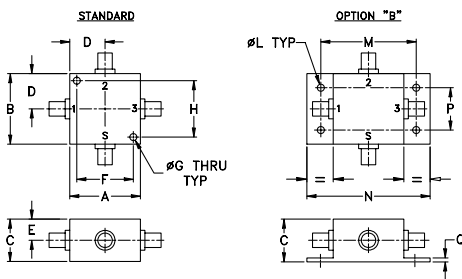
FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.) with reference to 90°		HARMONIC SUPPRESSION (dBc)					
RF (SIGNAL)		LO (CARRIER)		I&Q		$\bar{x}$	$\sigma$	Max.	Typ.	Max.	Typ.	Max.	3X1/Q		5X1/Q	
$f_L$	$f_U$	Min.	Max.	Min.	Max.								Typ.	Min.	Typ.	Min.
9	11	DC	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

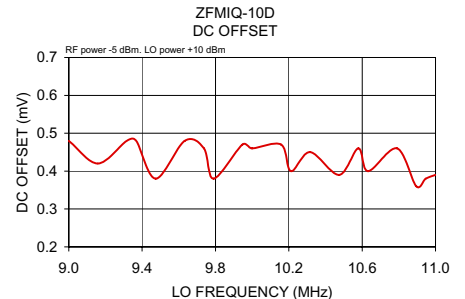
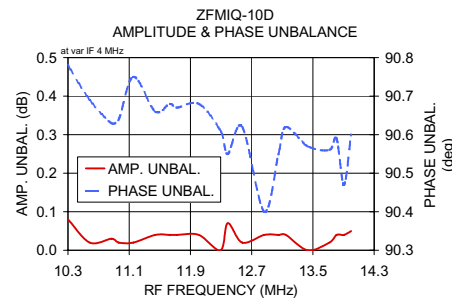
Frequency (MHz)	Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
				LO	RF	
10.30	0.30	5.85	90.78	9.00	9.10	0.48
10.59	0.59	5.82	90.69	9.16	9.26	0.42
10.87	0.87	5.80	90.63	9.32	9.42	0.48
10.96	0.96	5.80	90.64	9.37	9.47	0.48
11.15	1.15	5.83	90.75	9.47	9.57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

### Outline Drawing

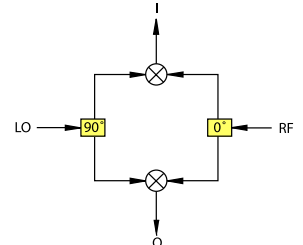


### Outline Dimensions (inch/mm)

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



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