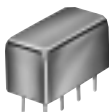
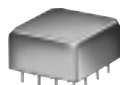


I&Q 1.15 to 895 MHz



MIQA



MIQY
MIQC



ZFMIQ



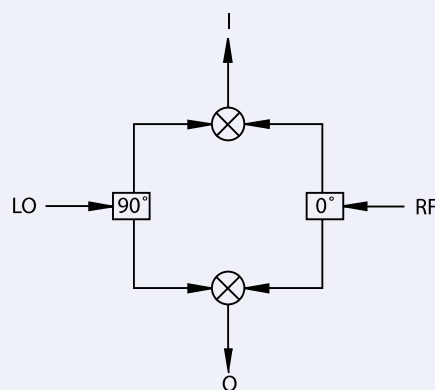
ZAMIQ

MODEL NO.	FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBAL. (dB)		PHASE UNBAL. (Deg.)		HARMONIC SUPPRESSION (-dBc)				CASE STYLE	CONNECTION	PRICE \$
	RF(signal)/LO(carrier)		I&Q		$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	3X1/Q		5X1/Q		Note B		Qty. (1-9)
	f_L	f_U	Min.	Max.								Typ.	Min.	Typ.	Min.			
	f_L	f_U	Min.	Max.	$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.			
MIQA-10D	9	11	DC	2	6.0	0.10	7.0	0.15	0.3	1.0	3.0	50	35	65	55	A06	dv	49.95
MIQA-21D	20	23	DC	3	6.1	0.15	7.0	0.15	0.6	0.7	3.0	64	35	67	50	A06	gd	49.95
MIQA-70D	66	73	DC	3	6.2	0.10	7.0	0.15	0.5	0.7	3.0	56	45	58	55	A06	dv	49.95
MIQC-60WD	20	60	DC	5	5.3	0.10	7.0	0.15	0.6	1.0	5.0	55	45	67	55	C07	dx	79.95
▲ ZFMIQ-10D ▲ ZFMIQ-70D ▲ ZAMIQ-895D	9	11	DC	2	6.0	0.10	7.0	0.15	0.3	1.0	3.0	50	35	65	55	J17	dz	89.95
	66	73	DC	2	6.2	0.10	7.0	0.15	0.5	0.7	3.0	56	45	58	55	J17	dz	89.95
	868	895	DC	5	8.0	0.20	10.5	0.15	0.3	1.5	4.0	52	35	58	50	HHH141	gv	149.95
																		Qty. (1-49)
□ MIQY-70D	67	73	DC	5	5.5	0.25	7.0	0.10	0.6	0.5	3.0	52	40	66	50	C07	dy	19.95
□ MIQY-140D	137	143	DC	5	5.5	0.25	7.0	0.10	0.6	0.5	3.0	47	35	70	50	C07	dy	19.95

NOTES:

- $\bar{x}$ Average of conversion loss at center of mid-band frequency ($f_L + f_U/4$)
- σ Standard deviation
- ◆ Aqueous washable
- Non-hermetic
- ▲ Available only with SMA connectors
- A. General Quality Control Procedures, Environmental Specifications, Hi-Rel and MIL description are given in section 0, see "Mini-Circuits Guarantees Quality" article.
- B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & outline drawings".
- C. Prices and specifications subject to change without notice.
- 1. Absolute maximum power, voltage and current rating:
 - 1a. LO/RF power, 50mW.
 - 1b. I&Q current, 40mA
- 2. Operating LO power: 10 ± 0.5 dBm
- 3. 1dB compression at +4dBm RF input
- 4. DC offset 1mV typical
- 5. Conversion Loss = RF power, dBm - (I+Q) power, dBm

I&Q demodulation block diagram



I&Q 104 MHz to 1880 MHz



JCIQ

MODEL NO.	FREQUENCY (MHz)			CONVERSION LOSS (dB)			AMPLITUDE UNBAL. (dB)		PHASE UNBAL. (Deg.)		HARMONIC SUPPRESSION (-dBc)		CASE STYLE	CONNECTION	PRICE \$			
	RF(signal)/LO(carrier)		I&Q	$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	3X1/Q Typ. Min.	5X1/Q Typ. Min.	Note B		Qty. (1-9)			
	f_L	f_U														Min.	Max.	
◆ JCIQ-176D	104	176	DC	5	5.5	0.1	7.0	0.15	0.6	2	5	52	40	65	50	BG291	hs	54.95
◆ JCIQ-1880D	1805	1880	DC	5	8	0.2	10.5	0.2	0.6	2	5	50	35	65	50	BG291	hs	99.95

features

- shielded surface mount metal case
- solder plated J-leads for excellent solderability and strain relief
- cellular applications, radar and communication systems
- good amplitude and phase unbalance
- excellent 3rd and 5th order harmonic suppression
- small size 0.8 X 0.87 X 0.25 inch

pin and coaxial connections

see case style outline drawings

PORT	dv	dw	dx	dy	dz	gd	gu	gv	hs
LO (carrier)	1	13	13	13	1	1	13	1	2
RF (signal)	8	2	1	1	3	8	1	3	9
I (0°)(ref.)	7	4	8	8	S	7	8	4	4
Q (90°)*	4	1	5	5	2	4	5	2	11
ISOLATED**	—	9,12,16	—	10,11	—	—	10,11	—	—
50W TERM. EXT.	2	—	—	—	—	—	—	—	—
NOT USED	—	—	—	—	—	2	—	—	—
GND EXT.	3,5,6	3,5,6,7,8,10,11,14,15	2,3,4,6,7,9,10,11,12,14,15,16	2,3,4,6,7,9,12,14,15,16	—	3,5,6	2,3,4,6,7,9,12,14,15,16	—	1,3,5,6,7,8,10,12,13,14
CASE GND	3,5,6	3,5,6,7,8,10,11,14,15	3,4,6,7,10,11,14,15	2,3,4,6,7,9,12,14,15,16	—	3,5,6	3,4,6,7,14,15	—	—

For I&Q demodulators:

Models MIQA-70D and ZFMIQ-70D: Q= +90° for LO>RF

Q= -90° for LO<RF

All other models: Q=+90° for LO<RF

Q=-90° for LO>RF

** For MIQY external variable capacitors can be connected at pins 10 & 11 to ground for improvement of phase unbalance.



The Design Engineers Search Engine

Provides Actual Data Instantly
At: <http://www.minicircuits.com>

In Stock... Immediate Delivery
For Custom Versions Of Standard Models
Consult Our Applications Dept.

