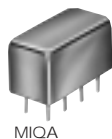
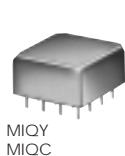


I&Q 9 MHz to 1880 MHz



ZFMIO



ZAMIO

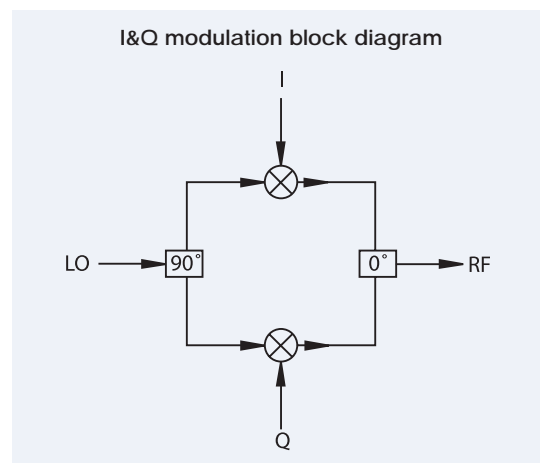


high rejection of carrier and sideband

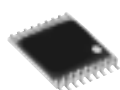
MODEL NO.	FREQUENCY (MHz)		I&Q		CONVERSION LOSS (dB)			CARRIER REJECTION (dBc)		SIDE BAND REJECTION (dBc)		HARMONIC SUPPRESSION (dBc)		CASE STYLE	CONNECTION	PRICE \$
	RF(signal)/LO(carrier) f _L	f _U	Min.	Max.	\bar{x}	σ	Max.	Typ.	Min.	Typ.	Min.	3XI/Q Typ.	5XI/Q Typ.			
MIQA-10M	9	11	DC	2	5.8	0.20	7.0	41	30	40	30	58	48	A06	dv	49.95
MIQA-21M	20	23	DC	3	6.2	0.14	7.0	50	40	40	30	48	40	A06	gd	39.95
MIQA-70M	66	73	DC	5	6.2	0.10	7.0	38	30	38	30	48	45	A06	dv	39.95
MIQA-70ML	66	73	DC	5	5.7	0.10	6.5	38	30	38	30	48	43	A06	dv	49.95
MIQA-91M	86	95	DC	5	5.5	0.10	6.5	38	30	38	30	48	45	A06	dv	49.95
MIQA-100M	95	105	DC	5	5.5	0.10	6.5	38	30	38	30	48	45	A06	dv	49.95
MIQA-195M	185	205	DC	5	5.6	0.10	6.5	38	30	38	30	48	45	A06	dv	49.95
MIQC-88M	52	88	DC	5	5.7	0.10	7.5	41	35	34	30	52	40	C07	dx	49.95
MIQC-176M	104	176	DC	5	5.5	0.10	7.0	38	30	36	30	47	35	C07	dx	54.95
MIQC-895M	868	895	DC	5	8.0	0.10	10.5	40	30	40	30	52	35	C07	dw	99.95
MIQC-1785M	1710	1785	DC	5	9.0	0.30	10.5	35	25	35	25	40	33	C07	dx	99.95
MIQC-1880M	1805	1880	DC	5	9.0	0.30	10.5	35	25	35	25	40	33	C07	dx	99.95
▲ ZAMIQ-895M	868	895	DC	5	8.0	0.10	10.5	40	30	40	30	52	35	HHH141	gv	149.95
▲ ZFMIO-10M	9	11	DC	2	5.8	0.20	7.0	41	30	40	30	58	45	J17	dz	89.95
▲ ZFMIO-70ML	66	73	DC	5	5.7	0.1	6.5	38	30	38	30	48	43	J17	dz	89.95
▲ ZFMIO-91M	86	95	DC	5	5.5	0.17	6.5	38	30	38	30	48	45	J17	dz	89.95
▲ ZFMIO-100M	95	105	DC	5	5.5	0.17	6.5	38	30	38	30	48	45	J17	dz	89.95
□ MIQY-70M	67	73	DC	5	5.8	0.20	7.0	40	35	36	30	47	40	C07	dy	19.95
□ MIQY-140M	137	143	DC	5	5.8	0.20	7.0	34	30	36	30	45	35	C07	dy	19.95

NOTES:

- \bar{x} Average of conversion loss at center of mid-band frequency ($(f_L + f_U)/4$)
- ◆ Aqueous washable
- σ Standard deviation
- Non-hermetic
- ▲ Available only with SMA connectors
- * BLUE CELL™ modulators protected by U.S. Patents 5,534,830 5,640,132 5,640,134 5,640,699, 5,745,017
- 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 power, 50mW
 - 1b. I&Q current, 40mA
 2. Operating LO power: 10 ± 1 dBm
 3. 1dB compression: 0dBm typical
 4. Conversion Loss = (I+Q) power, dBm - RF power, dBm
 5. Carrier and sideband rejections measured at -5dBm I/Q power.
 6. Q=I-90° for MIQA-70M
Q=I+90° for all other models



I&Q 52 MHz to 2000 MHz



IQBG



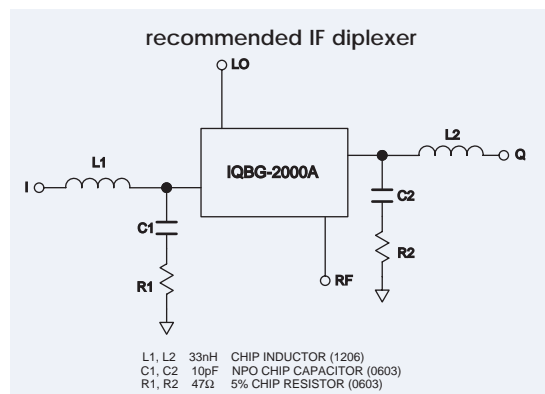
JCIQ

high rejection of carrier and sideband

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)			CARRIER REJECTION (dBc)		SIDE BAND REJECTION (dBc)		HARMONIC SUPPRESSION (dBc)				CASE STYLE	CONNECTION	PRICE \$		
	RF(signal)/LO(carrier) f _L	f _U	I&Q Min.	I&Q Max.	\bar{x}	σ	Max.	Typ.	Min.	Typ.	Min.	3X1/Q Typ. Min.	5X1/Q Typ. Min.				Note B	Qty. (1-9)
◆ IQBG-2000A*	1800	2000	DC	10	7.5	—	9.0	30	20	34	28	50	45	70	50	SM20A	lm	24.95
◆ JCIQ-88M	52	88	DC	5	5.6	0.1	7.0	40	32	35	30	45	35	65	50	BG291	hs	49.95
◆ JCIQ-176M	104	176	DC	5	5.6	0.1	7.0	35	30	35	30	45	35	65	50	BG291	hs	54.95

features

- IQBG, excellent temperature stability, low noise floor
- cellular applications, radar and communication systems
- good carrier and sideband rejections
- excellent 3rd and 5th order harmonic suppression
- all MIQA and MIQC models, metal case and hermetically sealed
- JCIQ models, shielded surface mount metal case with solder-plated J-leads



pin and coaxial connections

see case style outline drawings

PORT	dv	dw	dx	dy	dz	gd	gv	hs	lm
LO (carrier)	1	13	13	13	1	1	1	2	9
RF (signal)	8	2	1	1	3	8	3	9	14
I (0°)(ref.)	7	4	8	8	S	7	4	4	10
Q (90°)*	4	1	5	5	2	4	2	11	18
ISOLATED**	—	9,12,16	—	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	—	1,3,5,6,7,8,10,12,13,14	1,2,3,4,5,6,7,8,11,12,13,15,16,17
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	—	—	—

* For I&Q modulators: Q(90°) for lower sideband suppression.

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



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