

# Plug-In I&Q Modulator

50Ω

1805 to 1880 MHz

## MIQC-1880M+ MIQC-1880M



CASE STYLE: C07  
PRICE: \$ 99.95 ea. QTY (1-9)

**+RoHS Compliant**

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

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

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
GROUND	2,3,4,6,7,9,10,11,12,14,15,16
CASE GROUND	3,4,6,7,9,10,11,12,14,15

\* Q= I + 90° for lower sideband suppression

### Features

- hermetically sealed shielded case
- excellent 3rd and 5th order harmonic suppressions
- good carrier and sideband rejection

### Applications

- radar communications systems
- DCS
- military hi-rel applications

### Modulator Electrical Specifications

MODEL NO.	FREQUENCY (MHz)				CONVERSION LOSS (dB)			CARRIER REJECTION (-dBc)		SIDE BAND REJECTION (-dBc)		HARMONIC SUPPRESSION (-dBc)			
	RF (SIGNAL/ LO (CARRIER))		I&Q		$\bar{x}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	3X1/Q		5X1/Q	
	fL	fU	Min.	Max.								Typ.	Min.	Typ.	Min.
MIQC-1880M(+)	1805	1880	DC	5	9.0	0.30	10.5	35	25	35	25	40	33	65	50

Operating LO power: 10±1dBm

1dB Compression: 0dBm typical

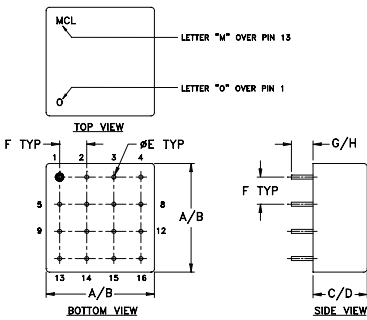
Conversion Loss: (I + Q) power, dBm - RF power, dBm

Carrier and sideband rejections measured at -5dBm I/Q power

### Typical Performance Data

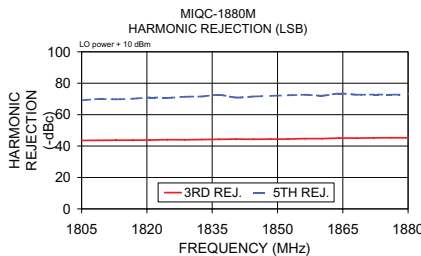
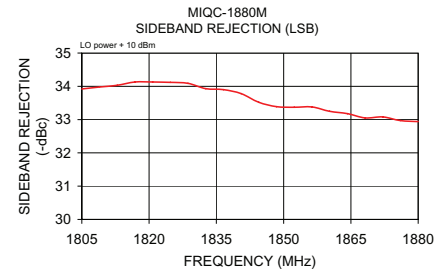
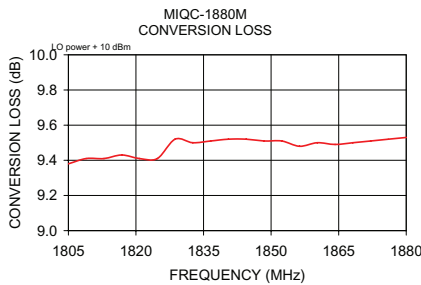
Carrier Freq. (MHz)	Conversion Loss		Sideband Rejection(x)		Carrier Rejection(x)		3rd. Harmonic Suppression (x)		5th. Harmonic Suppression (x)		DC Offset (x) (mV)
	$\bar{x}$ (dB)	$\sigma$ (dB)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	
1805.00	9.38	0.37	33.92	34.44	31.10	31.28	43.54	43.99	69.14	69.65	-6.01
1808.95	9.41	0.36	33.98	34.39	31.32	31.41	43.65	44.11	69.95	69.38	-5.91
1812.89	9.41	0.36	34.03	34.59	31.57	31.58	43.71	44.16	69.75	70.06	-5.81
1816.84	9.43	0.35	34.13	34.46	31.72	31.79	43.75	44.23	70.15	69.76	-5.71
1820.79	9.41	0.35	34.13	34.40	31.89	31.93	43.83	44.30	70.89	70.60	-5.60
1824.74	9.41	0.36	34.12	34.39	32.05	32.11	44.05	44.24	70.68	70.45	-5.49
1828.68	9.52	0.26	34.09	34.70	32.19	32.24	44.01	44.39	71.40	70.55	-5.38
1832.63	9.50	0.27	33.93	34.67	32.23	32.32	44.16	44.68	71.56	71.15	-5.26
1836.58	9.51	0.27	33.90	34.45	32.28	32.37	44.27	44.66	72.57	71.27	-5.14
1840.53	9.52	0.27	33.78	34.40	32.28	32.34	44.40	44.73	70.87	71.86	-5.03
1844.47	9.52	0.27	33.52	34.44	31.88	32.15	44.34	44.77	71.54	70.38	-4.92
1848.42	9.51	0.27	33.39	34.28	31.96	32.24	44.43	44.84	71.92	71.05	-4.80
1852.37	9.51	0.28	33.37	33.86	31.86	31.94	44.46	44.69	72.29	71.56	-4.69
1856.32	9.48	0.30	33.38	33.80	31.71	31.74	44.71	44.69	72.65	71.25	-4.58
1860.26	9.50	0.29	33.25	33.64	31.50	31.58	44.72	44.74	72.05	71.80	-4.47
1864.21	9.49	0.31	33.18	33.52	31.35	31.35	45.08	44.80	73.41	72.47	-4.36
1868.16	9.50	0.31	33.05	33.45	31.14	31.17	45.06	44.81	72.72	71.61	-4.26
1872.11	9.51	0.31	33.08	33.37	30.95	31.00	45.24	44.80	72.80	71.64	-4.18
1876.05	9.52	0.32	32.97	33.27	30.81	30.91	45.26	44.81	72.69	72.01	-4.09
1880.00	9.53	0.32	32.94	33.29	30.73	30.78	45.22	44.71	72.82	71.41	-4.02

### Outline Drawing

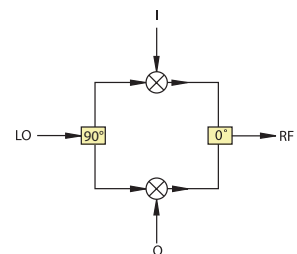


### Outline Dimensions (inch/mm)

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 modulation block diagram



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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