

Plug-In I&Q Modulator

50Ω

868 to 895 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
LO Power	50mW
I&Q Current	40mA

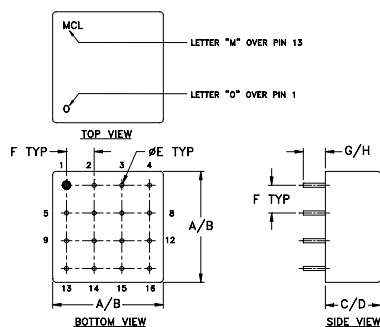
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

LO (carrier)	13
RF (signal)	2
I (0°)(ref.)	4
Q (90°)*	1
ISOLATE (DO NOT USE)	9,12,16
GROUND	3,5,6,7,8,10,11,14,15
CASE GROUND	3,5,6,7,8,10,11,14,15

* Q = I + 90° for lower sideband suppression

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
.770	.810	.380	.410	.030	.200	.20	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
19.56	20.57	9.65	10.41	0.76	5.08	5.08	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56

Features

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

Applications

- cellular
- radar and communications system
- military, hi-rel application

MIQC-895M



CASE STYLE: C07

PRICE: \$104.45 ea. QTY (1-9)

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	fL	fU	Min.	Max.	σ	Typ.	Min.	Typ.	Min.	3X1/Q	5X1/Q	Typ.	Min.
MIQA-895M	868	895	DC	5	8.0	0.10	10.5	40	30	40	30	52	35	58	50

Operating LO power: 10±1dBm

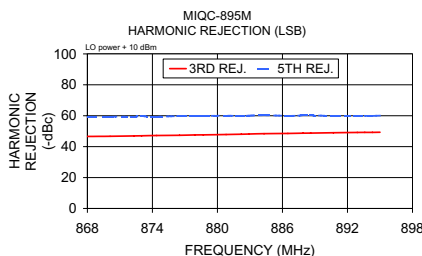
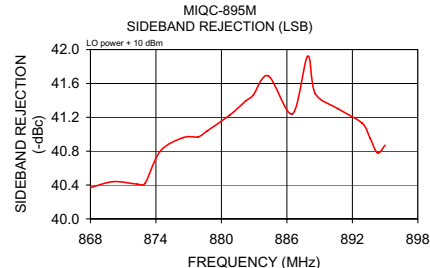
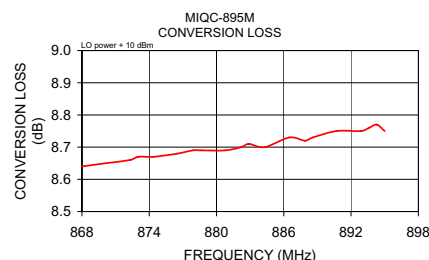
1dB Compression: 0dBm typical

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

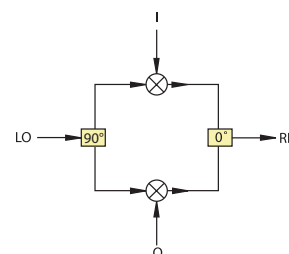
Carrier and sideband rejections measured at -5dBm I/Q power.

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)
	σ (dB)	σ (dB)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	
868.00	8.64	0.06	40.37	39.42	40.28	40.16	46.63	44.24	59.35	62.87	-1.24
870.10	8.65	0.06	40.44	39.60	40.36	40.27	46.71	44.38	59.33	63.25	-1.23
872.30	8.66	0.04	40.41	39.49	40.37	40.45	46.95	44.52	59.48	62.84	-1.23
873.00	8.67	0.05	40.42	39.34	40.48	40.50	47.02	44.51	59.52	62.94	-1.23
874.40	8.67	0.05	40.80	39.30	40.45	40.46	47.21	44.68	59.44	62.90	-1.23
876.50	8.68	0.05	40.96	39.03	40.61	40.68	47.35	44.85	59.78	63.10	-1.22
877.90	8.69	0.04	40.97	38.86	40.65	40.77	47.56	45.02	59.79	62.97	-1.24
878.70	8.69	0.04	41.04	38.97	40.72	40.78	47.62	45.16	59.91	62.83	-1.24
880.80	8.69	0.04	41.23	38.95	40.96	41.03	47.85	45.23	60.03	63.19	-1.23
882.20	8.70	0.04	41.39	38.79	40.94	40.96	48.04	45.38	59.82	63.02	-1.22
882.90	8.71	0.04	41.46	38.73	40.98	41.04	48.15	45.51	60.04	63.04	-1.23
884.30	8.70	0.04	41.69	38.80	41.22	41.17	48.41	45.63	60.30	63.38	-1.22
886.50	8.73	0.04	41.24	38.56	41.27	41.07	48.52	45.76	59.96	62.74	-1.24
887.90	8.72	0.04	41.92	38.57	41.54	41.28	48.70	45.92	60.17	62.61	-1.23
888.60	8.73	0.04	41.48	38.50	41.55	41.22	48.75	46.03	60.16	62.54	-1.23
890.70	8.75	0.04	41.30	38.38	41.60	41.30	48.99	46.19	60.01	62.41	-1.24
892.90	8.75	0.04	41.13	38.40	41.87	41.39	49.19	46.47	59.93	62.57	-1.26
893.60	8.76	0.04	40.96	38.38	42.02	41.37	49.20	46.48	59.96	62.14	-1.26
894.30	8.77	0.04	40.78	38.18	42.08	41.39	49.24	46.54	59.88	61.92	-1.27
895.00	8.75	0.04	40.87	38.27	42.42	41.73	49.31	46.61	60.07	62.33	-1.26



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.
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www.minicircuits.com P.O. Box 35166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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