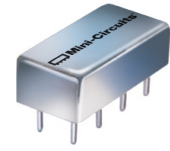


50Ω

185 to 205 MHz



CASE STYLE: A06

### 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)	1
RF (signal)	8
I (0°)(ref.)	7
Q (90°)*	4
50Ω TERM EXTERNAL	2
GROUND	3,5,6
CASE GROUND	3,5,6

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

### Features

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

### Applications

- radar
- communication system
- military, hi-rel application

### Modulator Electrical Specifications

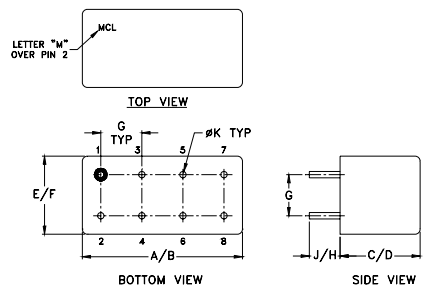
FREQUENCY (MHz)				CONVERSION LOSS (dB)			CARRIER REJECTION (-dBc)		SIDE BAND REJECTION (-dBc)		HARMONIC SUPPRESSION (-dBc)			
RF (SIGNAL/ LO (CARRIER))		I&Q		$\bar{x}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	3X1/Q		5X1/Q	
fL	fU	Min.	Max.								Typ.	Min.	Typ.	Min.
185	205	DC	5	5.6	0.10	6.5	38	30	38	30	48	45	58	55

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

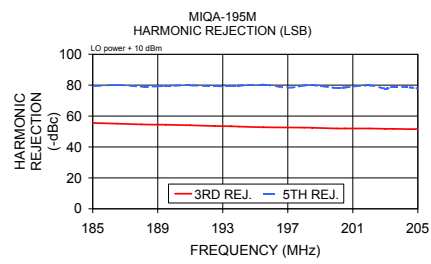
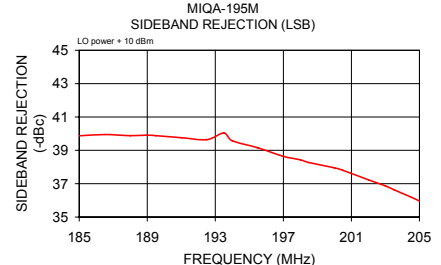
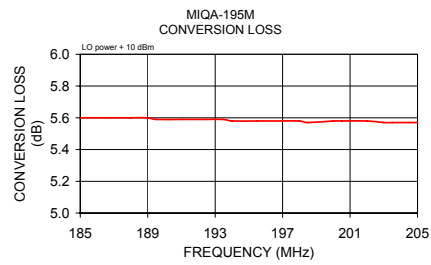
Carrier Freq. (MHz)	Conversion Loss		Sideband Rejection ( $\bar{x}$ )		Carrier Rejection ( $\bar{x}$ )		3rd Harmonic Suppression ( $\bar{x}$ )		5th. Harmonic Suppression ( $\bar{x}$ )		DC Offset ( $\bar{x}$ ) (mV)
	$\bar{x}$ (dB)	$\sigma$ (dB)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	LSB (-dBc)	USB (-dBc)	
185.00	5.60	0.03	39.87	42.64	41.48	41.50	55.49	49.15	79.33	77.29	0.47
186.50	5.60	0.03	39.95	42.51	41.31	41.31	55.07	48.98	80.07	77.46	0.47
188.00	5.60	0.03	39.88	42.29	41.14	41.17	54.59	48.72	79.11	77.26	0.47
189.00	5.60	0.03	39.91	42.13	41.01	41.01	54.45	48.70	79.29	77.02	0.48
189.50	5.59	0.03	39.88	41.95	40.97	41.00	54.40	48.68	79.50	77.74	0.48
191.00	5.59	0.02	39.76	41.88	40.85	40.88	54.02	48.54	79.84	77.26	0.47
192.50	5.59	0.03	39.64	41.32	40.77	40.76	53.58	48.33	79.22	77.41	0.47
193.50	5.59	0.02	40.04	41.09	40.67	40.66	53.38	48.28	79.56	77.42	0.49
194.00	5.58	0.03	39.57	40.99	40.65	40.66	53.20	48.16	79.68	76.94	0.49
195.50	5.58	0.03	39.15	40.43	40.52	40.50	52.75	48.00	80.31	76.48	0.49
197.00	5.58	0.03	38.64	39.99	40.41	40.45	52.61	47.96	78.35	77.12	0.50
198.00	5.58	0.03	38.43	39.68	40.36	40.35	52.53	47.72	79.79	77.68	0.51
198.50	5.57	0.03	38.27	39.38	40.31	40.31	52.41	47.74	80.05	76.06	0.50
200.00	5.58	0.03	37.95	39.04	40.17	40.21	51.99	47.60	78.17	76.04	0.51
200.50	5.58	0.02	37.80	38.83	40.11	40.10	51.99	47.56	78.51	76.18	0.52
202.00	5.58	0.03	37.23	38.09	40.01	39.99	51.96	47.45	79.84	76.57	0.53
203.00	5.57	0.02	36.87	37.64	39.91	39.93	51.76	47.38	77.80	75.84	0.54
203.50	5.57	0.03	36.64	37.44	39.82	39.79	51.73	47.36	78.95	75.34	0.54
204.50	5.57	0.03	36.20	36.98	39.74	39.76	51.53	47.32	78.55	75.42	0.54
205.00	5.57	0.02	35.96	36.44	39.69	39.74	51.64	47.20	77.88	75.46	0.55

### Outline Drawing

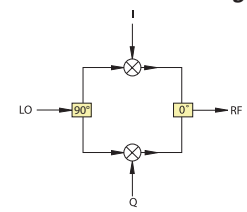


### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.285	.310	.370	.400
19.56	20.32	7.24	7.87	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	



### I&Q modulation block diagram



### Notes

A. 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.  
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

