

Coaxial I&Q Demodulator

50Ω

868 to 895 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
LO/Rf Power	50mW
I&Q Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

LO (carrier)	1
RF (signal)	3
I (0°)(ref.)	4
Q (90°)*	2

* Q= I+90° for LO<RF

Q= I-90° for LO>RF

Features

- rugged, shielded case
- excellent 3rd and 5th order harmonic suppression
- good phase and amplitude unbalance

Applications

- cellular
- communication systems

ZAMIQ-895D



CASE STYLE: HHH141

Connectors	Model	Price	Qty.
SMA	ZAMIQ-895D	\$149.95	(1-9)

Demodulator Electrical Specifications

MODEL NO.	FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)		HARMONIC SUPPRESSION (dBc)			
	RF (SIGNAL)	LO (CARRIER)	I&Q							with reference to 90°		3XI/Q	5XI/Q		
	fL	fU	Min.	Max.	$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ	Min.
ZAMIQ-895D	868	895	DC	5	8.0	0.20	10.5	0.15	0.3	1.5	4.0	52	35	58	50

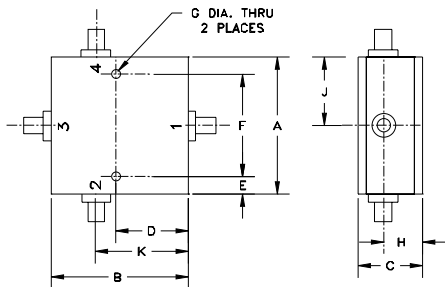
Notes:

1. Operating LO Power: 10±0.5 dBm
2. 1 dB Compression at +4 dBm RF input
3. DC offset 1mV typ.
4. Conversion Loss=RF power, dBm - (I+Q) power, dBm

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
LO=882MHz	RF				LO	RF	
882.30	0.30	8.79	0.13	90.93	868.00	868.10	0.88
882.66	0.65	8.78	0.12	90.92	870.13	870.23	0.69
883.02	1.03	8.77	0.12	90.92	872.26	872.36	0.70
883.14	1.15	8.77	0.13	90.87	872.97	873.07	0.70
883.38	1.38	8.76	0.13	90.76	874.39	874.50	0.70
883.75	1.76	8.75	0.14	90.89	876.53	876.63	0.73
883.99	1.99	8.74	0.13	90.78	877.95	878.05	0.74
884.11	2.11	8.73	0.13	90.80	878.66	878.76	0.91
884.47	2.46	8.71	0.13	90.86	880.79	880.89	0.79
884.83	2.84	8.70	0.13	90.69	882.21	882.31	0.86
884.95	2.96	8.69	0.14	90.76	882.92	883.02	0.81
885.19	3.19	8.68	0.13	90.77	884.34	884.44	0.83
885.55	3.54	8.65	0.14	90.79	886.47	886.57	0.87
885.79	3.80	8.63	0.13	90.71	887.89	888.00	1.08
885.92	3.92	8.62	0.12	90.84	888.61	888.71	1.08
886.28	4.27	8.60	0.11	90.79	890.74	890.84	1.09
886.64	4.65	8.59	0.13	90.68	892.87	892.97	0.87
886.76	4.76	8.60	0.14	90.83	893.58	893.68	0.88
886.88	4.88	8.60	0.13	90.79	894.29	894.39	0.87
887.00	5.00	8.59	0.13	90.68	895.00	895.10	0.87

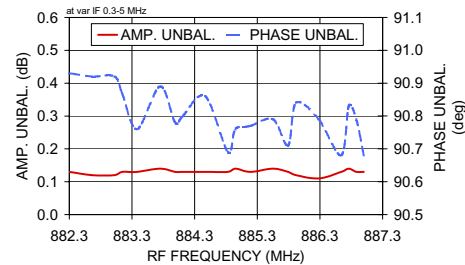
Outline Drawing



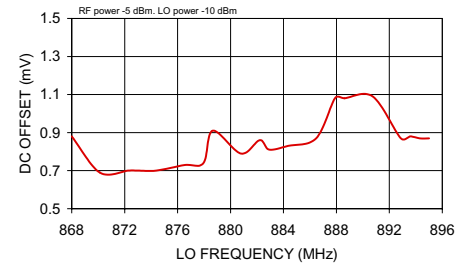
Outline Dimensions (inch/mm)

A	B	C	D	E	F
2.00	2.00	.95	1.062	.125	1.75
50.80	50.80	24.13	26.97	3.18	44.45
G	H	J	K	wt	
.125	.575	1.00	1.35	grams	
3.18	14.61	25.40	34.29	200	

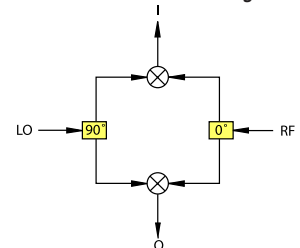
AMPLITUDE & PHASE UNBALANCE



DC OFFSET



I&Q demodulation 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



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