

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
SMA	ZAMIQ-895D

Demodulator Electrical Specifications

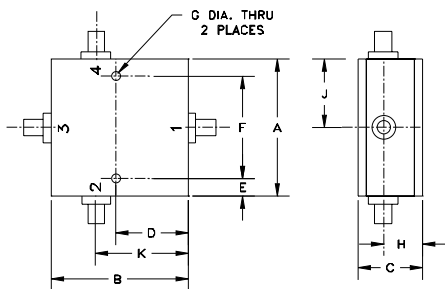
MODEL NO.	FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)		HARMONIC SUPPRESSION (dBc)			
	RF (SIGNAL)	LO (CARRIER)	I&Q							with reference to 90°					
	fL	fU	Min.	Max.	$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	3XI/Q		5XI/Q	
ZAMIQ-895D	868	895	DC	5	8.0	0.20	10.5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

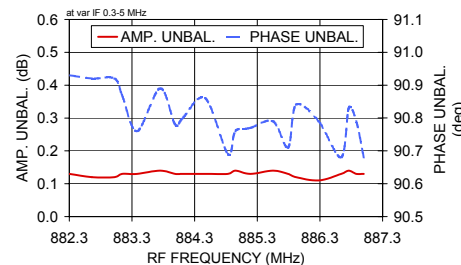
Outline Drawing



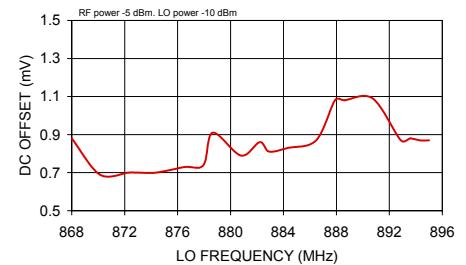
Outline Dimensions (inch/mm)

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	

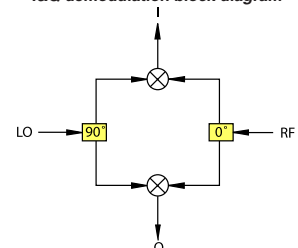
AMPLITUDE & PHASE UNBALANCE



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.
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