

50Ω

1805 to 1880 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.

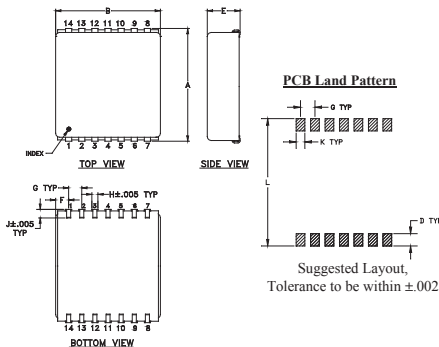
Pin Connections

LO (carrier)	2
RF (signal)	9
I (0°) (ref.)	4
Q (90°)*	11
GROUND	1,3,5,6,7,8,10,12,13,14

*Q=+90° for LO < RF

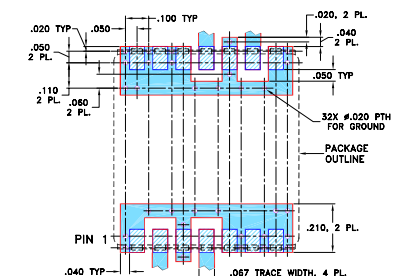
Q=-90° for LO > RF

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G
.870	.800	--	.100	.250	.100	.100
22.10	20.32	--	2.54	6.35	2.54	2.54
H	J	K	L		wt	
.047	.065	.065	.890		grams	
1.19	1.65	1.65	22.61		4.0	

Demo Board MCL P/N: TB-21
Suggested PCB Layout (PL-209)

Features

- shielded metal case with j-leads
- excellent 3rd and 5th order harmonic suppression
- good amplitude and phase unbalance
- aqueous washable

Applications

- radar and communication systems
- DCS

Demodulator Electrical Specifications

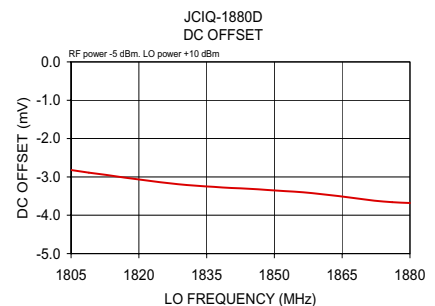
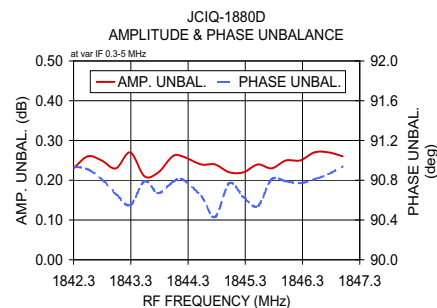
MODEL NO.	FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)		HARMONIC SUPPRESSION (dBc)			
	RF (SIGNAL)		LO (CARRIER)									with reference to 90°		3X1/Q	
	f _r	f _u	Min.	Max.	$\bar{x}$	σ	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.
JCIQ-1880D	1805	1880	DC	5	8	0.2	10.5	0.2	0.6	2	5	50	35	65	50

Note:

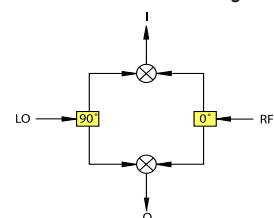
1. Operating LO Power: 10±0.5 dBm
2. 1 dB Compression at +4 dBm RF input
3. DC offset 4mV typ.
4. Conversion Loss=RF power, dBm - (I+Q) power, dBm

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Amplitude Unbalance (dB)	Phase (I&Q) (deg.)	Frequency (MHz)		DC Offset (mV)
LO=1842 MHz	RF				LO	RF	
1842.30	0.30	7.42	0.23	90.94	1805.00	1805.10	-2.82
1842.55	0.55	7.40	0.26	90.91	1808.95	1809.05	-2.89
1842.79	0.79	7.37	0.25	90.81	1812.89	1812.99	-2.95
1843.04	1.04	7.36	0.23	90.66	1816.84	1816.94	-3.02
1843.29	1.29	7.36	0.27	90.55	1820.79	1820.89	-3.08
1843.54	1.54	7.37	0.21	90.79	1824.74	1824.84	-3.14
1843.78	1.78	7.37	0.22	90.67	1828.68	1828.78	-3.19
1844.03	2.03	7.38	0.26	90.78	1832.63	1832.73	-3.23
1844.20	2.28	7.36	0.26	90.81	1836.58	1836.68	-3.26
1844.53	2.53	7.38	0.24	90.64	1840.53	1840.63	-3.29
1844.77	2.77	7.38	0.24	90.43	1844.47	1844.57	-3.31
1845.02	3.02	7.36	0.22	90.77	1848.42	1848.52	-3.34
1845.27	3.27	7.38	0.22	90.63	1852.37	1852.47	-3.37
1845.52	3.52	7.38	0.24	90.54	1856.32	1856.42	-3.40
1845.76	3.76	7.37	0.23	90.81	1860.26	1860.36	-3.45
1846.01	4.01	7.39	0.25	90.79	1864.21	1864.31	-3.50
1846.26	4.26	7.37	0.25	90.77	1868.16	1868.26	-3.56



I&Q demodulation block diagram



For detailed performance specs & shopping online see web site

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I/IRF MICROWAVE COMPONENTS

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