

Frequency Mixers

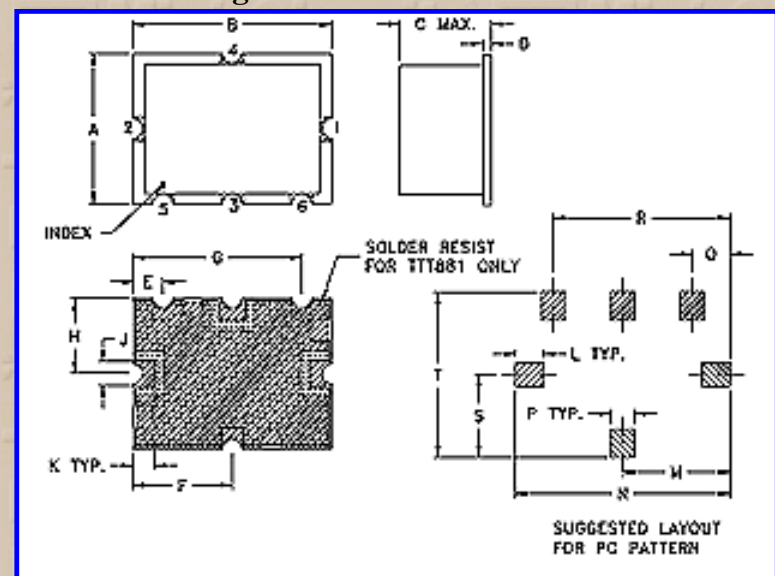
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LO Power Level 17 dBm

Pin Configuration

Port	LO	RF	IF	Gnd Ext.	Case Gnd	Not Used
x	2	1	3	4,5,6	-	-

Outline Drawing



Case Style - TTT167 (inch,mm) weight: 0.8 grams.

A	B	C	D	E	F	G	H	J
.375	.500	.23	.020	.075	.250	.425	.187	.050
9.525	12.700	5.842	0.508	1.905	6.350	10.795	4.750	1.270
K	L	M	N	P	Q	R	S	T
.050	.070	.270	.540	.060	.095	.445	.208	.415
1.270	1.778	6.858	13.716	1.524	2.413	11.303	5.283	10.541

Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

Material and Finish:

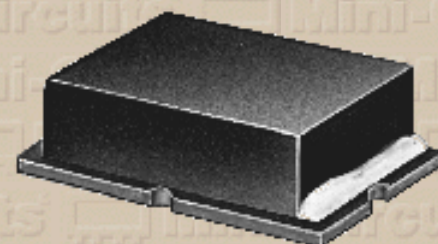
Case material: plastic or copper-nickel alloy, Glass Epoxy Laminate or ceramic base. Termination finish: tin-lead plate or tin plate.

Packaging:

Notes:

- Non-catalog model. Please consult factory for price and delivery.
- For Surface Mount Environmental Specifications, please click [here](#).
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Guarantees Quality](#). Hi-Rel, MIL description are given in [Hi-Rel and MIL](#).
- Prices and Specifications subjects to change without notice.

HJK-ED9680/1



Electrical Specifications

HJK-ED9680/1

LO Power Level 17 dBm

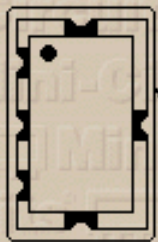
Frequency MHz		Conversion Loss dB		LO-RF Isolation dB			LO-IF Isolation dB		
LO/RF	IF	Mid-Band Total Range		L	M	U	L	M	U
1750-2100	500-1200								

L=low range(f_L to $10f_L$) M=mid range($10f_L$ to $f_U/2$) U=upper range($f_U/2$ to f_U)

Typical Performance Data

HJK-ED9680/1		Conversion Loss (dB)			ISO	Isolation L-R (dB)			Isolation L-I (dB)		
RF MHz	LO MHz	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm
1750.000	1500.000	7.62	7.36		1500.000	30.99	30.88		33.77	33.42	
1750.000	1500.000	7.62	7.36		1500.000	30.99	30.88		33.77	33.42	
1800.000	1550.000	7.67	7.47		1550.000	29.63	29.33		35.05	34.40	
1800.000	1550.000	7.67	7.47		1550.000	29.63	29.33		35.05	34.40	
1850.000	1600.000	7.75	7.60		1600.000	29.38	28.99		37.09	37.75	
1850.000	1600.000	7.75	7.60		1600.000	29.38	28.99		37.09	37.75	
1900.000	1650.000	7.76	7.62		1650.000	30.98	30.40		31.30	32.05	
1900.000	1650.000	7.76	7.62		1650.000	30.98	30.40		31.30	32.05	
1920.000	1670.000	7.79	7.69		1670.000	32.11	31.51		29.73	30.28	
1920.000	1670.000	7.79	7.69		1670.000	32.11	31.51		29.73	30.28	
1935.000	1685.000	7.75	7.65		1685.000	33.09	32.46		28.96	29.47	
1935.000	1685.000	7.75	7.65		1685.000	33.09	32.46		28.96	29.47	
1950.000	1700.000	7.70	7.62		1700.000	34.02	33.39		28.48	28.94	
1950.000	1700.000	7.70	7.62		1700.000	34.02	33.39		28.48	28.94	
1965.000	1715.000	7.71	7.64		1715.000	34.95	34.32		28.19	28.54	
1965.000	1715.000	7.71	7.64		1715.000	34.95	34.32		28.19	28.54	
1980.000	1730.000	7.76	7.72		1730.000	35.80	35.26		27.95	28.30	
1980.000	1730.000	7.76	7.72		1730.000	35.80	35.26		27.95	28.30	
2000.000	1750.000	7.74	7.70		1750.000	37.09	36.56		27.84	28.12	
2000.000	1750.000	7.74	7.70		1750.000	37.09	36.56		27.84	28.12	
2020.000	1770.000	7.68	7.63		1770.000	38.42	37.93		27.87	28.12	
2020.000	1770.000	7.68	7.63		1770.000	38.42	37.93		27.87	28.12	
2040.000	1790.000	7.70	7.67		1790.000	39.48	39.11		27.89	28.07	
2040.000	1790.000	7.70	7.67		1790.000	39.48	39.11		27.89	28.07	
2060.000	1810.000	7.72	7.70		1810.000	40.31	40.01		27.76	27.89	

UNIT ORIENTATION



Packaging information:
 Tape Width(mm): 24
 Reel Size(inches): 13
 Device Cavity Pitch(mm): 12
 Devices Per Reel: 500

2060.000	1810.000	7.72	7.70		1810.000	40.31	40.01		27.76	27.89
2080.000	1830.000	7.69	7.67		1830.000	41.02	40.84		27.63	27.67
2080.000	1830.000	7.69	7.67		1830.000	41.02	40.84		27.63	27.67
2100.000	1850.000	7.69	7.67		1850.000	41.72	41.65		27.62	27.57
2100.000	1850.000	7.69	7.67		1850.000	41.72	41.65		27.62	27.57

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port		
FREQ. (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm	FREQ. (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm
1500.000	9.72	10.31		4.52	4.34		500.000	1.81	1.83	
1500.000	9.72	10.31		4.52	4.34		500.000	1.81	1.83	
1550.000	10.11	10.62		3.36	3.20		550.000	1.86	1.85	
1550.000	10.11	10.62		3.36	3.20		550.000	1.86	1.85	
1600.000	10.71	11.09		2.42	2.30		600.000	1.91	1.88	
1600.000	10.71	11.09		2.42	2.30		600.000	1.91	1.88	
1650.000	11.22	11.44		1.93	1.86		650.000	1.97	1.91	
1650.000	11.22	11.44		1.93	1.86		650.000	1.97	1.91	
1670.000	11.40	11.53		1.79	1.73		700.000	2.03	1.94	
1670.000	11.40	11.53		1.79	1.73		700.000	2.03	1.94	
1685.000	11.55	11.62		1.72	1.67		750.000	2.09	1.98	
1685.000	11.55	11.62		1.72	1.67		750.000	2.09	1.98	
1700.000	11.70	11.73		1.69	1.66		800.000	2.21	2.08	
1700.000	11.70	11.73		1.69	1.66		800.000	2.21	2.08	
1715.000	11.84	11.84		1.70	1.70		850.000	2.27	2.11	
1715.000	11.84	11.84		1.70	1.70		850.000	2.27	2.11	
1730.000	11.95	11.92		1.76	1.78		900.000	2.30	2.13	
1730.000	11.95	11.92		1.76	1.78		900.000	2.30	2.13	
1750.000	12.15	12.10		1.89	1.94		950.000	2.33	2.14	
1750.000	12.15	12.10		1.89	1.94		950.000	2.33	2.14	
1770.000	12.31	12.27		2.10	2.16		1000.000	2.33	2.13	
1770.000	12.31	12.27		2.10	2.16		1000.000	2.33	2.13	
1790.000	12.47	12.41		2.35	2.44		1050.000	2.32	2.13	
1790.000	12.47	12.41		2.35	2.44		1050.000	2.32	2.13	
1810.000	12.62	12.60		2.66	2.77		1100.000	2.31	2.12	
1810.000	12.62	12.60		2.66	2.77		1100.000	2.31	2.12	
1830.000	12.76	12.80		2.97	3.08		1150.000	2.33	2.14	
1830.000	12.76	12.80		2.97	3.08		1150.000	2.33	2.14	
1850.000	12.87	12.99		3.25	3.36		1200.000	2.36	2.16	
1850.000	12.87	12.99		3.25	3.36		1200.000	2.36	2.16	

RF	LO	IP3
1750	1500	30.89
1750	1500	30.89
1784	1534	33.62
1784	1534	33.62
1818	1568	33.18
1818	1568	33.18
1852	1602	31.98
1852	1602	31.98
1886	1636	31.85
1886	1636	31.85
1920	1670	32.34
1920	1670	32.34
1950	1700	34.45
1950	1700	34.45

1980	1730	34.16
1980	1730	34.16
2024	1774	32.84
2024	1774	32.84
2068	1818	32.28
2068	1818	32.28
2112	1862	31.03
2112	1862	31.03
2156	1906	28.34
2156	1906	28.34
2200	1950	28.82
2200	1950	28.82

Click Above for Actual Performance Data.



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