

Frequency Mixer

ASK-2-KK81+ ASK-2-KK81

Level 7 (LO Power +7dBm) 1 to 1000 MHz

Features

- low conversion loss, 6.79 dB typ.
- wideband, 1 to 1000 MHz

Applications

- VHF/UHF
- cellular
- federal & defense communications



CASE STYLE: KK81
PRICE: \$8.25 ea. QTY (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

See our web site for RoHS Compliance methodologies and qualifications.

Mixer Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)				LO-IF ISOLATION (dB)				IP3@ center band Typ. (dBm)	E FACTOR				
	LO/RF $f_c - f_u$	IF	Mid-Band		Total Range	L	M	U	L	M	U	L	M	U						
			\bar{x}	σ													Max.	Max.	Typ. Min.	Typ. Min.
ASK-2-KK81(+)	1-1000	DC-1000	6.79	.10	8.0	9.8	60	40	35	18	26	16	50	30	25	17	15	10	12	0.5

1 dB COMP.: +1 dBm typ.
For phase detection, DC output positive polarity with in-phase LO & RF.
L = low range [f_c to $10 f_c$] M = mid range [$10 f_c$ to $f_c/2$] U = upper range [$f_c/2$ to f_c]
m = mid band [$2f_c$ to $f_c/2$]
E = $(IP3(dBm) - LO Power(dBm))/10$

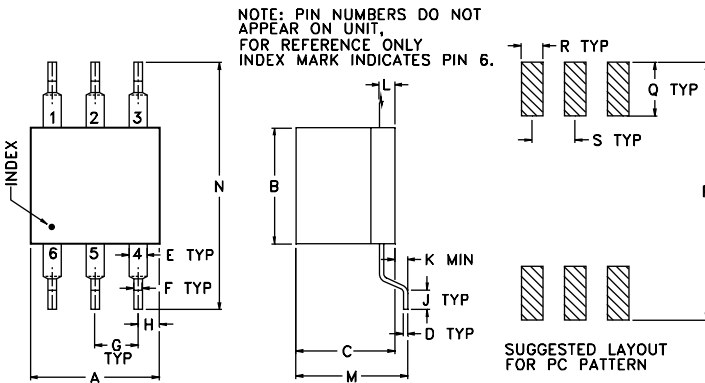
Pin Connections

LO	1
RF	4
IF	5
GROUND	2,3,6

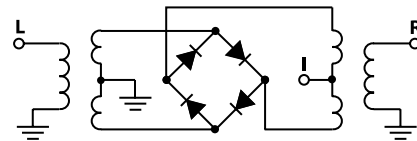
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

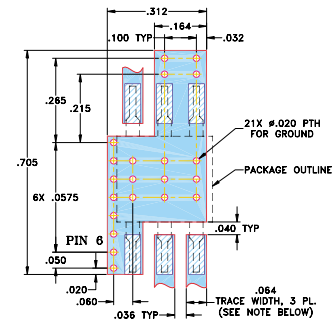
Outline Drawing



electrical schematic



Demo Board MCL P/N: TB-174 Suggested PCB Layout (PL-082)



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt.
.30	.27	.23	.010	.042	.020	.100	.05	.05	.020	.036	.26	.575	.600	.125	.050	.100	grams
7.62	6.86	5.84	0.25	1.07	0.51	2.54	1.27	1.27	0.51	0.91	6.60	14.61	15.24	3.18	1.27	2.54	.50

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Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF port (:1)	VSWR LO port (:1)
RF MHz	LO MHz	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
1.00	31.00	7.37	83.47	91.97	1.38	2.66
2.00	32.00	7.07	80.37	87.67	1.29	2.56
5.00	35.00	6.73	72.27	82.47	1.24	2.67
10.00	40.00	6.62	66.17	77.87	1.23	2.56
20.00	50.00	6.55	61.04	73.34	1.23	2.51
50.00	80.00	6.57	52.51	61.14	1.22	2.53
97.68	67.68	6.59	47.22	54.12	1.23	2.51
100.00	70.00	6.59	47.11	53.57	1.23	2.49
194.36	164.36	6.53	41.80	49.32	1.24	2.49
200.00	170.00	6.53	41.66	49.33	1.27	2.49
291.03	261.03	6.57	38.25	47.35	1.32	2.44
387.71	367.71	6.67	35.81	42.38	1.34	2.56
484.39	454.39	6.68	33.54	37.69	1.35	2.55
500.00	470.00	6.68	33.24	36.29	1.40	2.64
581.07	551.07	6.87	31.64	32.31	1.52	3.03
677.74	647.74	7.12	29.02	27.88	1.69	3.49
774.42	744.42	7.40	26.95	24.13	1.93	3.33
871.10	841.10	7.80	25.84	20.52	2.20	3.00
967.77	937.77	8.22	25.87	17.33	2.45	2.97
1000.00	970.00	8.38	25.95	16.29	2.58	2.98

Performance Charts

