

FREQUENCY MIXERS

Surface Mount

High IP3 (up to 38 dBm)

140 to 3600 MHz



HJK



HUD

MODEL NO.	FREQUENCY (MHz)			IP3 (dBm)	LO level (dBm)	RF @ 1dB compr. (dBm)	CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		CASE STYLE	CONNECTION	PRICE \$
	RF	LO	IF				Typ.	σ	Max.	Typ.	Min.	Typ.	Min.			
HJK-9	818-853	753-778	40-100	22	7	10	7.1	0.3	8.7	36	24	26	20	TTT167	x	10.95
HJK-19	1850-1910	1780-1840	70-130	21	7	10	8.0	0.2	9.5	30	20	24	16	TTT167	x	10.95
HJK-21	1850-1910	2090-2150	180-300	22	7	10	7.5	0.3	9.5	28	18	19	13	TTT167	x	10.95
HJK-9LH	818-853	753-778	40-100	27	10	13	6.7	0.2	8.0	37	24	27	20	TTT167	x	12.95
HJK-19LH	1850-1910	1780-1840	70-130	25	10	13	7.5	0.2	9.4	30	20	23	15	TTT167	x	12.95
HJK-21LH	1850-1910	2090-2150	180-300	25	10	13	7.2	0.3	8.9	28	20	19	13	TTT167	x	12.95
HJK-9MH	818-853	753-778	40-100	31	13	16	6.7	0.2	8.0	37	24	27	20	TTT167	x	14.95
HJK-19MH	1850-1910	1780-1840	70-130	30	13	16	7.4	0.2	8.9	30	20	23	15	TTT167	x	14.95
HJK-21MH	1850-1910	2090-2150	180-300	29	13	16	7.2	0.2	8.9	29	20	19	13	TTT167	x	14.95
HJK-3H*	140-180	160	0.5-20	37	16	19	8.0	0.1	9.2	44	35	44	30	TTT167	x	16.95
HUD-3H*	140-180	160	0.5-20	37	16	19	8.1	0.1	9.2	47	40	45	38	BK276	mx	15.95
HJK-9H	818-853	753-778	40-100	33	17	20	6.7	0.2	8.0	35	24	31	23	TTT167	x	16.95
HJK-19H	1850-1910	1780-1840	70-130	34	17	20	7.7	0.2	8.9	28	20	22	16	TTT167	x	16.95
HJK-21H	1850-1910	2090-2150	180-300	36	17	20	7.6	0.2	8.9	28	20	25	18	TTT167	x	16.95
◆HUD-19SH*	1819-1910	1710-1769	50-200	38	19	22	7.5	0.2	8.9	38	27	36	25	BK276	mx	19.95

features

- high IP3, up to 38 dBm
- compression, 3 dB higher than LO power

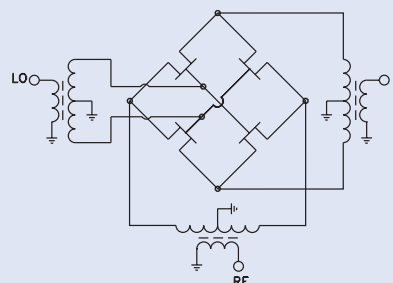
applications

- base stations
- communication systems, cellular, PCS

NOTES:

- $\bar{x}$ Average of conversion loss at center of mid-band frequency ($f_L + f_U/4$)
- σ Standard deviation
- ◆ Aqueous washable
- * Patent pending
- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.
1. Absolute maximum power, voltage and current ratings:
- LO & RF power: 16 dBm for level 7,10,13
19 dBm for level 16
20 dBm for level 17
22 dBm for level 19
2. For MCA models: operating temperature: -55°C to 100°C
storage temperature: -55°C to 125°C

electrical schematic



pin connections

see case style outline drawings

PORT	x	mx	ld
LO	2	1	10
RF	1	8	5
IF	3	5	3
GND EXT.	4,5,6	all others	all others
DEMO BOARD	TB-12	TB-107	TB-144

NEW!



MCA

MODEL NO.	FREQUENCY (MHz)			IP3 (dBm)	LO level (dBm)	RF @ 1dB compr. (dBm)	CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		E** FACTOR	CASE STYLE	CONNECTION	PRICE \$
	RF	LO	IF				Typ.	Max.	Typ.	Min.	Typ.	Min.				
MCA-19FLH*	1850-1910	1760-1820	70-130	25	10	10	6.9	8.8	40	22	39	20	1.5	DZ883	Id	9.95
MCA-30FLH*	2960-3060	2780-2880	130-230	25	10	10	7.5	8.9	35	20	27	15	1.5	DZ883	Id	9.95
MCA-36FLH*	3500-3600	3070-3170	380-480	25	10	10	8.4	9.4	40	20	28	15	1.5	DZ883	Id	9.95
MCA-19FMH*	1850-1910	1760-1820	70-130	30	13	13	6.9	8.4	40	22	39	20	1.7	DZ883	Id	10.95
MCA-30FMH*	2960-3060	2780-2880	130-230	30	13	13	7.4	8.9	35	20	27	15	1.7	DZ883	Id	10.95
MCA-36FMH*	3500-3600	3070-3170	380-480	30	13	13	8.3	9.3	42	20	27	15	1.7	DZ883	Id	10.95
MCA-19FH*	1850-1910	1760-1820	70-130	35	17	17	6.9	8.5	40	22	39	20	1.8	DZ883	Id	11.95
MCA-30FH*	2960-3060	2780-2880	130-230	34	17	17	7.4	8.9	37	20	27	15	1.7	DZ883	Id	11.95
MCA-36FH*	3500-3600	3070-3170	380-480	33	17	17	8.3	9.2	44	20	29	15	1.6	DZ883	Id	11.95

**E= [IP3(dBm)-LO Power(dBm)]/10

features

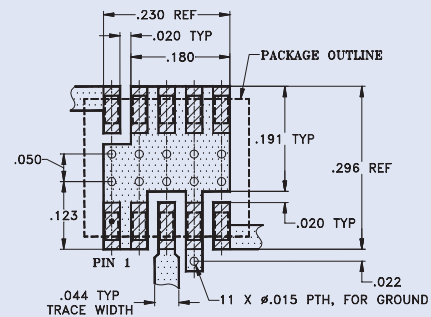
- excellent IP3, up to 35 dBm
- excellent compression, 1 dB compr, RF>LO power
- industry standard foot print
- LTCC design for excellent temperature stability
- performance repeatability

applications

- GSM 1800
- DECT
- line of sight links
- satellite communications



suggested PCB layout (PL-045) MCA models



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350, WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

- ▨ DENOTES LAND PATTERN
- ▤ DENOTES PCB LAYOUT



The Design Engineers Search Engine

Provides Actual Data Instantly
At: <http://www.minicircuits.com>

In Stock... Immediate Delivery

For Custom Versions Of Standard Models
Consult Our Applications Dept.



Available
Tape & Reel