

FREQUENCY MIXERS

Surface Mount

IMAGE REJECT 500 to 2550 MHz



JCIR

JCIR-4MH (+15 dBm LO)

JCIR-25 (+13 dBm LO)

MODEL NO.	FREQUENCY MHz			CONVERSION LOSS dB			IMAGE REJECTION dBc				LO-RF ISOLATION dB		LO-IF ISOLATION dB		RF-IF ISOLATION dB		IP3@ center band (dBm)	CASE STYLE	CONNECTION	PRICE \$
	RF f _L -f _U	LO f _L -f _U	IF	\bar{x}	σ	Max.	RF>LO	LO>RF	Typ.	Min.	M Typ.	Min.	M Typ.	Min.	M Typ.	Min.				
◆ JCIR-4MH	430-930	500-1000	65-75	7.9	0.15	9.0	●		28	18	55	40	25	20	25	15	20	BG291	kj	54.95
◆ JCIR-25	2490-2550	2420-2480	57-83	7.0	—	8.5		●	27	17	35	25	26	18		25	16	BG291	kk	44.95

L = low range [f_L to $10f_L$]

M = mid range [$10f_L$ to $f_U/2$]

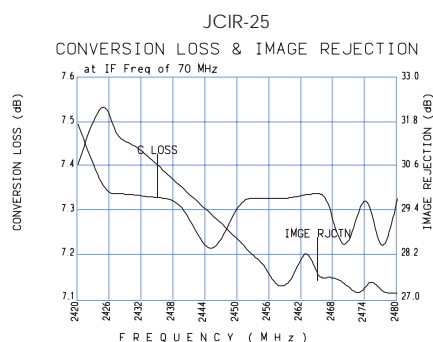
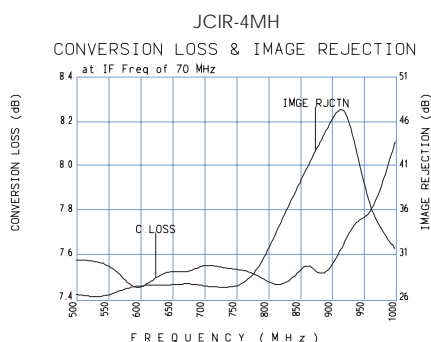
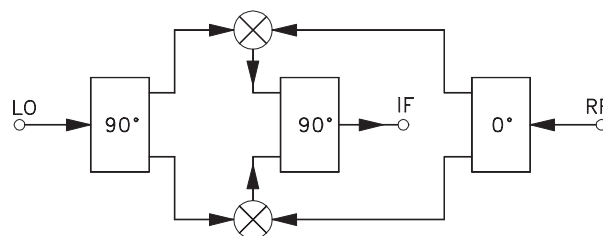
U = upper range [$f_U/2$ to f_U]

features

- excellent image rejection, 28 dB typ. (JCIR-4MH)
- low conversion loss, 7.9 dB typ. (JCIR-4MH)
7.0 dB typ. (JCIR-25)
- solder plated J-leads for excellent solderability & strain relief

applications

- cellular
- ISM



NOTES:

- ◆ Aqueous washable.
- 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:
 - 1a. RF power 100mW (JCIR-4MH); 200mW (JCIR-25)
 - 1b. IF current, 40mA

pin connections

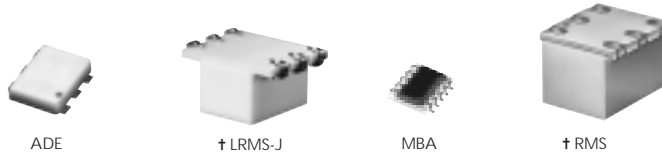
see case style outline drawings

PORT	kj	kk
LO	2	9
RF	9	2
IF	11	11
GND	1,3,5,6,7,8 10,12,13,14	1,3,4,5,6,7,8 10, 12, 13, 14
50 OHM TERM	4	—

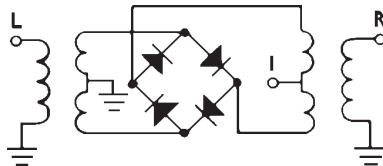
FREQUENCY MIXERS

Surface Mount

Low LEVEL 200 kHz to 4000 MHz



MODEL NO.	LO LEVEL dBm	RF @ 1dB Comp. Typ. dBm	FREQUENCY MHz		CONVERSION LOSS dB				LO-RF ISOLATION, dB						LO-IF ISOLATION, dB						IP3 @ center band Typ. (dBm)	CASE STYLE	CONNECTION	PRICE \$ Qty. (1-9)
			LO/RF f_L - f_U	IF	Mid-Band m			Total Range Max.	L Typ.	Min.	M Typ.	Min.	U Typ.	Min.	L Typ.	Min.	M Typ.	Min.	U Typ.	Min.				
					\bar{x}	σ	Max.																	
ADE-1L	+3	0	2-500	DC-500	5.2	0.1	7.2	8.0	68	50	55	30	44	30	55	40	45	30	35	25	16	CD542	ht	3.95***
ADE-3L	+3	-3	0.2-400	DC-400	5.3	.01	6.5	9.0	58	50	47	34	38	28	55	50	38	25	30	20	10	CD636	ht	4.25***
LRMS-2LJ	+3	-3	800-1000	DC-200	7.0	0.2	—	8.4	24 (typ.)			16 (min.)			20 (typ.)			12 (min.)			—	QQQ569	w	6.95
LRMS-5LJ	+3	-3	400-1400	DC-800	7.0	0.2	—	9.8	22 (typ.)			14 (min.)			18 (typ.)			6 (min.)			—	QQQ569	w	13.95
MBA-10L*	+3	0	800-1000	DC-200	8.0	0.1	—	9.5	20 (typ.)			13 (min.)			15 (typ.)			8 (min.)			9	SM2	ld	6.95***
MBA-10VL*	0	-3	800-1000	DC-200	7.4	0.1	—	9.8	18 (typ.)			14 (min.)			14 (typ.)			8 (min.)			3	SM2	ld	5.95***
MBA-15L*	+4	0	1200-2400	DC-600	6.5	0.1	—	8.5	27 (typ.)			15 (min.)			20 (typ.)			10 (min.)			10	SM2	ld	6.95***
MBA-18L*	+4	-1	1600-3200	DC-500	6.5	0.15	—	8.9	24 (typ.)			17 (min.)			16 (typ.)			10 (min.)			8	SM2	ld	6.95***
MBA-25L*	+4	0	2000-3000	DC-600	6.2	0.15	—	8.6	28 (typ.)			18 (min.)			15 (typ.)			7 (min.)			10	SM2	ld	6.95***
MBA-35L*	+4	0	3000-4000	DC-700	5.5	0.1	—	8.5	26 (typ.)			20 (min.)			17 (typ.)			7 (min.)			9	SM2	ld	6.95***
RMS-2L	+3	-3	800-1000	DC-200	7.0	0.2	—	8.4	24 (typ.)			16 (min.)			20 (typ.)			12 (min.)			—	TT240	w	6.95
RMS-5L	+3	-3	400-1400	DC-800	7.0	0.2	—	9.8	22 (typ.)			14 (min.)			22 (typ.)			6 (min.)			—	TT240	w	13.95

L = low range [f_L to $10 f_L$]M = mid range [$10 f_L$ to $f_U/2$]
m = mid band [$2f_L$ to $f_U/2$]U = upper range [$f_U/2$ to f_U]

Incorporates multi-layer monolithic ceramic substrates for moderate bandwidth and low cost RF/Microwave products

NOTES:

- \bar{x} Average of conversion loss at center of mid-band frequency ($f_L + f_U/4$)
- σ Standard deviation
- ◆ Aqueous washable. For non-aqueous requirements, LRMS units available in case style QQQ130.
- † Phase detection, positive polarity.
- * BLUE CELL™ mixers protected by U.S. Patents 5,534,830 5,640,132 5,640,134 5,640,699
- *** Price for quantities 10-49.
- 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:
 - 1a. RF power, 50mW
 - 1b. Peak IF current, 40mA

pin connections

PORT	w	ht ¹	ld
LO	1	6	10
RF	4	3	5
IF	5	2	3
GND EXT.	2,3,6	1,4,5	all others
DEMO BOARD	TB-03	TB-03	—

¹ pin connection physically same as w

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