

FREQUENCY MIXERS *Surface Mount*

Low LEVEL 2 to 12000 MHz



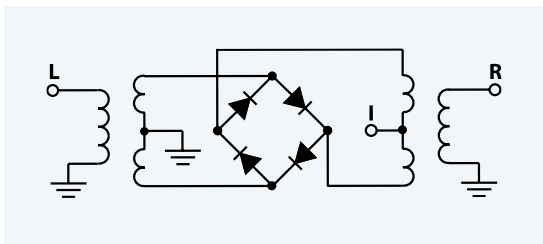
MODEL NO.	LO LEVEL (dBm)	RF @ 1dB Comp. Typ. (dBm)	FREQUENCY MHz		CONVERSION LOSS dB				LO-RF ISOLATION dB						LO-IF ISOLATION dB						IP3@ center band Typ. (dBm)	E f a c t o r	CASE STYLE	C O N N E C T I O N	PCB Lay-out PL-	PRICE \$
			LO/RF f_L-f_U	IF	\bar{x}	σ	Max.	Total Range Max.	L Typ. Min.	M Typ. Min.	U Typ. Min.	L Typ. Min.	M Typ. Min.	U Typ. Min.	Qty. (10-49)											
◆ 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	1.3	CD542	ht	052	3.95
◆ ADEX-10L**	+4	+1	10-1000	DC-800	7.2	0.1	8.2	8.8 ^{††}	75	55	60	40	47	37	40	26	33	20	24	13	16	1.2	CD542	ht	052	2.95
◆ MBA-10L*	+3	0	800-1000	DC-200	8.0	0.1	—	9.5	20 (typ.) 13 (min.)						15 (typ.) 8 (min.)						9	0.6	SM2	ld	066	6.95
◆ MBA-15L*	+4	0	1200-2400	DC-600	6.5	0.1	—	8.5	27 (typ.) 14 (min.)						14 (typ.) 8 (min.)						10	0.6	SM2	ld	066	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	0.6	SM2	ld	066	6.95
◆ MBA-591L*	+4	+1	4950-5900	DC-1000	7.0	0.1	—	9.0	35 (typ.) 25 (min.)						26 (typ.) 17 (min.)						15	1.1	SM2	le	067	6.95
NEW ◆ MCA1-85L	+4	0	2800-8500	DC-1200	5.7	0.2	8.4 [‡]	—	35 (typ.) 20 (min.)						13 (typ.) 7 (min.)						11	0.7	DZ885	ld	045	9.45
			2800-5000	DC-1200					35 (typ.) 20 (min.)						38 (typ.) 20 (min.)						7	0.3				
			5000-7500	DC-1200					35 (typ.) 20 (min.)						32 (typ.) —						8	0.4				
			7500-8500	DC-1200					31 (typ.) —																	
NEW ◆ MCA1-12GL	+4	+1	3800-12000	DC-1500	6.8	0.2	8.5 [‡]	—	32 (typ.) 17 (min.)						13 (typ.) 8 (min.)						9	0.5	DZ885	ld	045	11.95
			3800-6500	DC-1500					38 (typ.) 24 (min.)						40 (typ.) 20 (min.)						7	0.3				
			6500-9500	DC-1500					25 (typ.) 17 (min.)						26 (typ.) 15 (min.)						6	0.2				
			9500-12000	DC-1500																						
RMS-5L	+3	-3	400-1400	DC-800	7.0	0.2	—	9.8	22 (typ.) 14 (min.)						22 (typ.) 6 (min.)						9	0.2	TT240	w	052	13.95

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

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

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

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



NOTES:

- \bar{x} Average of conversion loss at center of mid-band frequency ($f_L+f_U/4$)
- σ Standard deviation
- ◆ Aqueous washable.
- † Phase detection, positive polarity.
- * BLUE CELL™ mixers protected by U.S. Patents 5,534,830 5,640,132 5,640,134 5,640,699
- ** Protected under U.S. patent 6133525
- †† Conversion loss increases 0.8 dB when IF is above 150 MHz.
- ‡ Conversion loss at 30 MHz IF, increases with IF frequency.
- 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	le
LO	1	6	10	10
RF	4	3	5	6
IF	5	2	3	1
GND EXT.	2,3,6	1,4,5	all others	all others
DEMO BOARD	TB-03	TB-03	TB-99(MBA) TB-144(MCA1)	TB-74

¹ pin connection physically same as w