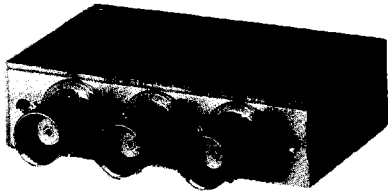


# LEVEL 13

(+13 dBm LO, up to +9 dBm RF)  
25 KHz to 4.3 GHz

# Mini-Circuits

**ULTRA-REL™ MIXERS**  
5-YR. GUARANTEE \*



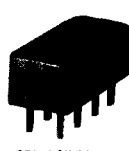
ZP-MH



SYM



TFM/ TUF



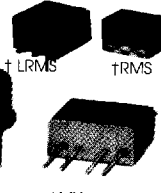
SBL / SIMA



SRA

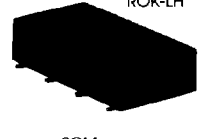


ROK-MH



LRMS

TRMS



SCM



ROK-LH

MODEL NO.	FREQUENCY MHz		CONVERSION LOSS dB				LO-RF ISOLATION, dB						LO-IF ISOLATION, dB						CAPD DATA (see RF/F Designer Handbook) Page	Case Style Note B	Orientation	Price \$ Qty. (1-9)
	LO/RF $f_L-f_o$	IF	Mid-Band		Total Range	L		M		U		L		M		U						
	$\bar{x}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
● RMS-1MH	2-500	DC-500	5.65	.08	7.0	8.0	58	45	44	25	30	20	55	40	36	25	28	17	1-222	TT100	w	8.95
● RMS-2MH	5-1000	DC-1000	6.72	.08	8.5	9.5	55	40	39	20	22	16	52	35	30	17	18	12	1-228	TT100	w	9.95
● RMS-2UMH	10-1000	20-500	7.0	.1	8.5	9.5	52	40	43	30	33	25	53	30	44	25	39	22	—	TT100	w	14.45
● RMS-5MH	10-1500	DC-900	5.67	.09	9.0	9.5	58	40	40	20	26	18	50	30	38	18	17	8	1-234	TT100	w	15.95
● RMS-25MH	5-2500	5-1500	7.0	.20	8.5	9.8	54	28	32	23	32	20	34	23	32	25	28	17	—	TT240	w	7.95***
● RMS-42MH	800-4200	DC-800	5.3	0.2	9.0	10.8	35	25	—	—	28	17	18	10	—	—	15	7	—	TT240	w	24.95
● LRMS-1MH	2-500	DC-500	5.65	.08	7.0	8.0	58	45	44	25	30	20	55	40	36	25	28	17	1-222	GGQ130	w	8.95
● LRMS-2MH	5-1000	DC-1000	6.72	.08	8.5	9.5	55	40	39	20	22	16	52	35	30	17	18	12	1-228	GGQ130	w	9.95
● LRMS-2UMH	10-1000	20-500	7.0	.1	8.5	9.5	52	40	43	30	33	25	53	30	44	25	39	22	—	GGQ130	w	14.45
● LRMS-5MH	10-1500	DC-900	5.67	.09	9.0	9.5	58	40	40	20	26	18	50	30	38	18	17	8	1-234	GGQ130	w	15.95
SIMA-5MH	2-1500	DC-1000	7.11	.11	8.6	9.0	70	44	44	23	31	22	57	38	30	20	25	15	1-204	A06	n	28.95
TFM-1MH	2-500	DC-500	5.80	.05	7.5	8.5	50	45	40	30	30	20	45	40	35	25	25	20	1-138	B02	z	24.95
TFM-3MH	1-250	DC-250	4.79	.23	7.0	8.5	50	45	40	30	28	23	45	40	35	25	26	20	1-140	B02	z	24.95
TFM-12MH	0.5-2000	0.2-600	6.99	.16	8.0	9.5	60	45	35	30	30	25	55	40	30	25	25	20	1-104	B13	z	48.95
TFM-42MH	10-4200	10-1000	7.46	.12	8.5	11	35	25	40	25	35	25	35	20	35	25	27	20	1-94	B13	aa	69.95
LMX-123MH	10-2500	10-500	6.80	.074	8.5	9.6	42	22	35	20	28	20	33	20	36	20	36	15	1-298	BB48	q	70.95
LMX-125MH	0.5-500	DC-500	5.80	.07	7.0	9.0	45	40	45	40	40	30	45	40	40	35	35	25	1-142	BB48	q	62.95
□ SBL-1MH	1-500	DC-500	5.73	.08	7.5	8.5	50	35	45	30	35	25	45	30	40	25	30	20	1-144	A06	d	10.45
□ SBL-12MH	2-1100	DC-500	6.63	.10	8.0	9.0	50	40	40	30	30	20	40	30	25	20	25	15	1-260	A06	s	12.45
SRA-1MH	.5-500	DC-500	5.65	.04	7.0	8.5	50	45	45	30	35	25	45	35	40	25	30	20	1-146	A01	e	14.95
SRA-3MH	.025-200	DC-200	4.77	.07	7.5	8.5	60	50	45	35	35	25	45	35	40	30	30	20	1-148	A01	e	16.95
SRA-2010MH	10-2000	DC-600	7.50	.20	8.5	9.8	50	45	45	30	40	25	45	45	35	30	35	20	1-98	A06	m	38.95
ROK-186MH	5-2500	10-1000	6.57	.11	8.5	9.5	33	25	35	25	25	20	33	20	31	25	27	20	1-112	QQ96	v	47.95
● SYM-11MH	50-2000	50-1000	6.6	.10	8.0	9.9	55	35	44	25	30	20	40	25	36	20	29	20	1-300	TTT167	x	15.95
▽ TUF-1MH	2-600	DC-600	6.3	.12	7.0	8.0	68	50	50	30	43	25	65	45	48	30	37	22	1-138	B02	z	7.25
▽ TUF-2MH*	50-1000	DC-1000	6.0	.25	7.5	9.0	58	40	47	30	37	25	55	35	47	20	32	18	1-326	B02	z	8.20
▽ TUF-3MH	0.15-400	DC-400	5.0	.33	7.0	8.0	60	50	46	30	35	25	60	40	42	25	35	20	1-140	B02	z	9.10
▽ TUF-5MH	20-1500	DC-1000	7.0	.25	8.5	9.0	50	40	41	30	35	25	38	25	28	18	20	8	1-328	B02	z	12.45
▽ TUF-11AMH	1400-1900	40-500	7.4	.20	8.6	8.6	33 (Typ.)	20 (Min.)	—	—	—	—	24 (Typ.)	15 (Min.)	—	—	—	—	1-330	B02	z	19.95
▽ TUF-860MH	800-1050	DC-250	6.8	.32	8.3	8.3	35 (Typ.)	25 (Min.)	—	—	—	—	27 (Typ.)	18 (Min.)	—	—	—	—	1-332	B02	z	12.45
▽ TUF-2500MH	400-2500	30-800	7.3	.15	8.5	10.0	32 (Typ.)	24 (Min.)	—	—	—	—	27 (Typ.)	17 (Min.)	—	—	—	—	—	B02	z	24.95
ZEM-4300MH	300-4300	DC-1000	6.42	.15	—	8.5	40	20	—	—	40	20	14	7	—	—	12	7	1-302	V37	af	89.95
ZEM-M2TMH	10-2400	10-1000	6.9	.10	9.0	9.5	49	40	43	35	42	35	49	40	44	30	40	30	—	V37	af	114.95
ZLW-186MH	2-2500	2-1000	6.9	.11	8.5	9.5	33	25	35	25	30	20	42	25	49	25	32	20	—	M21	ae	69.95
ZP-1MH	2-600	DC-600	6.3	.12	7.0	8.0	68	50	50	30	43	25	65	45	48	30	37	22	1-138	GG60	ag	43.95
ZP-2MH*	50-1000	DC-1000	6.0	.25	7.5	9.0	58	40	47	30	37	25	55	35	47	20	32	18	1-326	GG60	ag	43.95
ZP-3MH	0.15-400	DC-400	5.0	.33	7.0	8.0	60	50	46	30	35	25	60	40	42	25	35	20	1-140	GG60	ag	43.95
ZP-5MH	20-1500	DC-1000	7.0	.25	8.5	9.0	50	40	41	30	35	25	38	25	28	18	20	8	1-328	GG60	ag	47.95
ZP-11AMH	1400-1900	40-500	7.4	.20	8.6	8.6	33 (Typ.)	20 (Min.)	—	—	—	—	24 (Typ.)	15 (Min.)	—	—	—	—	1-330	GG60	ag	47.95
ZP-860MH	800-1050	DC-250	6.8	.32	8.3	8.3	35 (Typ.)	25 (Min.)	—	—	—	—	27 (Typ.)	18 (Min.)	—	—	—	—	1-332	GG60	ag	47.95

L = low range ( $f_L$  to  $10f_L$ )

M = mid range ( $10f_L$  to  $f_U/2$ )

U = upper range ( $f_U/2$  to  $f_U$ )

m = mid band ( $2f_L$  to  $f_U/2$ )

pin and coaxial connections see case style outline drawings

PORT	d	e	h	j	m	n	q	r	s	v	w	x	z	aa	ad	ae	af	ag	ah
LO	8	8	8	8	8	8	8	1	1	5	1	2	4	1	1	1	2	L	4
RF	1	1	1	3,4^	1	1	5	8	8	11	4	1	1	4	2	3	1	R	2
IF	3,4^	3,4^	3,4^	1	3	3	4	3	3	2	5	3	2	2	3	2	3	X	1
GND EXT.	2,5,6,7	2,5,6,7	—	2,5,6,7	2,5,6,7	2,4,5,6,7	1,2,3,6,7	2,4,5,6,7	2,5,6,7	1,3,4,6,7,8,9,10,12	2,3,6	4,5,6	3	3	—	—	—	—	3
CASE GND	—	2	2,5,6	2,5,6,7	2,5,6,7	2,5,6,7	1,2,3,6,7	—	2,5,6,7	1,3,4,6,7,8,9,10,12	—	—	3	3	—	—	—	—	3
NOT USED	—	—	—	—	4	—	—	—	4	—	—	—	—	—	—	—	—	—	—

^ pins must be connected together externally

**In Stock... Immediate Delivery**

For custom versions of standard models consult our applications dept.

