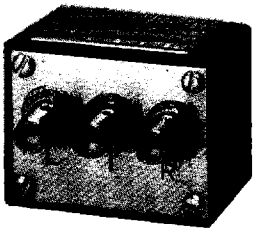
Frequency Mixers

LEVEL 10 (+10 dBm LO, up to +5 dBm RF)

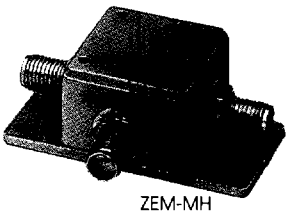
50 KHz to 3 GHz

case style selection

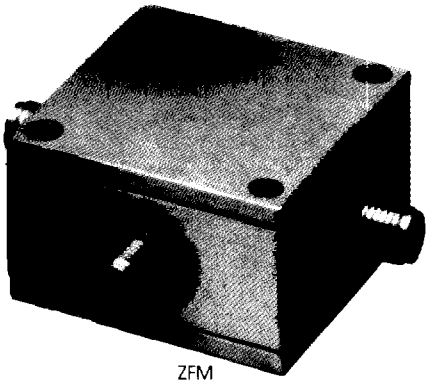
outline drawings see Table of Contents



ZLW



ZEM-MH



ZFM

MODEL NO.	FREQUENCY MHz LO/RF f_L-f_U	FREQUENCY MHz IF	CONVERSION LOSS dB Mid-Band m $\bar{x}$	σ	Max.	Total Range Max.	LO-RF ISOLATION, dB L Typ.	L Min.	M Typ.	M Min.	U Typ.	U Min.	LO-IF ISOLATION, dB L Typ.	L Min.	M Typ.	M Min.	U Typ.	U Min.	CAPD DATA (see RF/IF Designer Handbook) Page	Case Style Note B	CONNECTION	Price $ Qty. (1-9)
● RMS-1LH	2-500	DC-500	5.36	.08	7.0	8.0	58	45	44	25	30	20	55	40	40	25	28	17	1-220	TT100	w	7.95
● RMS-2LH	5-1000	DC-1000	6.44	.10	8.0	9.5	58	40	39	20	22	16	52	30	30	17	18	11	1-226	TT100	w	8.95
● RMS-5LH	10-1500	DC-900	5.27	.09	8.0	9.8	58	35	38	20	25	18	56	30	38	14	17	6	1-294	TT100	w	14.95
● LRMS-1LH	2-500	DC-500	5.36	.08	7.0	8.0	58	45	44	25	30	20	55	40	40	25	28	17	1-220	QQQ130	w	7.95
● LRMS-2LH	5-1000	DC-1000	6.44	.10	8.0	9.5	58	40	39	20	22	16	52	30	30	17	18	11	1-226	QQQ130	w	8.95
● LRMS-5LH	10-1500	DC-900	5.27	.09	8.0	9.8	58	35	38	20	25	18	56	30	38	14	17	6	1-294	QQQ130	w	14.95
TFM-15	10-3000	10-800	6.75	.08	8.0	8.5	35	25	35	25	35	25	30	20	30	20	30	20	1-126	B13	aa	49.95
TFM-150**	10-2000	DC-1000	6.19	.11	8.0	8.0	32	25	35	25	35	25	33	20	30	20	30	20	1-128	B13	aa	45.45
TFM-2LH	2-1000	DC-1000	5.70	.177	7.5	9.2	62	45	44	25	37	25	58	40	45	25	31	18	1-262	B02	z	16.95
LMX-123	10-3000	10-1000	5.94	.08	8.0	8.5	35	25	35	20	30	15	35	25	30	25	30	20	1-130	BB48	q	69.95
† LMX-148	10-1500	DC-1500	6.48	.08	7.0	10.0	45	40	35	30	25	20	40	35	35	25	20	12	1-132	BB48	q	29.95
LMX-1481	3-1100	DC-1100	6.70	.12	8.5	9.8	65	45	40	25	30	18	57	38	30	20	20	14	1-208	BB48	q	23.95
SRA-2CR	10-1000	5-500	5.68	.12	7.5	8.0	50	40	40	30	30	20	40	25	30	18	25	15	1-242	A01	s	17.95
SRA-215	.05-1500	.05-500	5.20	.08	7.5	9.0	25	20	35	25	30	20	25	20	35	25	25	15	1-134	A01	m	28.95
SRA-220	.05-2000	.05-500	5.59	.11	8.0	9.0	25	20	40	30	30	20	25	20	40	30	25	15	1-136	A01	m	31.95
● SCM-1LH	1-500	DC-500	5.75	.20	7.0	8.0	60	40	50	35	40	30	50	40	45	35	40	25	—	YY101	d	6.25
● SCM-2LH	5-1000	DC-500	7.15	.20	8.4	9.7	65	40	50	25	44	20	58	40	50	25	28	15	—	YY101	d	7.45
● SCM-5LH	1250-1800	DC-500	6.0	.46	—	8.8	26 (Typ.) 17 (Min.)						18 (Typ.) 8 (Min.)						—	YY101	d	13.95
● SCM-2500LH	500-2500	DC-500	5.6	.20	6.8	10.0	35 (Typ.) 20 (Min.)						18 (Typ.) 10 (Min.)						—	YY101	r	13.95
❑ SBL-1LH	2-500	DC-500	5.8	.03	7.0	8.0	75	45	68	35	56	25	61	35	45	25	36	20	1-252	A06	d	5.75
❑ SBL-1-1LH	.2-400	DC-400	5.2	.06	7.0	9.0	67	45	64	30	51	25	62	30	52	25	34	20	1-256	A06	d	8.45
❑ SBL-1XLH	10-1000	5-500	6.0	.12	7.5	8.5	50	40	40	25	30	20	70	45	55	40	45	30	1-258	A06	j	7.45
❑ SBL-2LH	5-1000	DC-1000	5.9	.09	7.5	9.5	67	45	61	30	57	30	68	40	54	30	43	20	1-262	A06	h	8.45
❑ SBL-3LH	.07-250	DC-250	4.9	.22	7.0	8.5	60	45	60	35	45	30	57	35	53	30	42	25	1-264	A06	d	8.45
❑ SBL-11LH	5-2000	10-600	7.0	.11	8.5	9.5	60	45	45	30	30	20	50	35	30	20	25	16	1-254	A06	m	20.95
● SYM-11LH	1-2000	10-600	7.0	.10	8.3	9.85	60	40	45	25	37	25	59	40	33	20	25	20	1-296	TTT167	x	11.95
▽❑ TUF-1LH	2-600	DC-600	6.0	.17	7.0	8.0	70	50	50	30	42	25	65	45	50	30	41	22	1-316	B02	z	6.25
▽❑ TUF-2LH*	50-1000	DC-1000	5.2	.3	7.0	8.5	58	40	44	30	39	25	60	35	50	25	38	20	1-262	B02	z	7.20
▽❑ TUF-3LH	0.15-400	DC-400	4.8	.37	7.0	8.0	67	50	51	30	40	25	67	40	45	25	34	20	1-318	B02	z	8.10
▽❑ TUF-5LH	20-1500	DC-1000	6.9	.27	8.5	9.0	53	40	42	30	38	25	40	25	30	18	22	8	1-320	B02	z	11.45
▽❑ TUF-11ALH	1400-1900	40-500	7.0	.20	8.6	8.6	36 (Typ.) 20 (Min.)						28 (Typ.) 15 (Min.)						1-322	B02	z	18.95
▽❑ TUF-860LH	800-1050	DC-250	6.3	.27	7.9	7.9	35 (Typ.) 25 (Min.)						27 (Typ.) 18 (Min.)						1-324	B02	z	11.45
ROK-2500LH	1-2500	DC-500	6.4	.2	8.4	9.0	55	40	48	20	30	20	55	38	27	15	22	15	—	PP230	ah	32.95
ZFM-15	10-3000	10-800	6.13	.14	8.0	8.5	35	25	35	25	35	25	30	20	30	20	30	20	1-126	K18	ad	89.95
ZFM-150**	10-2000	DC-1000	6.05	.12	8.0	8.0	32	25	35	25	35	20	33	20	30	20	25	20	1-128	K18	ad	69.95
ZP-1LH	2-600	DC-600	6.0	.17	7.0	8.0	70	50	50	30	42	25	65	45	50	30	41	22	1-316	GG60	ag	41.95
ZP-2LH*	50-1000	DC-1000	5.2	.3	7.0	8.5	58	40	44	30	39	25	60	35	50	25	38	20	1-262	GG60	ag	41.95
ZP-3LH	0.15-400	DC-400	4.8	.37	7.0	8.0	67	50	51	30	40	25	67	40	45	25	34	20	1-318	GG60	ag	41.95
ZP-5LH	20-1500	DC-1000	6.9	.27	8.5	9.0	53	40	42	30	38	25	40	25	30	18	22	8	1-320	GG60	ag	45.95
ZP-11ALH	1400-1900	40-500	7.0	.20	8.6	8.6	36 (Typ.) 20 (Min.)						28 (Typ.) 15 (Min.)						1-322	GG60	ag	45.95
ZP-860LH	800-1050	DC-250	6.3	.27	7.9	7.9	35 (Typ.) 25 (Min.)						27 (Typ.) 18 (Min.)						1-324	GG60	ag	45.95

L = low range (f_L to $10 f_L$) M = mid range ($10 f_L$ to $f_U/2$) U = upper range ($f_U/2$ to f_U)

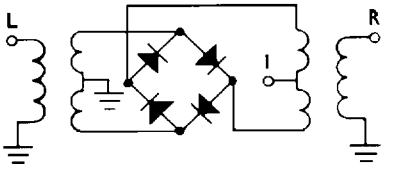
m = mid band ($2f_L$ to $f_U/2$)

NOTES:

- $\bar{x}$ Average of conversion loss at center of mid-band frequency ($f_L+f_U/4$)
- σ Standard deviation
- ● Surface-mount, non-hermetic, available on tape and reel
- ❑ Non-hermetic
- † Phase detection, positive polarity
- ▽ For surface-mount version add suffix SM (case style NNN150); available on tape and reel.
- ✪ Frequency Specified m=1000 - 2000 MHz, L= 800 - 2100 MHz, U= 2100 - 4200 MHz.
- * L=50-100 MHz; M=100-500 MHz
- ** Below 10 MHz IF, conversion loss increase up to 6 dB higher as frequency decreases to DC.
- *** Price for quantities 10-49
- A. General Quality Control Procedures, Environmental Specifications, Hi-Rel, MIL and TX description are given in section 0, see "Mini-Circuits Guarantees Quality" article.
- B. Connector types and case mounted options, case finishes are given in section 0, see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.
- 1. Absolute maximum power, voltage and current ratings: 1a. Level 10 mixers, RF power 50mW; 1b. Level 13 mixers, RF power 200mW (except RMS-MH, 150mW); 1c. Peak IF current, 40mA

NSN GUIDE

MCL NO.	NSN	MCL NO.	NSN
ZFM-150	5895-01-217-6878	TFM-3MH	5895-01-302-7047
TFM-15	5895-01-292-2759	LMX-148	5962-01-357-4432
		LMX-123	5895-01-367-9005



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