

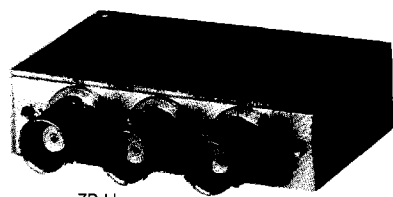
LEVEL 17S

(+17 dBm LO, up to +14 dBm RF)
10 kHz to 3 GHz

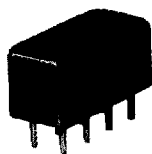
Mini-Circuits

ULTRA-REL™ MIXERS

5-YR. GUARANTEE*



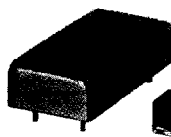
ZP-H



SRA-H



SBL-H
SIMA-H
SRA-SH



GRA-H



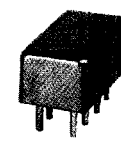
RMS-H



LRMS-H



TFM-H
TUF-H



TAK-H



SYM-H

MODEL NO.	FREQUENCY MHz		CONVERSION LOSS dB				LO-RF ISOLATION, dB						LO-IF ISOLATION, dB						CAPD DATA (see RF/IF Designer Handbook) Page	Case Style Note B	CONNECTION	Price \$ Qty. (1-9)
	LO/RF f _L -f _u	IF	Mid-Band		Total Range Max.	L		M		U		L		M		U						
			$\bar{x}$	m σ		Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
† RMS-1H	2-500	DC-500	6.25	.034	7.0	8.5	55	44	44	25	33	20	50	34	45	25	37	22	1-306	TT100	w	10.95
† RMS-1WH	5-750	DC-750	7.00	.11	8.5	8.8	55	40	43	22	28	20	52	30	38	22	29	20	1-308	TT100	w	11.95
† RMS-2H	5-1000	DC-900	6.98	.054	8.5	9.3	55	40	39	22	33	20	52	30	45	22	30	17	1-310	TT100	w	11.95
† RMS-2UH	10-1000	10-750	7.10	.083	9.2	9.9	50	40	38	30	30	23	50	30	40	25	34	22	1-312	TT100	w	14.45
† RMS-5H	10-1500	DC-900	6.36	.05	8.0	9.8	65	40	36	20	22	15	50	30	30	18	17	7	1-250	TT100	w	17.95
† LRMS-1H	2-500	DC-500	6.25	.034	7.0	8.5	55	44	44	25	33	20	50	34	45	25	37	22	1-306	QQQ130	w	10.95
† LRMS-1WH	5-750	DC-750	7.00	.11	8.5	8.8	55	40	43	22	28	20	52	30	38	22	29	20	1-308	QQQ130	w	11.95
† LRMS-2H	5-1000	DC-900	6.98	.054	8.5	9.3	55	40	39	22	33	20	52	30	45	22	30	17	1-310	QQQ130	w	11.95
† LRMS-2UH	10-1000	10-750	7.10	.083	9.2	9.9	50	40	38	30	30	23	50	30	40	25	34	22	1-312	QQQ130	w	14.45
† LRMS-5H	10-1500	DC-900	6.36	.05	8.0	9.8	65	40	36	20	22	15	50	30	30	18	17	7	1-250	QQQ130	w	17.95
□ SBL-173SH	5-1200	1-1200	5.7	.10	7.0	8.5	40	35	35	25	35	20	40	35	35	20	30	20	—	A06	u,f	21.95
SRA-173SH	5-1200	1-1200	5.7	.10	7.0	8.5	40	35	35	25	35	20	40	35	35	20	30	20	—	A06	u,f	33.95
SRA-2500SH	5-2500	1-1000	5.8	.10	7.5	10.5	40	25	37	28	30	18	50	35	42	25	25	17	—	A06	f	35.95
TFM-1H	2-500	DC-500	6.14	.11	7.5	8.5	50	45	40	30	30	20	45	40	35	25	25	20	1-164	B02	z	25.95
TFM-2H	5-1000	DC-1000	6.12	.12	7.0	10	50	45	40	30	30	20	45	40	35	25	25	17	1-166	B02	z	36.95
TFM-3H	1-250	DC-250	4.58	.11	7.0	8.5	50	45	40	30	28	23	45	40	35	25	26	20	1-170	B02	z	25.95
† TFM-4H	5-1200	DC-1200	5.24	.05	8.0	9.0	50	40	35	25	30	20	50	40	35	20	30	20	1-174	B13	z	39.45
TAK-1H	2-500	DC-500	5.93	.08	7.5	8.5	50	40	40	30	30	25	45	35	35	25	25	20	1-164	A05	e	21.45
TAK-1WH	5-750	DC-750	5.71	.08	7.5	9.0	50	40	40	30	30	25	45	35	35	25	30	20	1-168	A05	f	25.95
TAK-3H	.05-300	DC-300	4.82	.09	7.0	8.5	55	45	40	30	30	25	50	40	35	25	25	20	1-172	A05	e	23.45
ZFM-1H	2-500	DC-500	6.14	.11	7.5	8.5	50	45	40	30	30	25	45	35	35	25	25	20	1-164	K18	ad	64.95
ZFM-2H	5-1000	DC-1000	6.12	.12	7.0	10	50	40	40	30	30	20	45	40	35	25	25	17	1-166	K18	ad	71.95
ZFM-3H	.05-300	DC-300	5.18	.11	7.0	8.5	55	45	40	30	30	25	50	40	35	25	25	20	1-172	K18	ad	64.95
† ZFM-4H	5-1200	DC-1200	4.97	.11	8.0	9.0	50	40	35	25	30	20	50	40	35	20	30	20	1-174	K18	ad	73.95
ZLW-1SH	2-500	DC-500	5.93	.08	7.5	8.5	50	40	40	30	30	25	45	35	35	25	25	20	1-164	M21	ae	62.95
ZLW-1WSH	5-750	DC-750	5.83	.07	7.5	9.0	50	45	40	30	30	20	45	40	35	25	30	20	1-168	M21	ae	66.95
ZLW-3SH	.05-300	DC-300	4.65	.09	7.0	8.5	55	45	40	30	30	25	50	40	35	25	25	20	1-172	M21	ae	64.95
ZAD-1SH	2-500	DC-500	5.98	.08	7.5	8.5	50	40	40	30	30	25	45	35	35	25	25	20	1-164	M22	ae	54.95
ZAD-1WSH	5-750	DC-750	5.64	.08	7.5	9.0	50	45	40	30	30	20	45	40	35	25	30	20	1-168	M22	ae	56.95
ZAD-3SH	.05-300	DC-300	5.08	.09	7.0	8.5	55	45	40	30	30	25	50	40	35	25	25	20	1-172	M22	ae	55.95
▽ TUF-1H	2-600	DC-600	5.90	.18	7.0	8.0	68	50	50	30	43	25	62	45	48	30	33	22	1-164	B02	z	9.25
▽ TUF-2H	50-1000	DC-1000	6.20	.22	7.5	9.0	58	40	47	30	42	25	58	35	44	25	28	18	1-166	B02	z	10.20
▽ TUF-3H	0.15-400	DC-400	5.00	.33	7.0	8.0	60	50	50	35	40	30	60	40	45	25	35	20	1-170	B02	z	11.10
▽ TUF-5H	20-1500	DC-1000	7.50	.17	8.5	9.0	62	55	50	40	38	25	40	25	29	18	20	8	1-334	B02	z	14.45
▽ TUF-11AH	1400-1900	40-500	7.30	.28	9.0	9.0	35 (Typ.) 25 (Min.)		25 (Typ.) 15 (Min.)		30 (Typ.) 15 (Min.)		30 (Typ.) 15 (Min.)		15 (Typ.) 10 (Min.)		15 (Typ.) 10 (Min.)		1-336	B02	z	21.95
▽ TUF-860H	800-1050	DC-250	6.80	.31	8.3	8.3	38 (Typ.) 25 (Min.)		25 (Typ.) 15 (Min.)		24 (Typ.) 18 (Min.)		24 (Typ.) 18 (Min.)		18 (Typ.) 14 (Min.)		18 (Typ.) 14 (Min.)		1-338	B02	z	14.45
ZP-1H	2-600	DC-600	5.90	.18	7.0	8.0	68	50	50	30	43	25	62	45	48	30	33	22	1-164	GG60	ag	45.95
ZP-2H	50-1000	DC-1000	6.20	.22	7.5	9.0	58	40	47	30	42	25	58	35	44	25	28	18	1-166	GG60	ag	45.95
ZP-3H	0.15-400	DC-400	5.00	.33	7.0	8.0	60	50	50	35	40	30	60	40	45	25	35	20	1-170	GG60	ag	45.95
ZP-5H	20-1500	DC-1000	7.50	.17	8.5	9.0	62	55	50	40	38	25	40	25	29	18	20	8	1-334	GG60	ag	49.95
ZP-11AH	1400-1900	40-500	7.30	.28	9.0	9.0	35 (Typ.) 25 (Min.)		25 (Typ.) 15 (Min.)		30 (Typ.) 15 (Min.)		30 (Typ.) 15 (Min.)		15 (Typ.) 10 (Min.)		15 (Typ.) 10 (Min.)		1-336	GG60	ag	49.95
ZP-860H	800-1050	DC-250	6.80	.31	8.3	8.3	38 (Typ.) 25 (Min.)		25 (Typ.) 15 (Min.)		24 (Typ.) 18 (Min.)		24 (Typ.) 18 (Min.)		18 (Typ.) 14 (Min.)		18 (Typ.) 14 (Min.)		1-338	GG60	ag	49.95

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)

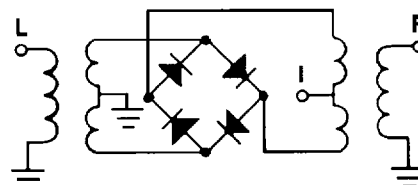
m = mid band ($2f_L$ to $f_U/2$)

pin and coaxial connections

see case style outline drawings

PORT	e	f	m	u	w	x	y	z	ad	ae	ag
LO	8	8	8	3,4 ^	1	2	1	4	1	1	L
RF	1	1	1	1	4	1	6	1	2	3	R
IF	3,4 ^	3,4 ^	3	8	5	3	4	2	3	2	X
GND EXT.	2,5,6,7	2,5,6,7	2,5,6,7	2,5,6,7	2,3,6	4,5,6	2,3,5	3	—	—	—
CASE GND	2	2,5,6,7	2,5,6,7	2,5,6,7	—	—	—	3	—	—	—
NOT USED	—	—	4	—	—	—	—	—	—	—	—

^ pins must be connected together externally



In Stock...Immediate Delivery

For custom versions of standard models consult our applications dept.