FREQUENCY MIXERS

Surface Mount

LEVEL 7 150 kHz to 6 GHz


ASK-KK81


†JMS


† LRMS-J


†RMS

+7 dBm LO, up to +1 dBm RF

	MODEL NO.	FREQUENCY MHz LO/RF f_L-f_U	FREQUENCY MHz IF	CONVERSION LOSS dB Mid-Band $\bar{x}$	m 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.	IP3@ center band Typ. (dBm)	E factor	CASE STYLE	CONNECTION	PCB Lay-out PL-	PRICE $ Qty. (1-9)
	ASK-1-KK81	1-600	DC-600	5.58	.06	7.0	8.5	50	30	35	25	30	20	45	35	30	20	25	15	14	0.7	KK81	w	082	6.95
†	ASK-2-KK81	1-1000	DC-1000	6.79	.10	8.0	9.8	60	40	35	18	26	16	50	30	25	17	15	10	12	0.5	KK81	w	082	8.25
	JMS-1	2-500	DC-500	5.75	.10	7.0	8.0	55	50	45	30	40	25	55	45	45	25	32	20	16	0.9	BH292	ht	052	4.95
	JMS-2	20-1000	DC-1000	7.0	.15	8.4	9.5	63	40	50	28	35	20	56	30	47	22	37	20	17	1.0	BH292	ht	052	7.45
	JMS-2W	5-1200	DC-500	6.8	.10	8.0	9.0	60	40	60	30	37	20	60	40	48	20	31	15	17	1.0	BH292	ht	052	7.95
	JMS-11X	5-1900	5-1000	6.7	.15	8.2	9.8	58	45	35	20	27	18	56	45	37	20	27	20	9	0.2	BH292	hu	052	4.25***
◆	LRMS-1J	0.5-500	DC-500	5.94	.05	7.0	8.5	55	50	33	25	27	20	55	45	30	23	24	19	15	0.8	QQQ569	w	083	6.25
◆	LRMS-2J	5-1000	DC-1000	6.67	.26	8.0	9.5	60	40	40	20	25	18	55	30	30	20	20	12	16	0.9	QQQ569	w	083	6.95
◆	LRMS-5J	5-1500	DC-1000	5.92	.34	7.5	9.5	60	40	40	20	30	18	55	30	30	18	15	8	12	0.5	QQQ569	w	083	13.95
◆	LRMS-30J	200-3000	DC-1000	6.8	.30	9.0	9.8	30 (typ.)		17 (min.)				27 (typ.)		7 (min.)				14	0.7	QQQ569	w	083	7.95***
	RMS-1	0.5-500	DC-500	5.94	.05	7.0	8.5	55	50	33	25	27	20	55	45	30	23	24	19	20	1.3	TT240	w	052	6.25
	RMS-1W	2-750	DC-750	5.83	.21	7.5	8.5	70	45	45	28	38	22	60	45	40	25	30	20	17	1.0	TT240	w	052	6.75
	RMS-2	5-1000	DC-1000	6.67	.26	8.0	9.5	60	40	40	20	25	18	55	30	30	20	20	12	17	1.0	TT240	w	052	6.95
	RMS-2D	5-1000	DC-1000	6.81	.06	8.0	10.0	59	40	40	30	33	22	55	30	40	22	30	20	17	1.0	TT240	w	052	7.25
	RMS-2U	10-1000	10-750	6.79	.16	8.0	9.5	55	40	40	30	30	25	55	30	35	25	30	22	10	0.3	TT240	w	052	11.45
	RMS-5	5-1500	DC-1000	5.92	.34	7.5	9.5	60	40	40	20	30	18	55	30	30	18	15	8	13	0.6	TT240	w	052	13.95
	RMS-11A	1500-1900	40-400	7.44	.36	—	9.0	25 (typ.)		17 (min.)				23 (typ.)		15 (min.)				4	-0.3	TT240	w	052	16.95
✪	RMS-11F	350-2000	DC-400	5.5	.20	7.0	9.2	37	26	36	20	32	20	22	14	29	20	28	20	12	0.5	TT240	w	052	4.95***
	RMS-11X	5-1900	5-1000	7.1	.10	8.2	9.8	58	45	35	20	27	18	56	45	37	20	27	20	10	0.3	TT240	gk	052	3.95***
	RMS-30	200-3000	DC-1000	6.5	.20	9.0	9.8	27 (typ.)		17 (min.)				20 (typ.)		7 (min.)				11	0.4	TT240	w	052	6.95***

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

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
- ◆ Aqueous washable. For non-aqueous requirements, LRMS units available in case style QQQ130
- † Phase detection, positive polarity
- ✪ Frequency ranges specified: m = 350-1000 MHz, L = 350-750 MHz, M = 750-1000 MHz, U = 1000-2000 MHz
- *** 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

NSN GUIDE

MCL NO.	NSN
LRMS-1	5895-01-477-4173
RMS-1	5895-01-415-6798
RMS-2	5895-01-447-3489
RMS-2TR	5895-01-382-2092
SCM-1NL	5895-01-374-9561

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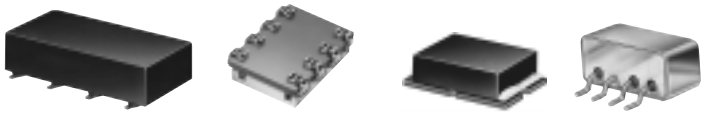
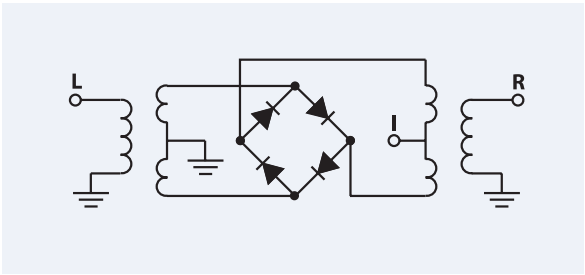


SCM SKY SYM TUF-SM

+7 dBm LO, up to +1 dBm RF

MODEL NO.	FREQUENCY MHz LO/RF f_L-f_U	IF	CONVERSION LOSS dB Mid-Band $\bar{x}$	m 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.	IP3@ center band Typ. (dBm)	E factor	CASE STYLE	CONNECTION	PCB Lay-out PL-	PRICE $ Qty. (1-9)
SCM-1	1-500	DC-500	5.72	.10	7.0	8.0	60	40	45	35	40	30	50	40	45	35	40	25	10	0.3	YY101	d	084	4.25
SCM-2	5-1000	DC-500	5.76	.03	8.3	9.8	50	40	40	25	35	20	55	30	40	25	30	18	11	0.4	YY101	k		5.45
SCM-2500	500-2500	DC-500	5.88	.08	6.9	10.0	35	22	35	22	35	22	18	12	18	12	18	12	13	0.6	YY101	r	130	11.95
SKY-7G	2000-7000	DC-1000	7.0	.10	—	9.8			28 (typ.)		15 (min.)				20 (typ.)		7 (min.)		11	0.4	BJ398	je		16.95
SKY-42	2000-4200	DC-1200	5.0	.30	—	8.5			31 (typ.)		20 (min.)				17 (typ.)		12 (min.)		9	0.2	BJ398	je		14.95
SKY-60	2500-6000	DC-1500	6.2	.20	—	9.7			28 (typ.)		17 (min.)				14 (typ.)		8 (min.)		11	0.4	BJ398	je		14.95
SYM-2	2-1000	DC-1000	5.4	.10	7.2	9.5	70	45	50	30	40	25	63	40	48	24	37	20	17	1.0	TTT166	x	079	11.95
SYM-11	1-2500	10-600	7.0	.30	9.0	10.5	63	40	40	24	34	20	61	40	35	20	28	15	10	0.3	TTT167	x	079	9.95
SYM-12	5-1200	DC-1000	6.5	.30	8.0	9.0	68	45	50	30	37	25	56	40	46	25	29	18	16	0.9	TTT167	x	079	9.45
SYM-2500	1-2500	DC-500	6.5	.10	8.5	9.8	70	50	50	25	36	20	60	45	30	10	16	8	12	0.5	TTT167	x	079	11.95
TUF-1SM	2-600	DC-600	5.85	.04	7.0	8.0	60	50	42	30	37	25	60	45	47	30	36	22	16	0.9	NNN150	z	081	5.25
TUF-2SM	50-1000	DC-1000	5.85	.07	7.5	9.0	58	40	47	30	42	25	50	35	44	20	29	18	16	0.9	NNN150	z	081	6.20
† TUF-3SM	0.15-400	DC-400	4.7	.02	7.0	8.0	60	50	46	30	35	25	60	40	47	25	35	20	11	0.4	NNN150	z	081	7.05
TUF-5SM	20-1500	DC-1000	5.7	.04	9.0	9.0	54	40	42	30	39	25	40	25	32	18	23	8	12	0.5	NNN150	z	081	10.45

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 connections see case style outline drawings

PORT	d	k	r	w	x	z	gk	ht[1]	hu[2]	hp	je	kv
LO	8	8	1	1	2	4	1	6	6	5	1	1
RF	1	1	8	4	1	1	5	3	2	1	5	2
IF	3,4^	3	3	5	3	2	4	2	3	7	7	3
GND EXT.	2,5,6,7	2,5,6,7	2,4,5,6,7	2,3,6	4,5,6	3	2,3,6	1,4,5	1,4,5	2,3,4,6,8	2,3,4,6,8	4,5,6
CASE GND	—	—	—	—	—	3	—	—	—	—	—	—
NOT USED	—	4	—	—	—	—	—	—	—	—	—	—
DEMO BOARD			TB-171	TB-03	TB-12	TB-201		TB-03		TB-11	TB-11	

^ pins must be connected together externally
[1] pin connection physically same as w
[2] pin connection physically same as gk

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