

# MIXERS SUB-HARMONIC

$LO = +7 \text{ dBm}$

EXCELLENT L.O. REJECTION

## EVEN-HARMONIC MIXERS

An even-harmonic mixer will, by its inherent design, convert the fundamental input L.O. frequency into its even harmonics ( $m=2,4$  or  $8$  etc.). These even harmonics will mix with the fundamental R.F. frequency to basically produce  $m \text{ L.O. } \pm \text{ R.F.}$  mixing results. Synergy specifies the 2 L.O. and 4 L.O. mixing products, as the higher L.O. even harmonics result in

much higher conversion losses. The best conversion loss is achieved at the 2 L.O. x 1 R.F. mixing condition.

These models allow for lower frequency local oscillators to be used, therefore reducing costs.

## SURFACE MOUNT



FREQUENCY RANGE (MHz)			CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	PACKAGE	PIN OUT	MODEL
RF	LO	IF	2LO-RF TYP/MAX	4LO-RF TYP/MAX	TYP/MIN	TYP/MIN			
280-800	140-400	DC-100	11.5/13.5	17.0/26	45/33	30/22	159	1	XLD-K1
280-800	140-400	DC-100	11.5/13.5	17.0/26	45/33	30/22	134J	1	XMZ-K1
500-1800	250-900	DC-200	11.5/14.5	17.0/26	40/30	25/18	159	1	XLD-K2
500-1800	250-900	DC-200	11.5/14.5	17.0/26	40/30	25/18	134J	1	XMZ-K2
800-2400	400-1200	DC-300	12.5/16.5	18.0/27	30/25	25/16	159	1	XLD-K3
800-2400	400-1200	DC-300	12.5/16.5	18.0/27	30/25	25/16	134J	1	XMZ-K3

## THROUGH HOLE



FREQUENCY RANGE (MHz)			CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	PACKAGE	PIN OUT	MODEL
RF	LO	IF	2LO-RF TYP/MAX	4LO-RF TYP/MAX	TYP/MIN	TYP/MIN			
900-2400	450-1200	DC-300	12.5/16.5	18.0/24	30/25	25/16	120	2	CXP-237
900-2400	450-1200	DC-300	12.5/16.5	18.0/24	30/25	25/16	106	3	CXP-337
900-2400	450-1200	DC-300	12.5/16.5	18.0/24	30/25	25/16	108	2	CXP-437

### NOTES:

- 1dB Compression Point = -7 dBm (Typ.)
- IP3 (Input) = +4 dBm (Typ.)
- Maximum Input Power without damage = 100 mW ave. cw

### PIN-OUT TABLE

	RF	LO	IF	GND	No Conn.
#1	4	1	5	2,3,6	--
#2	1	3	8	2,5,6,7	4
#3	1	2	4	3	--

GND = Ground externally

For pin location and package outline drawings, see back pages.