MIXERS
DOUBLE -BALANCED

LO = +23 dBm

Super-High Dynamic Range

SURFACE MOUNT

133 

134 

134J 

159 

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.5 - 500	DC - 500	6.2/7	6.4/8.5	55/44	44/25	33/20	50/34	45/25	37/22	159	1	**SLD-K1H***
0.5 - 500	DC - 500	6.2/7	6.4/8.5	55/44	44/25	33/20	50/34	45/25	37/22	134	1	**SMD-K1H***
0.5 - 500	DC - 500	6.2/7	6.4/8.5	55/44	44/25	33/20	50/34	45/25	37/22	134J	1	**SMZ-K1H***
1-1000	DC-1000	6.5/7.5	7.5/9.5	70/45	45/30	40/25	60/40	35/23	30/15	133	3	**SMD-C1H**
5 - 1000	DC - 900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/22	39/22	159	1	**SLD-K2H***
5 - 1000	DC - 900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/22	39/22	134	1	**SMD-K2H***
5 - 1000	DC - 900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/22	39/22	134J	1	**SMZ-K2H***
5 - 1500	DC - 900	6.3/8	7.5/9.8	65/40	36/20	22/15	50/30	30/18	17/7	159	1	**SLD-K3H***
5 - 1500	DC - 900	6.3/8	7.5/9.8	65/40	36/20	22/15	50/30	30/18	17/7	134	1	**SMD-K3H***
5 - 1500	DC - 900	6.3/8	7.5/9.8	65/40	36/20	22/15	50/30	30/18	17/7	134J	1	**SMZ -K3H***
5 - 2500	3 - 600	8/9.5	10.5/12	60/35	40/25	35/20	50/35	30/20	25/15	159	1	**SLD-K4H**
5 - 2500	3 - 600	8/9.5	10.5/12	60/35	40/25	35/20	50/35	30/20	25/15	134	1	**SMD-K4H**
5 - 2500	3 - 600	8/9.5	10.5/12	60/35	40/25	35/20	50/35	30/20	25/15	134J	1	**SMZ-K4H**
20-1500	DC-1500	7.0/8.5	8.5/9.0	50/35	40/25	20/10	40/25	30/18	15/8	133	3	**SMD-C2H**
20-2500	20-600	8.0/9.0	9.0/10.5	45/30	30/23	30/15	40/20	25/15	25/12	133	3	**SMD-C3H**

FLAT PACK

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.01-125	DC - 125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	101	2	**CHF-102**
0.025-200	DC - 200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	101	2	**CHF-112**
0.1 - 500	DC - 500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	101	2	**CHF-101**
0.5 - 1000	DC - 1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	101	2	**CHF-103**
10 - 2000	5 - 600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	101	2	**CHF-109**
20 - 1500	DC - 1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	101	2	**CHF-111**
800-2500	DC - 400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	101	2	**CHF-104**

NOTES:

* Phase Detection, Polarity Positive
1. 1dB Compression Point = +15 dBm (Typ)
2. IP3 (Input) = +26 dBm (Typ)
3. Maximum Input Power without damage = 500 mW ave. cw

XMB= 2LF to HF/2
FULL BAND = LF to HF
LB= LF to 10LF
MB = 10LF to HF/2
UB= HF/2 to HF

PIN-OUT TABLE

	RF	LO	IF	GND	CASE GND
#1	4	1	5	2, 3,6	--
#2	1	4	5	2,3,6,7,8	2,3,6,7,8
#3	1	2	3	4,5,6	--

GND = Ground externally
For pin location and package outline drawings, see back pages.

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SYNERGY® MICROWAVE CORPORATION

MIXERS
DOUBLE -BALANCED

LO = +23 dBm

Super-High Dynamic Range

THROUGH HOLE (RELAY)


102


103


120

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.01-125	DC-125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	102	1	**CHP-202**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	103	1	**CHP-212**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	103	1	**CHP-201**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	103	2	**CHP-203**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	102	2	**CHP-211**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	120	3	**CHP-209**
800-2500	DC-400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	120	3	**CHP-204**

THROUGH HOLE (MINI-RELAY)


105


106


107


108

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.01-125	DC-125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	105	4	**CHP-302**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	105	4	**CHP-312**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	106	4	**CHP-301**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	106	4	**CHP-303**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	106	4	**CHP-311**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	105	4	**CHP-309**
0.01-125	DC-125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	107	1	**CHP-402**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	107	1	**CHP-412**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	108	1	**CHP-401**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	108	2	**CHP-403**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	107	2	**CHP-411**

NOTES:

1. 1dB Compression Point = +17 dBm (Typ)
2. IP3 (Input) = +26 dBm (Typ)
3. Maximum Input Power without damage = 500 mW ave. cw

XMB= 2LF to HF/2
FULL BAND = LF to HF
LB= LF to 10LF
MB = 10LF to HF/2
UB= HF/2 to HF

PIN-OUT TABLE

	RF	LO	IF	GND	CASE GND	NO CONN.
#1	1	8	*3,4	2,5,6,7	2	--
#2	1	8	*3,4	2,5,6,7	2,5,6,7	--
#3	1	8	3	2,5,6,7	2,5,6,7	4
#4	1	4	2	3	3	--

GND = Ground externally
For pin location and package outline drawings, see back pages.

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MIXERS
DOUBLE -BALANCED

LO = +23 dBm

Super-High Dynamic Range

THROUGH HOLE (TO-CAN)

104 

122 

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.01-125	DC-125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	104	1	**CHP-502**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	104	1	**CHP-512**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	104	1	**CHP-501**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	104	1	**CHP-503**
5-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	122	2	**CHP-612**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	122	2	**CHP-603**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	122	2	**CHP-611**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	122	2	**CHP-609**
800-2500	DC-400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	122	2	**CHP-604**

COAXIAL

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
RF/LO	IF	XMB TYP/MAX	FULL BAND TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN			
0.01-125	DC-125	5.5/6	6/6.5	60/50	50/40	40/35	60/45	50/35	40/30	110	3	**CHK-702***
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	110	3	**CHK-712***
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	110	3	**CHK-701***
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	110	3	**CHK-703***
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	110	3	**CHK-711S**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	110	3	**CHK-709S**
800-2500	DC-400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	110	3	**CHK-704S**
800-4200	DC-1000	--/--	6/10	25/13	25/13	25/13	20/10	20/10	20/10	110	3	**CHK-215S**

NOTES:

1. 1dB Compression Point = +17 dBm (Typ)
2. IP3 (Input) = +26 dBm (Typ)
3. As IF frequency decrease below LF towards DC, conversion loss increases up to 8 dB higher than maximum.
4. Maximum Input Power without damage = 500 mW ave. cw

XMB= 2LF to HF/2
FULL BAND = LF to HF
LB= LF to 10LF
MB = 10LF to HF/2
UB= HF/2 to HF

* Connector style: "B" = BNC, "T" = TNC, "N" = Type N, "S" = SMA

PIN-OUT TABLE

	RF	LO	IF	GND	CASE GND
#1	2	5	11	All Others	All Others
#2	1	3	2	4	4
#3	1	3	2	--	--

GND = Ground externally
For pin location and package outline drawings, see back pages.

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