MIXERS
DOUBLE -BALANCED

LO = +17 dBm

VERY HIGH DYNAMIC RANGE

SURFACE MOUNT

106B 

133 

134 

134J 

159 

FREQUENCY RANGE (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			PACKAGE	PIN OUT	MODEL
		XMB	FULL BAND	LB	MB	UB	LB	MB	UB			
RF/LO	IF	TYP/MAX	TYP/MAX	TYP/MIN	TYP/MIN	TYP/MIN	TYP/MIN	TYP/MIN	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-K1M***
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-K1M***
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-K1M***
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-C1M**
2-600	DC-600	5.5/7	7/8	60/50	42/30	37/25	60/45	47/30	36/22	106B	2	**TOP-1MZ**
5-1000	DC-900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/20	39/22	159	1	**SLD-K2M***
5-1000	DC-900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/20	39/22	134	1	**SMD-K2M***
5-1000	DC-900	7/8.5	7.8/9.3	55/40	39/22	33/20	52/30	45/20	39/22	134J	1	**SMZ-K2M***
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-K3M***
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-K3M***
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-K3M***
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-K4M**
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-K4M**
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-K4M**
10-1000	10-750	6.5/8	7/9.5	50/40	38/30	30/23	50/30	40/25	34/22	159	1	**SLD-K2UM***
10-1000	10-750	6.5/8	7/9.5	50/40	38/30	30/23	50/30	40/25	34/22	134	1	**SMD-K2UM***
10-1000	10-750	6.5/8	7/9.5	50/40	38/30	30/23	50/30	40/25	34/22	134J	1	**SMZ-K2UM***
20-1500	DC-1000	7.5/8	8.5/9	54/40	42/30	39/25	40/25	29/18	20/8	106B	2	**TOP-5MZ**
20-1500	DC-1500	7/8.5	8.5/9	50/35	40/25	20/10	40/25	30/18	15/8	133	3	**SMD-C2M**
20-2500	20-600	8/9	9/10.5	45/30	30/23	30/15	40/20	25/15	25/12	133	3	**SMD-C3M**
50-1000	DC-1000	6/7	7.8/9	58/45	45/30	38/25	50/35	40/20	28/18	106B	2	**TOP-2MZ**

NOTES:

***** Phase Detection, Positive Polarity
1. 1dB Compression Point = +10 dBm (Typ)
2. IP3 (Input) = +22 dBm (Typ)
3. Maximum Input Power without damage = 250 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	2	3	3
#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 = +17 dBm

VERY 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	4	**CMP-202**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	103	4	**CMP-212**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	103	4	**CMP-201**
1-750	DC-750	5.5/7.5	6.5/8.5	50/40	45/25	35/25	45/35	40/30	30/20	102	1	**CMP-2E4**
0.5-1000	DC-1000	5.5/7	7/8.5	70/40	45/35	40/25	60/40	40/30	30/20	103	1	**CMP-203**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	102	1	**CMP-211**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	120	2	**CMP-209**

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	3	**CMP-302**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	105	3	**CMP-312**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	106	3	**CMP-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	3	**CMP-303**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	106	3	**CMP-311**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	105	3	**CMP-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	4	**CMP-402**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	107	4	**CMP-412**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	108	4	**CMP-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	1	**CMP-403**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	107	1	**CMP-411**

NOTES:

1. 1dB Compression Point = +10 dBm (Typ)
2. IP3 (Input) = +22 dBm (Typ)
3. Maximum Input Power without damage = 250 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	2,5,6,7	--
#2	1	8	3	2,5,6,7	2,5,6,7	4
#3	1	4	2	3	3	--
#4	1	8	*3,4	2,5,6,7	2	--

GND = Ground externally
* Pins must be tied together externally
For pin location and package outline drawings, see back pages.

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MIXERS
DOUBLE -BALANCED

LO = +17 dBm

VERY HIGH DYNAMIC RANGE

THROUGH-HOLE (RELAY)

102 

103 

105 

106 

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			
0.05-300	DC-300	5/7	6/8.5	55/45	40/30	30/25	50/40	35/25	25/20	103	1	**CMP-2P2**
1-500	DC-500	5.5/7	6/7	40/30	50/40	40/35	30/23	40/30	35/30	102	2	**CMP-221**
2-500	DC-500	6/7.5	7/8.5	50/40	40/30	30/25	45/35	35/25	25/20	103	1	**CMP-2Q3**
5-750	DC-750	6.2/7.5	7/9	50/40	40/30	30/25	45/35	35/25	30/20	103	3	**CMP-2R4**
0.1-250	DC-250	5/7	6/8.5	50/45	40/30	28/23	45/40	35/25	26/20	106	4	**CMP-3G2**
2-500	DC-500	6/7.5	7/8.5	50/45	40/30	30/20	45/40	35/25	25/20	106	4	**CMP-3G3**
5-1000	DC-1000	6.2/7	7/10	50/45	40/30	30/20	45/40	35/25	20/17	106	4	**CMP-3M4**
5-1200	DC-1200	6.5/8	7/9	50/40	35/25	30/20	50/40	35/20	30/20	105	4	**CMP-3J5**

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	5	**CMP-502**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	104	5	**CMP-512**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	104	5	**CMP-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	5	**CMP-503**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	122	6	**CMP-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	6	**CMP-603**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	122	6	**CMP-611**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	122	6	**CMP-609**
800-2500	DC-400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	122	6	**CMP-604**

NOTES:

1. 1dB Compression Point = +14 dBm (Typ)
2. IP3 (Input) = +26 dBm (Typ)
3. Maximum Input Power without damage = 250 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	2,5,6,7	2,5,6,7	4
#3	1	8	*3,4	2,5,6,7	2,5,6,7	--
#4	1	4	2	3	3	--
#5	2	5	11	All other	All other	--
#6	1	3	2	4	4	--

* Pins must be tied together
GND = Ground externally
For pin location and package outline drawings, see back pages.

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MIXERS
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LO = +17 dBm

VERY HIGH DYNAMIC RANGE

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	1	**CMF-102**
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	101	1	**CMF-112**
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	101	1	**CMF-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	1	**CMF-103**
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	101	1	**CMF-111**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	101	1	**CMF-109**
800-2500	DC-400	--/--	5.5/7	30/20	30/20	30/20	20/10	20/10	20/10	101	1	**CMF-104**

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	2	**CMK-702***
0.025-200	DC-200	5.5/6	6/7	65/55	55/45	45/35	60/50	45/35	35/30	110	2	**CMK-712***
0.1-500	DC-500	6/7	7/8	65/40	60/40	50/30	45/30	50/35	35/20	110	2	**CMK-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	2	**CMK-703***
20-1500	DC-1000	7.5/8.5	8/9	60/35	40/25	25/20	50/30	40/25	20/12	110	2	**CMK-711S**
10-2000	5-600	7/8.5	7.5/9	60/35	40/25	40/20	50/30	30/20	25/15	110	2	**CMK-709S**
800-2500	DC-400	--/--	6.5/8.5	30/20	30/20	30/20	20/10	20/10	20/10	110	2	**CMK-704S**
800-4200	DC-1000	--/--	6/10	25/13	25/13	25/13	20/10	20/10	20/10	110	2	**CMK-215S**
0.05-300	DC-300	5/7	6/8.5	55/45	45/30	30/25	50/40	35/25	25/20	110	2	**CMK-7N2*** ■
5-1000	DC-1000	6.2/7	7/10	50/40	40/30	30/20	45/40	35/25	25/17	110	2	**CMK-7Q4*** ■
5-1200	DC-1200	6.5/8	7/9	50/40	35/25	30/20	50/40	35/20	30/20	110	2	**CMK-7L5S** ■

NOTES:
1) 1dB Compression Point = +10 dBm (Typ)
2) IP3 (Input) = +22 dBm (Typ)
3. Maximum Input Power without damage = 250 mW ave. cw

■ 1dB Compression Point = +14dBm (Typ)
■ IP3 (Input) = +26 dBm (Typ)

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	1	4	5	2,3,6,7,8	2,3,6,7,8
#2	1	3	2	--	--

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

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