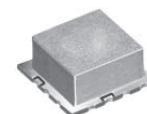


DEMODULATORS I & Q



LEADLESS SURFACE-MOUNT MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB) ♦	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
19-21	10-30	DC-10	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102S	1	QMS-201
28.5-31.5	15-45	DC-15	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102S	1	QMS-202
38-42	20-60	DC-20	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102S	1	QMS-203
52-88	52-88	DC-35	+10	7.0	0.2/0.5	2.0/4.0	40	35	1.5:1	+3	+15	102S	1	QMS-210
57-63	30-90	DC-30	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102S	1	QMS-204
66.5-73.5	35-105	DC-35	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102S	1	QMS-205
80-160	80-160	DC-40	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	102S	1	QMS-206
100-200	100-200	DC-50	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	102S	1	QMS-207
810-830	810-830	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102S	1	QMS-214
850-950	850-950	DC-100	+10	8.0	0.8/1.3	3.0/6.0	35	30	1.8:1	+3	+15	102S	1	QMS-213
869-894	869-894	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102S	1	QMS-224
935-960	935-960	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102S	1	QMS-234
1805-1880	1805-1880	DC-50	+10	8.0	0.8/1.2	2.0/6.0	25	20	2.0:1	+3	+15	102S	1	QMS-244



MINIATURE SURFACE-MOUNT PACKAGE

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB) ●	AMPLITUDE BALANCE (dB)	PHASE BALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
935-960	935-960	DC-5	+10	8.5	0.3/0.7	2.0/4.0	35	30	1.7:1	+3	+15	240	2	VMS-935D
1050	1050 ± 40	DC-40	+10	10.0	0.4/0.6	2.0/5.0	30	25	1.8:1	+3	+15	240	2	VMS-1050D
1710-1780	1710-1780	DC-10	+10	8.5	0.45/1.0	3.0/6.0	28	23	1.7:1	+3	+15	240	2	VMS-1710D

Notes:

♦ Conversion loss = RF input power (dBm) minus IF₁ and IF₂ power (dBm).

● Conversion loss = (I + Q) power (dBm) minus RF power (dBm).

IF₁ is +90° ref. to IF₂ when RF < LO frequency.

Nominal impedance = 50 ohms.

Maximum RF input power without damage 200 mW.

PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	1	8	3	4	All Other
#2	1	8	11	5	All Other

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

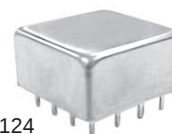
DEMODULATORS I & Q

THROUGH-HOLE MOUNT

8 PIN - RELAY CAN



FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS♦ (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
19-21	10-30	DC-10	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102	1	QMR-201
28.5-31.5	15-45	DC-15	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102	1	QMR-202
38-42	20-60	DC-20	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102	1	QMR-203
57-63	30-90	DC-30	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102	1	QMR-204
66.5-73.5	35-105	DC-35	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	102	1	QMR-205
80-160	80-160	DC-40	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	102	1	QMR-206
100-200	100-200	DC-50	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	102	1	QMR-207
810-830	810-830	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102	1	QMR-214
869-894	869-894	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102	1	QMR-224
935-960	935-960	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	102	1	QMR-234
1805-1880	1805-1880	DC-50	+10	8.0	0.8/1.2	2.0/6.0	25	20	2.0:1	+3	+15	102	1	QMR-244



124



151

6 PIN (Wideband) AND 16 PIN

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS♦ (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
15-50	15-50	DC-10	+10	7.0	0.3/0.5	2.0/5.0	40	35	1.5:1	+3	+15	151	3	QMP-15-50
15-510	15-510	DC-250	+10	7.0	0.7/1.5	5.0/10	35	20	2.0:1	+3	+15	151	3	QMP-34-15
19-21	10-30	DC-10	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	124	2	QMP-901
28.5-31.5	15-45	DC-15	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	124	2	QMP-902
38-42	20-60	DC-20	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	124	2	QMP-903
57-63	30-90	DC-30	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	124	2	QMP-904
66.5-73.5	35-105	DC-35	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	124	2	QMP-905
80-160	80-160	DC-40	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	124	2	QMP-906
100-200	100-200	DC-50	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	124	2	QMP-907
810-830	810-830	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	124	2	QMP-914
869-894	869-894	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	124	2	QMP-924
935-960	935-960	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	124	2	QMP-934
1805-1880	1805-1880	DC-50	+10	8.0	0.8/1.2	2.0/6.0	25	20	2.0:1	+3	+15	124	2	QMP-944

Notes:

IF₁ is +90° ref to IF₂ when RF < LO frequency.
Nominal impedance = 50 ohms.
Maximum RF input power without damage 200 mW.

♦ Conversion loss = RF input power (dBm) minus IF1 and IF2 power (dBm).

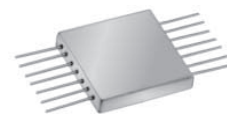
PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	1	8	3	4	All Other
#2	1	16	4	13	All Other
#3	1	6	3	2	4,5

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

DEMODULATORS

I & Q



FLAT PACK MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS♦ (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
19-21	10-30	DC-10	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	115	1	QMF-201
28.5-31.5	15-45	DC-15	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	115	1	QMF-202
38-42	20-60	DC-20	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	115	1	QMF-203
57-63	30-90	DC-30	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	115	1	QMF-204
66.5-73.5	35-105	DC-35	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	115	1	QMF-205
80-160	80-160	DC-40	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	115	1	QMF-206
100-200	100-200	DC-50	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	115	1	QMF-207
810-830	810-830	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	115	1	QMF-214
869-894	869-894	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	115	1	QMF-224
935-960	935-960	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	115	1	QMF-234
1805-1880	1805-1880	DC-50	+10	8.0	0.8/1.2	2.0/6.0	25	20	2.0:1	+3	+15	115	1	QMF-244



113



153

COAXIAL CONNECTOR MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS♦ (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Degrees)	ISOLATION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF					LO/RF MIN	LO/IF MIN						
15-510	15-510	DC-250	+10	7.0	0.7/1.5	5.0/10	35	20	2.0:1	+3	+15	153	2	QMK-34-15
19-21	10-30	DC-10	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	113	2	QMK-701*
28.5-31.5	15-45	DC-15	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	113	2	QMK-702*
38-42	20-60	DC-20	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	113	2	QMK-703*
57-63	30-90	DC-30	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	113	2	QMK-704*
66.5-73.5	35-105	DC-35	+10	7.0	0.2/0.4	1.0/2.0	40	35	1.5:1	+3	+15	113	2	QMK-705*
80-160	80-160	DC-40	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	113	2	QMK-706*
100-200	100-200	DC-50	+10	8.0	0.6/1.0	1.0/3.0	35	30	1.5:1	+3	+15	113	2	QMK-707*
810-830	810-830	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	113	2	QMK-714*
869-894	869-894	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	113	2	QMK-724*
935-960	935-960	DC-50	+10	8.0	0.6/1.0	1.0/4.0	35	30	1.8:1	+3	+15	113	2	QMK-734*
1805-1880	1805-1880	DC-50	+10	8.0	0.8/1.2	2.0/6.0	25	20	2.0:1	+3	+15	113	2	QMK-744*
2450	2400-2500	DC-100	+10	7.0	0.3/0.5	2.0/5.0	17	20	2.0:1	+2	+13	153	2	QMK2450A
3410-3590	3410-3590	DC-100	+10	9.0	0.5/1.0	3.0/6.0	17	10	2.0:1	+2	+13	153	2	QMK2490A

Notes:

IF₁ is +90° ref to IF₂ when RF < LO frequency.

Nominal impedance = 50 ohms.

Maximum RF input power without damage 200 mW.

*Select female connector suffix: S=SMA, B=BNC, N=Type N, T=TNC.

All other models numbers are available with SMA connectors only.

♦ Conversion loss = RF input power (dBm) minus IF1 and IF2 power (dBm).

PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	14	1	10	5	All Other
#2	3	1	2	4	-

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