

# OSCILLATORS

## VOLTAGE CONTROLLED OSCILLATORS (VCO)



### MQE Series

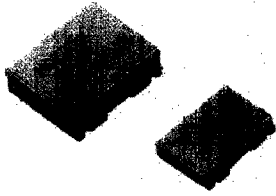
OSCILLATORS

#### FEATURES

- Small and lightweight
- Low power consumption
- Excellent temperature stability

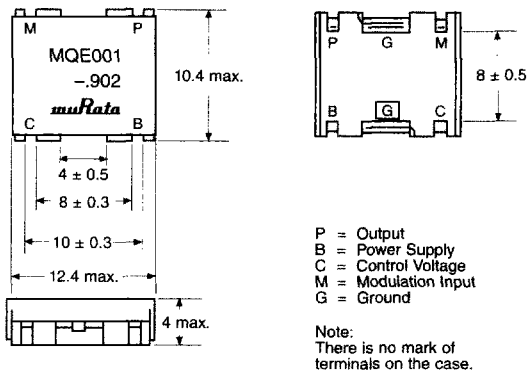
#### APPLICATIONS

- Mobile and hand held telephone
- Cordless telephone
- Personal radio
- MCA radio

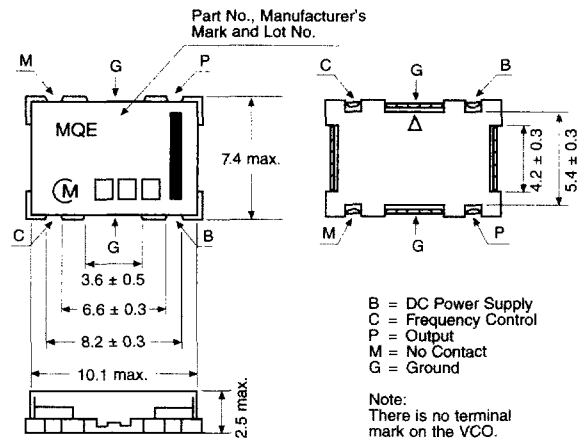


#### DIMENSIONS: mm

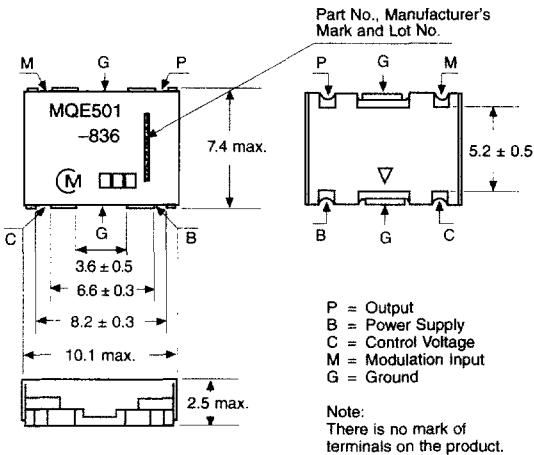
##### MQE 000/700 Series



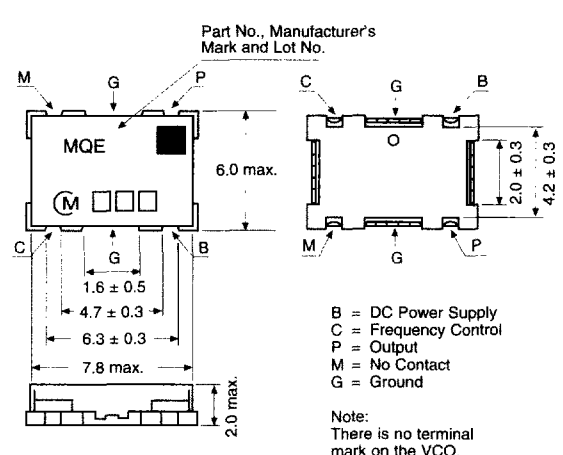
##### MQE 600 Series



##### MQE 500 Series



##### MQE 900 Series



## ANALOG AND DIGITAL CELLULAR PHONE SYSTEMS

Application	Part Number	Operating Frequency Range (MHz)	Supply Voltage (V)	Control Voltage Range (V)	Control Voltage Sensitivity (MHz/V)	Output Level (dBm)	Power Consumption (mA max.)	Audio Modulation Sensitivity (mVrms) (1)	C/N (2) (dBc/Hz min.)	
<b>E-AMPS &amp; ADC</b>	<b>NEW</b> Tx	MQE001-836	836.5 ± 12.5	4.2 ± 0.25	1.0 - 4.0	11 ± 2	-2 ± 3	6.5	124 - 248 (±8)	110 (25)
		MQE505-836	836.5 ± 12.5	4.0 ± 0.2	0.8 - 3.2	19 ± 3	0 ± 3	7.0	247 - 459 (±8)	108 (25)
	Rx	MQE001-926	926.5 ± 12.5	4.2 ± 0.25	1.0 - 4.0	12 ± 2	-2 ± 3	6.5	—	110 (25)
		MQE001-964	964.5 ± 12.5	4.2 ± 0.25	1.0 - 4.0	≥ 9.0	≥ -5.0	8.0	—	110 (25)
		MQE043-964A	964.5 ± 12.5	3.2 ± 0.25	1.0 - 3.0	17 ± 4	-3 ± 3	8.0	—	114 (60)
		MQE504-964	964.5 ± 12.5	4.0 ± 0.25	0.8 - 3.2	19 ± 3	0 ± 3	7.0	—	107 (25)
		MQE901-926	926.5 ± 12.5	4.5 ± 0.2	1.0 - 3.3	18 ± 3	0 ± 3	8.0	—	114 (60)
<b>PCS</b>	<b>NEW</b> Rx	MQE920-1750	1750 ± 30	3.3 ± 0.17	0.3 - 3.0	40 ± 10	0 ± 2.5	8.5	—	90 (10)
	<b>NEW</b> Tx	MQE524-1880	1880 ± 33	3.8 ± 0.15	0.8 - 2.8	50 ± 5	10.5 ± 1.5	45.0	—	118 (150)
<b>E-TACS</b>	Tx	MQE042-888	888.5 ± 16.5	3.3 ± 0.20	0.5 - 2.7	22.5 ± 3	≥ 6.0	8.0	124 - 248 (±6.4)	107 (25)
		MQE541-888	888.5 ± 16.5	3.0 ± 0.20	0.5 - 2.8	22 ± 3	1 ± 3	8.0	336 - 504 (±10)	104 (25)
	Rx	MQE001-978	978.5 ± 16.5	4.2 ± 0.25	0.7 - 4.3	13 ± 2	-3 ± 3	10.0	—	109 (25)
		MQE042-1016	1016.5 ± 16.5	3.3 ± 0.20	0.5 - 2.7	19 ± 3	≥ -6.0	7.0	—	107 (25)
		MQE501-978	978.5 ± 16.5	4.2 ± 0.25	0.7 - 4.0	16 ± 3	-2 ± 3	8.0	—	109 (25)
<b>N-TACS</b>	Rx	MQE045-801	801.5 ± 13.5	3.2 ± 0.20	0.8 - 3.3	17 ± 3	-1 ± 3	7.5	—	112 (25)
		MQE570-766	766.5 ± 13.5	3.0 ± 0.15	0.5 - 2.5	22 ± 3	-2 ± 3	7.0	—	110 (25)
<b>GSM</b> <b>NEW</b>	Tx	MQE001-902	902.5 ± 12.5	4.2 ± 0.25	1.0 - 4.0	12 ± 2	≥ -3.0	8.0	200 - 316 (±3)	103 (12.5)
		MQE502-902	902.5 ± 12.5	4.7 ± 0.25	0.8 - 4.2	12 ± 2	≥ -1.0	10.0	200 - 316 (±3)	103 (12.5)
		MQE601-902	902.5 ± 12.5	4.7 ± 0.25	0.8 - 4.2	12 ± 3	≥ -1.0	10.0	—	103 (12.5)
	Rx	MQE551-1018	1018.5 ± 12.5	3.75 ± 0.2	0.6 - 3.0	19 ± 3.8	-1.5 ± 2.5	8.0	—	143 (3k)
		MQE602-1171	1171.0 ± 35	3.0 ± 0.15	0.8 - 2.2	65 ± 10	≥ -5.0	6.0	—	90 (10)
<b>PDC 800</b>	Rx	MQE001-820	820.0 ± 10.0	4.2 ± 0.25	1.5 - 3.5	14 ± 2	≥ -6.0	7.0	—	115 (50)
		MQE003-730	730.0 ± 10.0	4.3 ± 0.25	1.0 - 4.0	10.7 ± 2	≥ -4.0	6.0	—	114 (50)
		MQE541-688	688.0 ± 8.0	2.1 ± 0.1	0.5 - 2.3	7 ± 2	≥ -10.0	6.0	—	112 (50)
		MQE570-688	688.0 ± 8.0	2.1 ± 0.2	0.5 - 2.5	14.3 ± 3	≥ -9.0	3.0	—	110 (50)
		MQE570-820	820.0 ± 10.0	2.3 ± 0.23	0.5 - 2.5	17 ± 3	-5 ± 3	6.0	—	121 (100)
<b>PDC 1500</b>	Rx	MQE523-1619	1619.0 ± 12.0	3.0 ± 0.25	0.5 - 2.5	≥ 39.0	-3 ± 3	11.0	—	107 (50)
		MQE520-1638	1638.5 ± 31.5	4.3 ± 0.3	1.0 - 4.0	≥ 24.0	≥ -7.0	8.0	—	104 (25)
<b>DCS 1800</b> <b>NEW</b>	Tx	MQE520-1747	1747.5 ± 40.5	4.6 ± 0.2	0.7 - 4.3	31 ± 3.1	≥ -5.0	10.0	—	90 (10)
	Rx	MQE520-1655	1655.5 ± 41.5	4.6 ± 0.2	0.7 - 4.3	31 ± 3.1	≥ -5.0	10.0	—	90 (10)
		MQE920-1655	1655.5 ± 41.5	3.6 ± 0.15	0.5 - 3.1	42 ± 5	-1.5 ± 2.5	10.0	—	140 (3000)

(1) = Deviation (kHz)

(2) = Separation (kHz)

## DIGITAL CORDLESS PHONE SYSTEMS

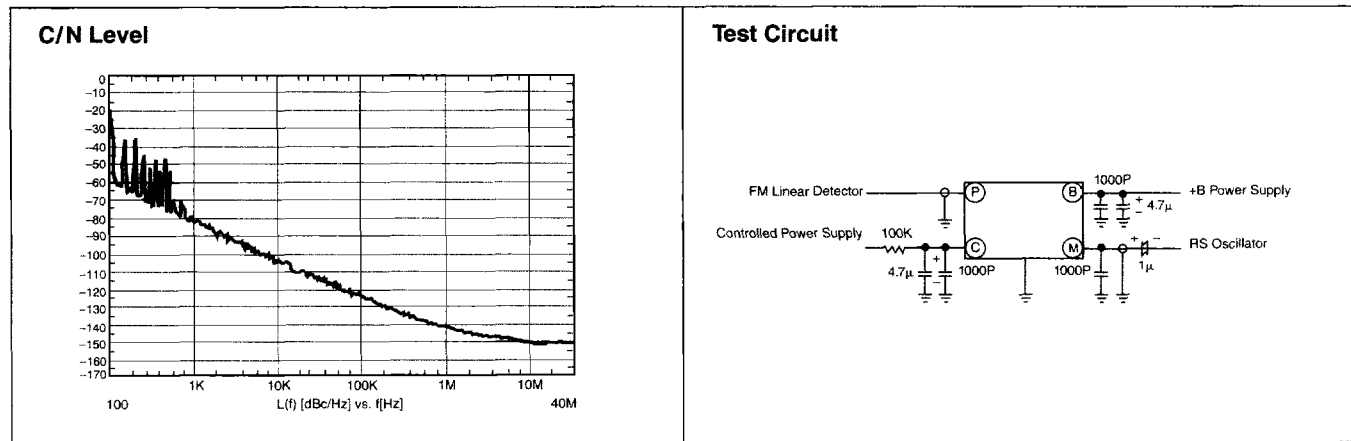
Application	Part Number	Operating Frequency Range (MHz)	Supply Voltage (V)	Control Voltage Range (V)	Control Voltage Sensitivity (MHz/V)	Output Level (dBm)	Power Consumption (mA max.)	Audio Modulation Sensitivity (mVrms) (1)	C/N (2) (dBc/Hz min.)	
DECT	Rx	MQE030-1780	1780.0 ± 15.0	3.0 ± 0.25	0.5 - 2.5	≥ 15	≥ -5.0	10.0	—	100 (50)
		MQE030-1835	1835.0 ± 65.0	3.0 ± 0.25	0.5 - 2.5	≥ 65	≥ -5.0	15.0	—	90 (50)
PHS	1 L	MQE620-1662	1662.5 ± 11.5	3.0 ± 0.2	0.6 - 2.3	18 ± 2	-2 ± 3	8.0	—	116 (150)
		MQE680-1652	1652.5 ± 118.5	2.3 ± 0.3	0.5 - 2.3	32 ± 4	-3 ± 3	8.0	—	112 (150)
		MQE680-1668	1668.0 ± 16.8	2.9 ± 0.18	0.5 - 2.3	30 ± 4	≥ -5.0	7.0	—	110 (100)
		MQE980-1668	1668.0 ± 17.0	3.0 ± 0.25	0.5 - 2.4	28 ± 3	-2 ± 3	7.0	—	113 (150)
		MQE744-233B	233.15 ± 7.5	3.0 ± 0.25	0.2 - 2.7	≥ 7.5	-4 ± 3	7.0	—	120 (150)
	Tx	NEW MQE981-1668	1668 ± 16.8	2.8	0.6 - 2.1	35 ± 5	≥ -6	7.0	—	113 (150)
		NEW MQE984-1668	1668 ± 17.0	2.1	0.5 - 2.5	27 ± 4	-3 ± 3	7.0	—	113 (150)
		NEW MQE986-1668	1668 ± 16.8	3.0	0.5 - 2.5	28 ± 6	≥ -6	7.0	—	103 (50)
NEW MQE987-1668		1668 ± 16.8	2.8	0.6 - 2.3	34 ± 5	≥ -6	6.0	—	110 (100)	

## OTHER SYSTEMS

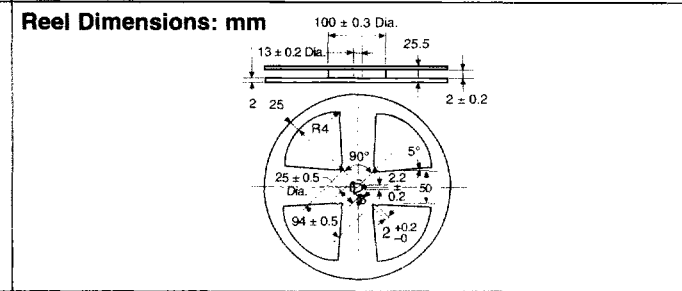
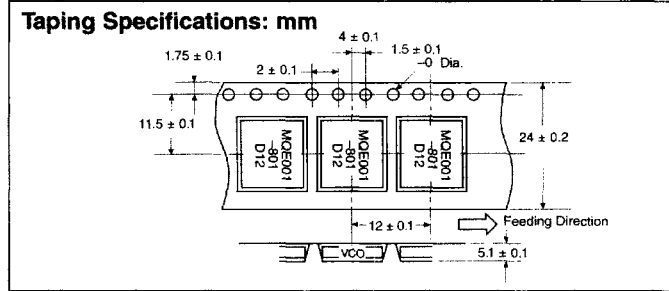
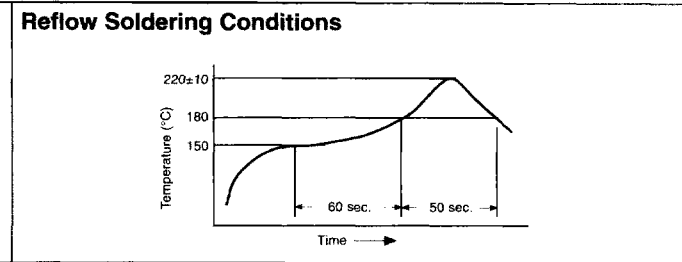
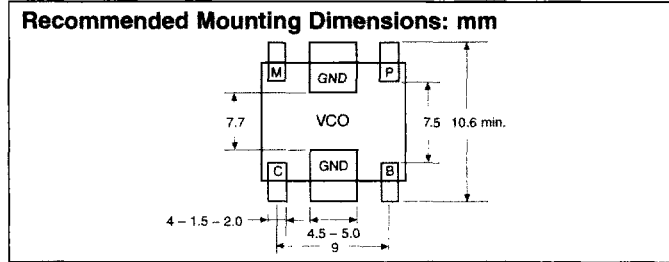
Application	Part Number	Operating Frequency Range (MHz)	Supply Voltage (V)	Control Voltage Range (V)	Control Voltage Sensitivity (MHz/V)	Output Level (dBm)	Power Consumption (mA max.)	Audio Modulation Sensitivity (mVrms) (1)	C/N (2) (dBc/Hz min.)	
GPS <b>NEW</b>	Rx	MQE570-1397	1397.7 ± 4.0	3.0 ± 0.1	0.5 - 2.5	12 ± 5	1 ± 3	10.0	—	90 (10)
LMR	Tx	MQE001-815	815.5 ± 9.5	5.0 ± 0.25	1.5 - 3.5	13.5 ± 2	0 ± 3	7.0	124 - 248 (±8)	110 (25)
RADIO TRANSCIVER	Tx	MQE744-411	411.4 ± 10.9	3.0 ± 0.2	0.3 - 2.8	16 ± 2.5	-3 ± 3	7.0	67 - 133 (±1.5)	102 (12.5)
		MQE744-429	429.0 ± 1.0	3.0 ± 0.2	0.5 - 2.5	4 ± 2	0 ± 3	10.0	253 - 455 (±3.5)	107 (12.5)
		MQE744-430	431.0 ± 9.5	3.0 ± 0.3	0.5 - 2.7	12 ± 2	-3 ± 3	7.0	60 - 140 (±1.5)	103 (12.5)
		MQE746-426	426.5 ± 1.0	2.0 ± 0.2	0.5 - 1.5	12 ± 3	-3 ± 3	7.0	60 - 140 (±1.5)	101 (12.5)
		MQE501-808	808.0 ± 2.0	5.0 ± 0.3	1.0 - 3.0	≥ 6	4 ± 3	10.0	80 - 120 (±10)	109 (25)
	Rx	MQE744-385	386.0 ± 8.5	3.0 ± 0.3	0.5 - 2.7	12 ± 2	-3 ± 3	7.0	—	103 (12.5)
		MQE744-450	450.7 ± 1.0	3.0 ± 0.2	0.5 - 2.5	4 ± 2	0 ± 3	10.0	—	107 (12.5)

(1) = Deviation (kHz)  
(2) = Separation (kHz)

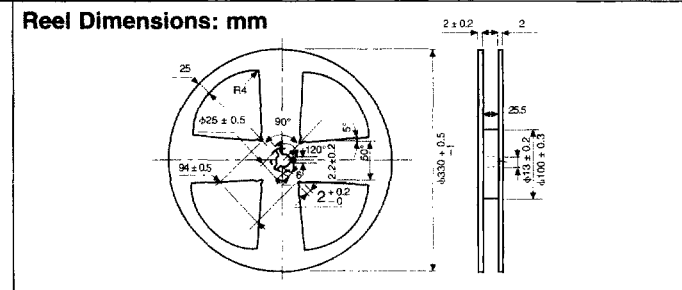
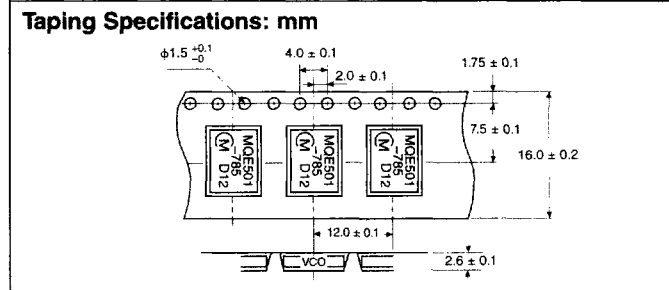
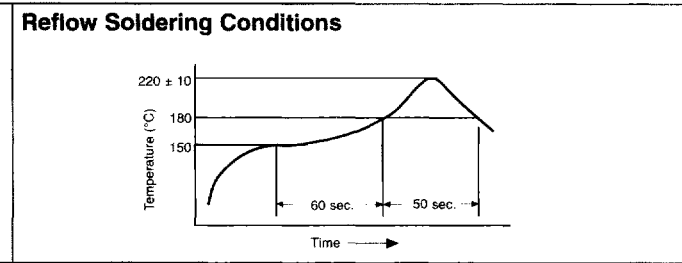
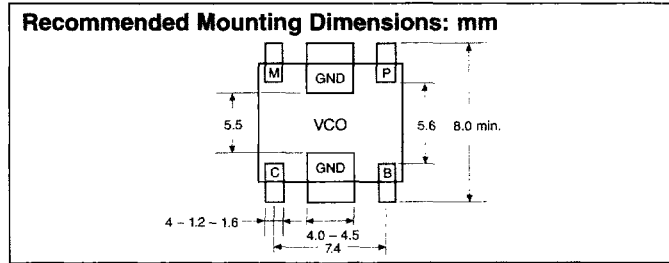
## VCO TYPICAL CHARACTERISTICS



## MOUNTING AND PACKING – MQEO/MQE7



## MOUNTING AND PACKAGING – MQE5/MQE6



## MOUNTING AND PACKAGING – MQE9

