

RF Modules

VCOs

For Cellular Phone/Dual Band 8.5x6.5

QVC81 Series

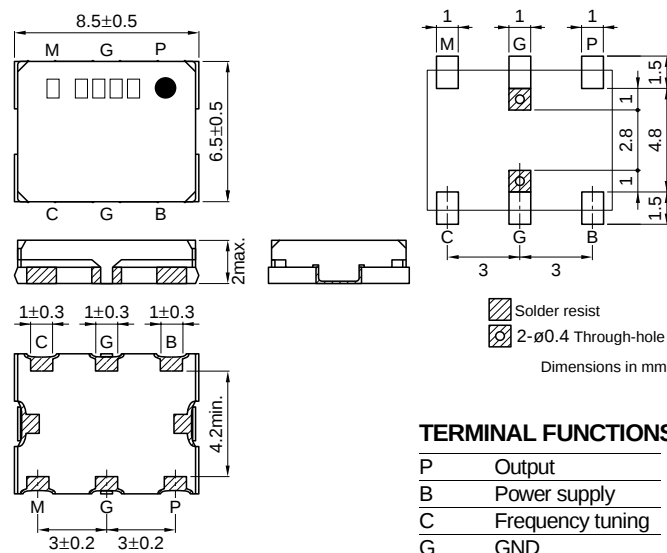
Shift Type

FEATURES

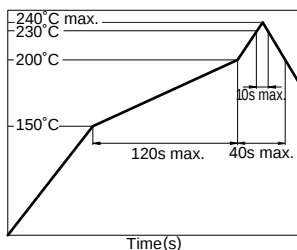
- VCO for mobile communication equipment applications. Roughly 0.7 to 2GHz frequency range, dual mode.
- Area is greatly reduced (41% less area) in comparison to the use of two of the earlier type VCOs (QVC80 series, 8.5×5.5mm).
- Compact, low profile and light weight type (L8.5×W6.5×T1.8mm, 210mg typ.).
- Either single output type for low voltage operation, low power consumption.
- Makes cost reduction possible.

SHAPES AND DIMENSIONS/

RECOMMENDED PC BOARD PATTERN



RECOMMENDED REFLOW SOLDERING CONDITIONS



ELECTRICAL CHARACTERISTICS

PART NO. : QVC811171RT-2094

APPLICATIONS : GSM

Measuring conditions : Ta=25±2°C Vcc=2.75V

Parameter	Unit	Min. value	Typical value	Max. value
Oscillation frequency Band switch Low[0 to 0.1V]	MHz	1130	1151	1171
Band switch High[1.8V to Vcc]	MHz	1171	1191	1212
Current consumption	mA	—	7.3	9
Output power [at Fo]	dBm	−4	−1	+2
C/N ratio [at Fo, Offset frequency=3000kHz, B.W.=1Hz]	dBc/Hz	—	−145	−142
Tuning sensitivity[Vt=0.8 to 2.25V]	MHz/V	40	47	53
Frequency pushing [Vcc=2.75V±5%]	MHz	—	±0.6	±1
Frequency pulling [VSWR=2, all phases]	MHz	—	±1.5	±2
Spurious level	dBc	—	−30	−15
Operating temperature range	°C	−20	—	+75
Storage temperature range	°C	−40	—	+85

PART NO. : QVC811612RT-2097

APPLICATIONS : DCS

Measuring conditions : Ta=25±2°C Vcc=2.75V

Parameter	Unit	Min. value	Typical value	Max. value
Oscillation frequency Band switch Low[0 to 0.1V]	MHz	1540	1568	1596
Band switch High[1.8V to Vcc]	MHz	1584	1612	1640
Current consumption	mA	—	6.5	8
Output power [at Fo]	dBm	−4	−1	+2
C/N ratio [at Fo, Offset frequency=3000kHz, B.W.=1Hz]	dBc/Hz	—	−144	−142
Tuning sensitivity[Vt=0.8 to 2.25V]	MHz/V	48	54	60
Frequency pushing [Vcc=2.75V±5%]	MHz	—	±0.6	±2
Frequency pulling [VSWR=2, all phases]	MHz	—	±1.5	±3
Spurious level	dBc	—	−30	−15
Operating temperature range	°C	−20	—	+75
Storage temperature range	°C	−40	—	+85

PART NO. : QVC811506RT-2143

APPLICATIONS : GSM/DCS

Measuring conditions : Ta=25±2°C Vcc=2.75V

Parameter	Unit	Min. value	Typical value	Max. value
Oscillation frequency Band switch Low[0 to 0.1V]	MHz	1246	1289.5	1333
Band switch High[1.8V to Vcc]	MHz	1463	1506.5	1550
Current consumption	mA	—	7.5	10
Output power [at Fo]	dBm	−4	−1	+3
C/N ratio [at Fo, Offset frequency=3000kHz, B.W.=1Hz]	dBc/Hz	—	−132	−122
Tuning sensitivity[Vt=0.8 to 2.25V]	MHz/V	70	85	90
Frequency pushing [Vcc=2.75V±5%]	MHz	—	±0.8	±1.5
Frequency pulling [VSWR=2, all phases]	MHz	—	±1	±3
Spurious level	dBc	—	−20	−15
Operating temperature range	°C	−20	—	+80
Storage temperature range	°C	−40	—	+85

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