

# RF Modules

## QVC10 Series

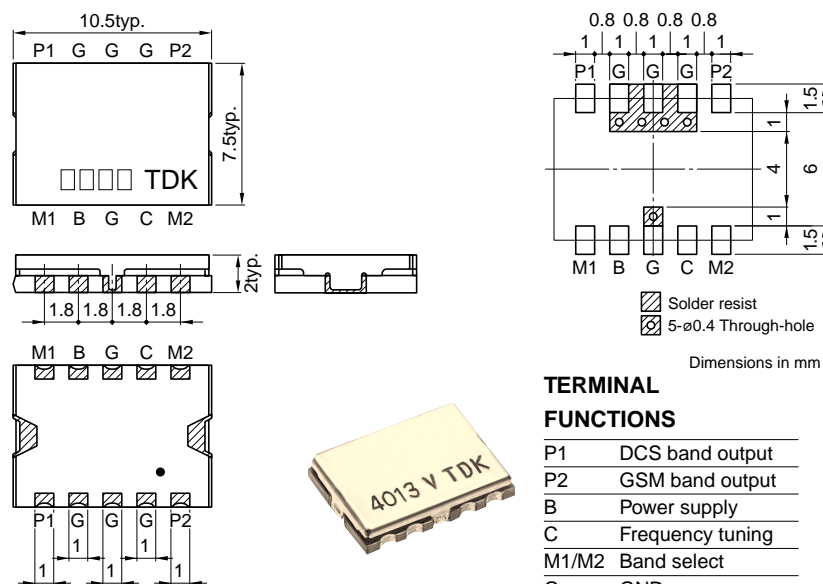
### VCOs

#### For Cellular Phone/Dual Band 10x7

#### FEATURES

- VCO for mobile communication equipment applications. Roughly 0.7 to 2GHz frequency range, dual mode.
- Area is greatly reduced (18% 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 (L10.2×W7.5×T1.9mm, 290mg typ.).
- Either single or dual output type for low voltage operation, low power consumption.
- Makes cost reduction possible.

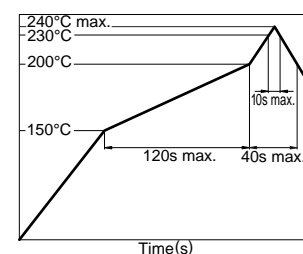
#### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



#### TERMINAL FUNCTIONS

P1	DCS band output
P2	GSM band output
B	Power supply
C	Frequency tuning
M1/M2	Band select
G	GND

#### RECOMMENDED REFLOW SOLDERING CONDITIONS



#### ELECTRICAL CHARACTERISTICS

PART NO. : QVC101747RT-4013

APPLICATIONS : GSM/DCS

Measuring conditions : Ta=25±2°C Vcc=2.7V

Application	Parameter	Unit	GSM			DCS		
			Min. value	Typical value	Max. value	Min. value	Typical value	Max. value
	Oscillation frequency	MHz	880	897.5	915	1710	1747.5	1785
	Current consumption	mA	–	10.5	16	–	15	18
	Output power[at Fo]	dBm	+3	+4.5	–	+3	+4	–
	C/N ratio [at Fo, Offset frequency=25kHz, B.W.=1Hz]	dBc/Hz	–	–137	–132	–	–133	–128
	Tuning sensitivity [Vt=0.8 to 2.8V]	MHz/V	21	26	31	41	49	57
	Frequency pushing [Vcc=3.6±0.2V]	MHz	–	±0.2	±1	–	±0.5	±1.2
	Frequency pulling [VSWR=2, all phases]	MHz	–	±0.9	±2	–	±1	±4
	Spurious level	dBc	–	–28	–15	–	–15	–10
	Operating temperature range	°C	–20	–	+70	–20	–	+70
	Storage temperature range	°C	–40	–	+85	–40	–	+85

**RF Modules****QVC10 Series****VCOs****For Cellular Phone/Dual Band 10x7****ELECTRICAL CHARACTERISTICS****PART NO. : QVC101615RT-4012****APPLICATIONS : GSM/DCS**

Measuring conditions : Ta=25±2°C Vcc=2.5V

Application		GSM			DCS		
Parameter	Unit	Min. value	Typical value	Max. value	Min. value	Typical value	Max. value
Oscillation frequency	MHz	1150	1167.5	1185	1575	1615	1655
Current consumption	mA	–	9	11	–	7	11
Output power[at Fo]	dBm	–3	0	–	–3	0	–
C/N ratio [at Fo, Offset frequency=25kHz, B.W.=1Hz]	dBc/Hz	–	–133	–128	–	–132	–127
Tuning sensitivity [Vt=0.8 to 2.8V]	MHz/V	21	26	31	41	49	57
Frequency pushing [Vcc=3.6±0.2V]	MHz	–	±0.2	±1	–	±0.2	±1
Frequency pulling [VSWR=2, all phases]	MHz	–	±0.6	±2	–	±1.3	±2.5
Spurious level	dBc	–	–30	–15	–	–25	–15
Operating temperature range	°C	–20	–	+70	–20	–	+70
Storage temperature range	°C	–40	–	+85	–40	–	+85

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