

RF Modules

QVC10 Series

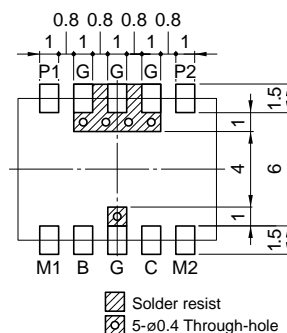
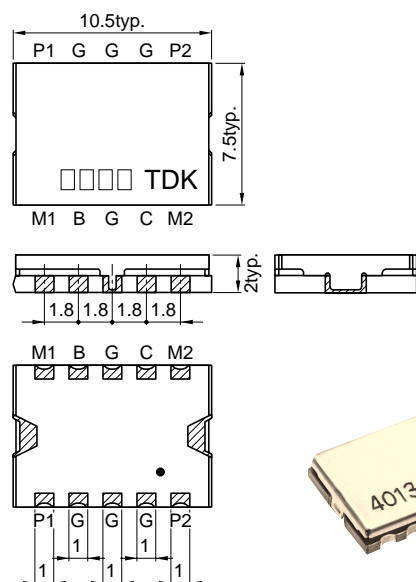
VCOs

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

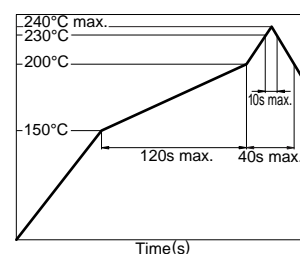


Dimensions in mm

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 | | GSM | | | DCS | | |
|--|--------|------------|---------------|------------|------------|---------------|------------|
| Parameter | Unit | 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 |

• Company and product names mentioned are registered trademarks.