Fuel The Digital World

QTT216

Temperature Compensated Crystal Oscillator

Features

- Frequency range : 10MHz to 70MHz
- SMD seam sealing ceramic package
- Supply voltage : 1.8V & 3.3V
- Clipped Sinewave output
- Low power consumption
- Voltage control function available
- External dimensions (mm)
  L : 2.0 x W : 1.6 x H : 0.8
- RoHS compliant & Pb free

Applications

- Mobile communications
- GNSS
- Smartphone, Mobile phone
- Wearables
- IoT devices
- Portable radio communications

Electrical Characteristics

Item		QTT216	Conditions
Nominal Frequency Range (F_0)		10MHz ~ 70MHz	
Frequency Tolerance (F_{tol})		±2.0 ppm Max.	Note [1]
Frequency Stability	vs Temperature	±0.5ppm, ±2.0ppm	Note [2]
	vs Load	±0.2 ppm Max.	Load ±10%
	vs Supply Voltage	±0.2 ppm Max.	V_{DD} ±5%
Operating Temperature Range (T_{OTR})		-30°C ~ +85°C	
Supply Voltage (V_{DD})		1.8V, 3.3V	
Current Consumption (I_{DD})		2.0 mA Max.	
Output Type		Clipped Sinewave	
Output Load		10kΩ // 10pF	
Output Level		0.8 V(p-p) Min.	Note [3]
Start-up Time		5 ms Max.	
Auto Frequency Control (AFC) Range		±7ppm ~ ±16ppm	VCTCXO, optional, Note [4]
Phase Noise		-135 dBc/Hz Typ.	at 1kHz offset
Aging (F_{aging})		±1 ppm Max.	at 25°C, first year
Storage Temperature Range (T_{STR})		-55°C ~ +125°C	

Notes:

[1] Refer to nominal frequency after 2 times of reflow at 25°C.

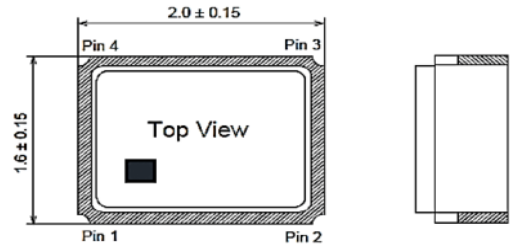
[2] Refer to frequency at 25°C±2°C.

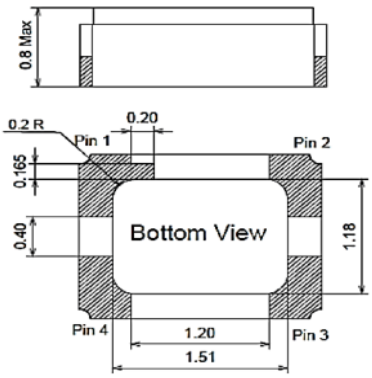
[3] Decoupling capacitor is required in external circuit.

[4] If supply voltage V_{DD} = 3.3V, control voltage V_{con} = 0.5*V_{DD} ± 1.0V.
If supply voltage V_{DD} = 1.8V, control voltage V_{con} = 0.5*V_{DD} ± 0.8V.

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Dimensions



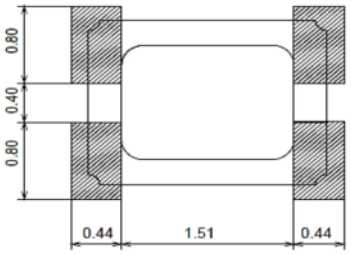


it: mm)

Pin function

Pin	Function	
	TCXO	VCTCXO
1	GND or NC	AFC
2	GND	
3	OUTPUT	
4	V_{DD}	

Recommended pad layout



Ordering Information

QTT216 - 26.000M B G - T

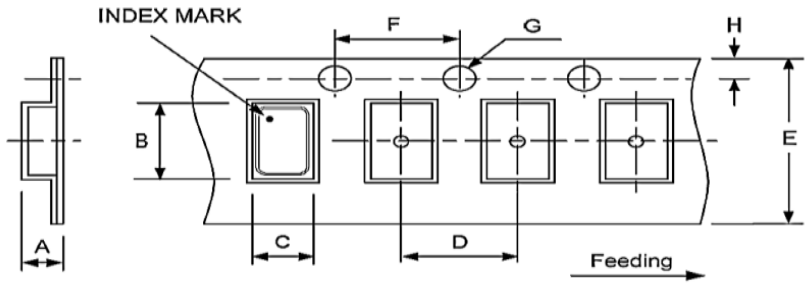
Frequency in Hz
Please contact us for available frequencies

Packaging Method
T Tape & Reel

Supply Voltage
B 3.3 V
D 1.8 V

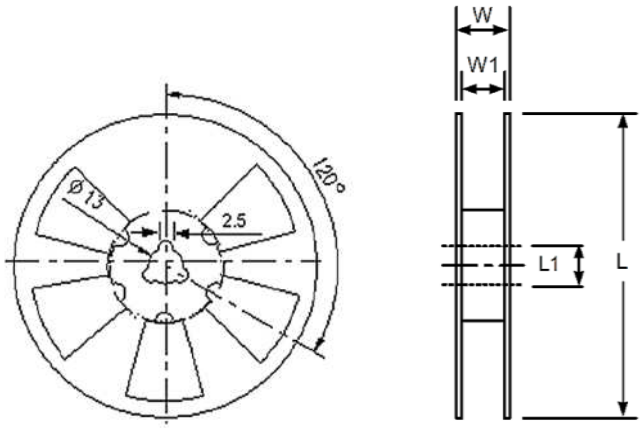
Frequency Stability (over Temp.)
N ± 2.0 ppm (-30˚C ~ +85˚C), TCXO
S ± 2.0 ppm (-30˚C ~ +85˚C), VCTCXO
G ± 0.5 ppm (-30˚C ~ +85˚C), TCXO
V ± 0.5 ppm (-30˚C ~ +85˚C), VCTCXO

Packing



DIMENSIONS	A	B	C	D	E	F	G	H
	0.90	2.30	1.90	4.00	8.00	4.00	1.55	1.75

(Unit: mm)



DIMENSIONS	L	L1	W	W1
	178	13	11.5	8

(Unit: mm)

Reflow Profile

Solder melting point : 220˚C, 60 sec. Min., 200 sec. Max.
Peak temperature : 260˚C, 10 sec. Min., 30 sec. Max.

