

Features

- Frequency range : 10MHz to 52MHz
- SMD seam sealing ceramic package
- Supply voltage : 3.3V
- Free Run Stability for 20 Years : $\pm 4.6\text{ppm}$ (Stratum 3)
- Clipped Sinewave output
- Voltage control function available
- External dimensions (mm)
L : 7.0 x W : 5.0 x H : 2.0
- RoHS compliant & Pb free

Applications

- Wireless communications, Smallcell, Base station
- Precise timing & synchronization network (IEEE1588, Sync.E), OTN, PTN, Switch
- Test and measurement equipment
- Smart grid
- Stratum 3

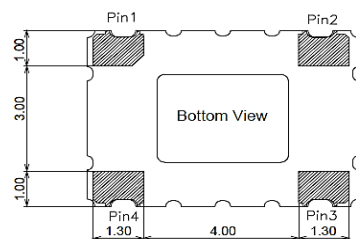
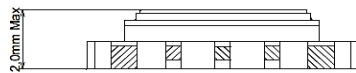
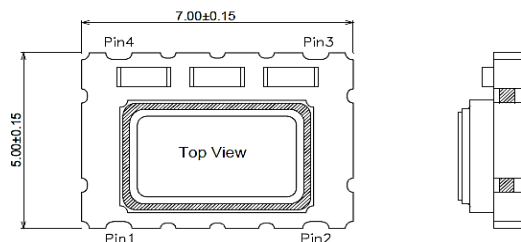
Electrical Characteristics

Item		QTS750	Conditions
Nominal Frequency Range (F_0)		10MHz ~ 52MHz	
Frequency Tolerance (F_{tol})		± 2.0 ppm Max.	Note [1]
Frequency Stability	vs Temperature	$\pm 0.1\text{ppm}$, $\pm 0.28\text{ppm}$, $\pm 0.5\text{ppm}$	Note [2]
	vs Load	± 0.1 ppm Max.	Load $\pm 5\%$
	vs Supply Voltage	± 0.1 ppm Max.	$V_{DD} \pm 5\%$
Operating Temperature Range (T_{OTR})		$-40^\circ\text{C} \sim +85^\circ\text{C}$	
Supply Voltage (V_{DD})		3.3V	
Current Consumption (I_{DD})		5.0 mA Max.	
Output Type		Clipped Sinewave	
Output Load		10k Ω // 10pF	
Output Level		0.8 V(p-p) Min.	Note [3]
Start-up Time		2.5 ms Max.	
Auto Frequency Control (AFC) Range		$\pm 5\text{ppm} \sim \pm 16\text{ppm}$	VCTCXO, optional $V_C = 1.5 \pm 1.0\text{V}$
Phase Noise		-135 dBc/Hz Typ.	at 1kHz offset
Aging (F_{aging})		± 1 ppm Max.	at 25°C , first year
24 Hours Holdover Stability		± 40 ppb Max.	Note [4]
Free Run Stability for 20 Years		± 4.6 ppm Max.	Note [5]
Storage Temperature Range (T_{STR})		$-55^\circ\text{C} \sim +125^\circ\text{C}$	

Notes:

- [1] Refer to nominal frequency, operation after 2 times of reflow at 25°C.
- [2] Refer to $(F_{max} + F_{min})/2$.
- [3] Decoupling capacitor is required in external circuit.
- [4] 24 hours at constant temperature after 48 hours operation
- [5] Inclusive of initial tolerance at 25°C, variations over temperature, supply voltage, load, reflow soldering and aging for 20 years.

Dimensions

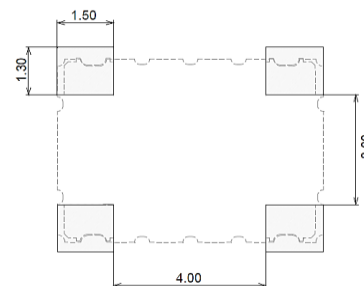


(Unit: mm)

Pin function

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

Recommended pad layout



Ordering Information

QTS750 - 19.200M B P - T

Frequency in Hz

Please contact us for available frequencies

Supply Voltage

B 3.3 V

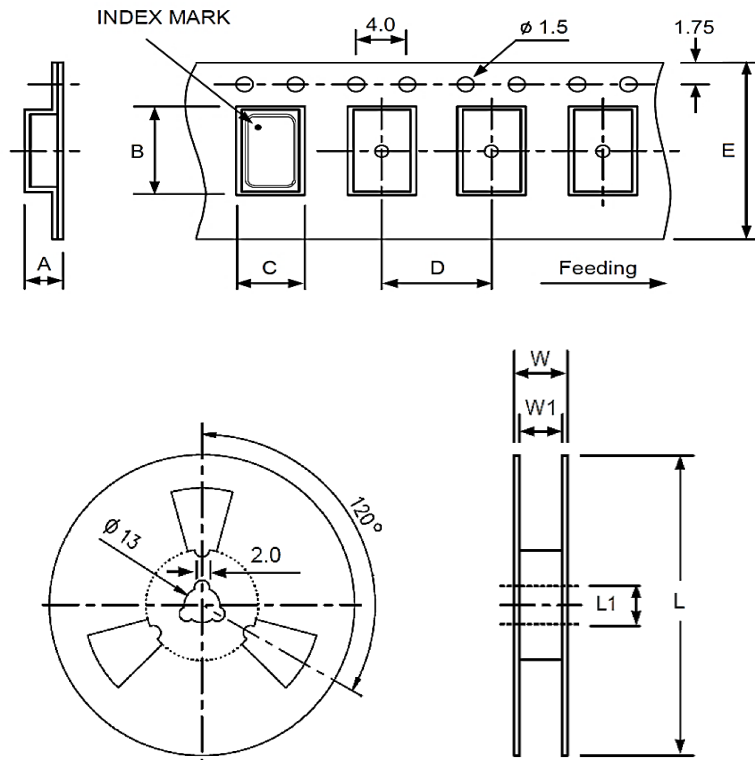
Packaging Method

T Tape & Reel

Frequency Stability (over Temp.)

F	± 0.5 ppm	(-40°C ~ +85°C),	VCTCXO
G	± 0.5 ppm	(-40°C ~ +85°C),	TCXO
O	± 0.28 ppm	(-40°C ~ +85°C),	VCTCXO
P	± 0.28 ppm	(-40°C ~ +85°C),	TCXO
T	± 0.1 ppm	(-40°C ~ +85°C),	VCTCXO
U	± 0.1 ppm	(-40°C ~ +85°C),	TCXO

Packing



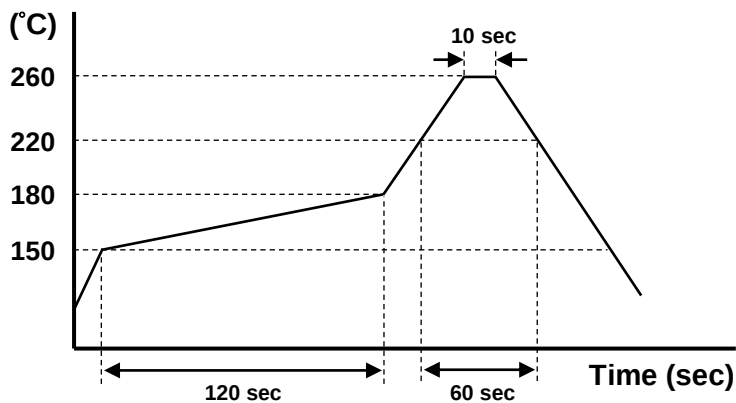
DIMENSIONS	A	B	C	D	E	L	L1	W	W1
	2.00	7.90	5.45	8.00	16.0	180.0	13.0	20.5	16.0

(Unit: mm)

Reflow Profile

Solder melting point : $220^{\circ}\text{C} \pm 10^{\circ}\text{C}$, 60 sec. Min., 200 sec. Max.

Peak temperature : $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$, 10 sec. Min., 30 sec. Max.



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