

Features

- Frequency range : 10MHz to 52MHz
- SMD seam sealing ceramic package
- Supply voltage : 3.3V
- Free Run Stability for 20 Years :
±4.6ppm (Stratum 3)
- CMOS output
- Voltage control function available
- External dimensions (mm)
L : 5.0 x W : 3.2 x H : 1.5
- 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

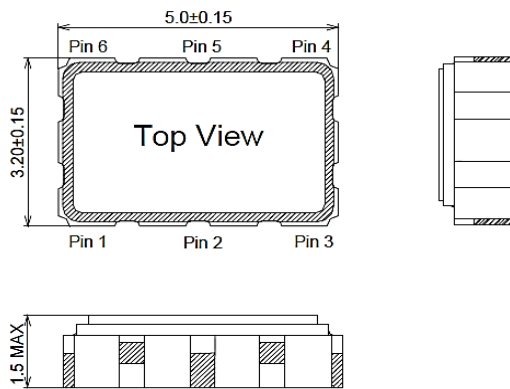
Electrical Characteristics

Item		QTS532C	Conditions
Nominal Frequency Range (F_0)		10MHz ~ 52MHz	
Frequency Tolerance (F_{tol})		±2.0 ppm Max.	Note [1]
Frequency Stability	vs Temperature	±0.1ppm, ±0.28ppm, ±0.5ppm	Note [2]
	vs Load	±0.1 ppm Max.	Load ±5%
	vs Supply Voltage	±0.1 ppm Max.	$V_{DD} \pm 5\%$
Operating Temperature Range (T_{OTR})		-40°C ~ +85°C	
Supply Voltage (V_{DD})		3.3V	
Current Consumption (I_{DD})		5.0 mA Max.	
Output Type		CMOS	
Output Load		15 pF	
Output Voltage High (V_{OH})		90% V_{DD} Min.	
Output Voltage Low (V_{OL})		10% V_{DD} Max.	
Start-up Time		2.5 ms Max.	
Auto Frequency Control (AFC) Range		±5ppm ~ ±16ppm	VCTCXO, optional $V_C = 1.5 \pm 1.0V$
Phase Noise		-130 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 [3]
Free Run Stability for 20 Years		±4.6 ppm Max.	Note [4]
Storage Temperature Range (T_{STR})		-55°C ~ +125°C	

Notes:

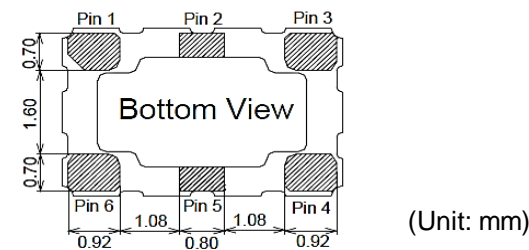
- [1] Refer to nominal frequency, operation after 2 times of reflow at 25°C.
- [2] Refer to $(F_{max} + F_{min})/2$.
- [3] 24 hours at constant temperature after 48 hours operation
- [4] Inclusive of initial tolerance at 25°C, variations over temperature, supply voltage, load, reflow soldering and aging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

Dimensions

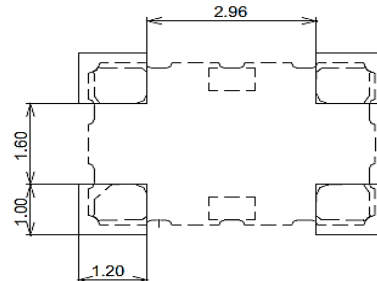


Pin function

Pin	Function	
	TCXO	VCTCXO
Pin 1	GND or NC	AFC
Pin 2	NC	
Pin 3	GND	
Pin 4	OUTPUT	
Pin 5	NC	
Pin 6	V _{DD}	



Recommended pad layout



Ordering Information

QTS532C - 19.200M B P - T

Frequency in Hz
Please contact us for available frequencies

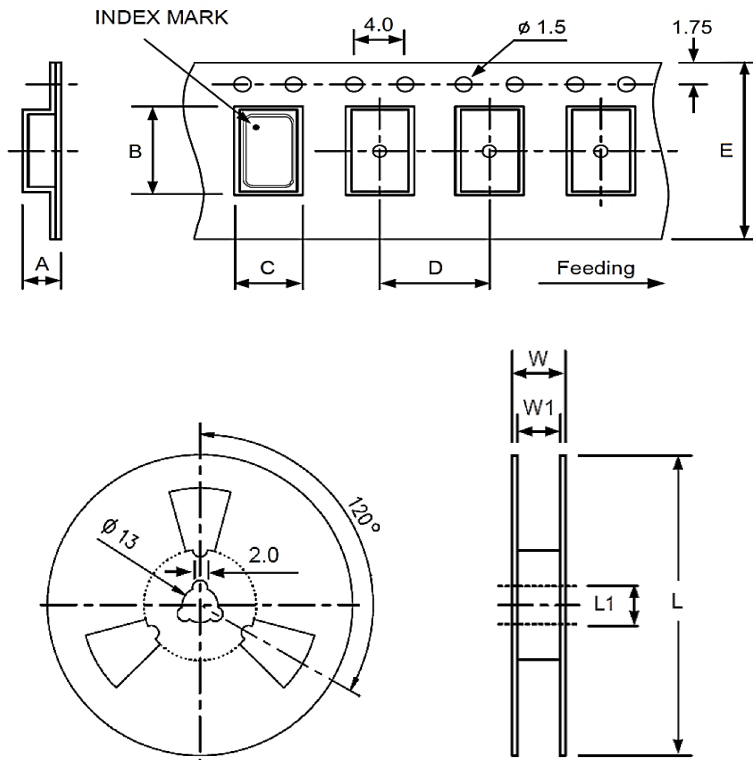
Supply Voltage
B 3.3 V

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
		1.46	5.50	3.60	8.00	12.00	180	13.0	15.4

(Unit: mm)

Reflow Profile

Solder melting point : 220°C ± 10°C, 60 sec. Min., 200 sec. Max.

Peak temperature : 260°C ± 10°C, 10 sec. Min., 30 sec. Max.

