

### Features

- Frequency range : 10MHz to 52MHz
- 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 : 3.2 x W : 2.5 x H : 1.0
- RoHS compliant & Pb free

### Applications

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

### Electrical Characteristics

Item		QTT325	Conditions
Nominal Frequency Range ( $F_0$ )		10MHz ~ 52MHz	
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.	$V_{DD} \pm 5\%$
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.

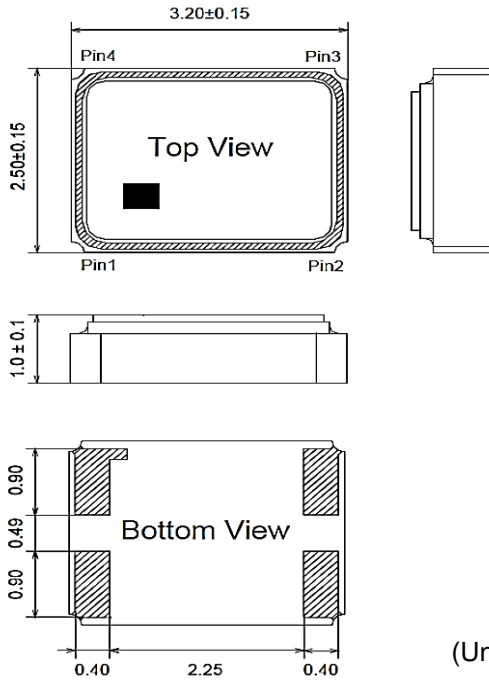
[2] Refer to frequency at 25°C±2°C.

[3] Decoupling capacitor is required in external circuit.

[4] If supply voltage  $V_{DD} = 3.3V$ , control voltage  $V_{con} = 0.5 * V_{DD} \pm 1.0V$ .

If supply voltage  $V_{DD} = 1.8V$ , control voltage  $V_{con} = 0.5 * V_{DD} \pm 0.8V$ .

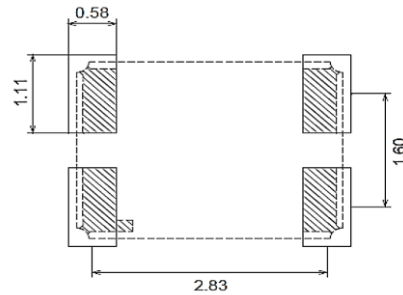
### Dimensions



### Pin function

Pin	Function	
	TCXO	VCTCXO
1	GND or NC	AFC
2	GND	
3	OUTPUT	
4	V <sub>DD</sub>	

### Recommended pad layout



(Unit: mm)

### Ordering Information

**QTT325 - 26.000M B G - T**

**Frequency in Hz**

Please contact us for available frequencies

**Supply Voltage**

B	3.3 V
D	1.8 V

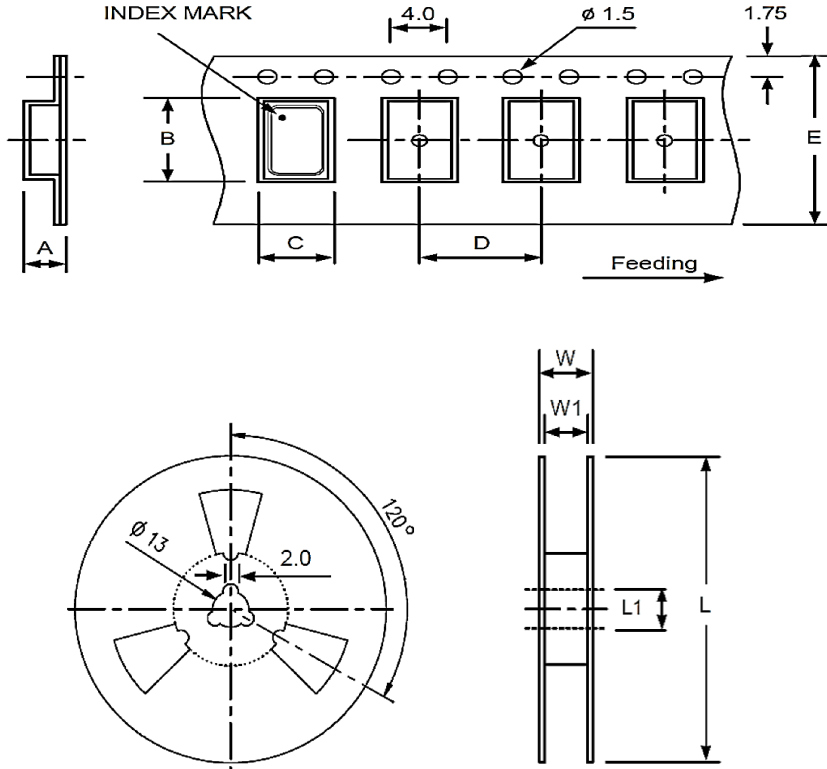
**Packaging Method**

T	Tape & Reel
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**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	L	L1	W	W1
	1.40	3.40	2.70	4.00	8.0	178.0	13.0	11.5	8.0

(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.

