

Travelling Merchant: _____

DATASHEET

Standard: **T32-Q513-10.00MHz**

P/N: **TC-0002**

| Plot | | | The Label |
|------------------|---------|----------|------------------------|
| Drew | Audited | Approved | Stamp, please! Thanks! |
| | | | |
| Date: 2020.12.21 | | | |

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1、Electrical Parameters

| MODEL: T32-Q513-10.00MHz | | | | | | |
|--------------------------|---|-------------------|------|-------|------------------|---|
| Item | Description | Parameters | | | Unit | Test Condition |
| | | Min. | Typ. | Max. | | |
| Output | Frequency | 10.00 | | | MHz | |
| | Output Waveform | Clipped Sine Wave | | | | |
| | Vp-p | 0.8 | | | V | |
| | Load | 10KΩ//10pF | | | | |
| Frequency Stabilities | Frequency Tolerance vs. Operating Temperature Range | -1 | | +1 | $\times 10^{-6}$ | T_A varied from -40°C to 85°C , measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=3.3\text{V}$, $V_c=1.5\text{V}$, $O_{load}=10\text{K}\Omega//10\text{pF}$, temperature variable speed less than 2°C per minute. |
| | Nominal Frequency Tolerance | -1 | | +1 | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=3.3\text{V}$, $V_c=1.5\text{V}$ within 30 days after ex-works. |
| | Frequency Tolerance vs. Supply Voltage | -0.2 | | +0.2 | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 3.13V to 3.47V, $V_c=1.5\text{V}$ and $O_{Load}=10\text{K}\Omega//10\text{pF}$. |
| | Frequency Tolerance vs. Load | -0.2 | | +0.2 | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=3.3\text{V}$, $V_c=1.5\text{V}$ and $O_{Load}=10\text{K}\Omega//10\text{pF}$. |
| | Aging Tolerance Per Day | -0.02 | | +0.02 | $\times 10^{-6}$ | $T_A=25^{\circ}\text{C}$, $V_{cc}=3.3\text{V}$, $V_c=1.5\text{V}$ and after 1h of operation. |
| | Aging Tolerance 1 Year | -1 | | +1 | $\times 10^{-6}$ | |
| Power Supply | Operating Current | | | 3 | mA | @ 25°C , $V_{cc}=3.3\text{V}$, $V_c=1.5\text{V}$, $O_{Load}=10\text{K}\Omega//10\text{pF}$. |
| | Supply Voltage | 3.13 | 3.3 | 3.47 | V | |
| Voltage Control | Frequency tuning range | -15 | | -9 | $\times 10^{-6}$ | $V_c=0.5\text{V}$. measurement referenced to $V_c=1.5\text{V}$. |
| | | -1 | | +1 | $\times 10^{-6}$ | $V_c=1.5\text{V}$. measurement referenced to Exactly 10.00MHz. |
| | | +9 | | +15 | $\times 10^{-6}$ | $V_c=2.5\text{V}$. measurement referenced to $V_c=1.5\text{V}$. |
| | Linearity | | | 10 | % | |
| | Slope | Positive | | | | |
| | Input Impedance | 100 | | | KΩ | |

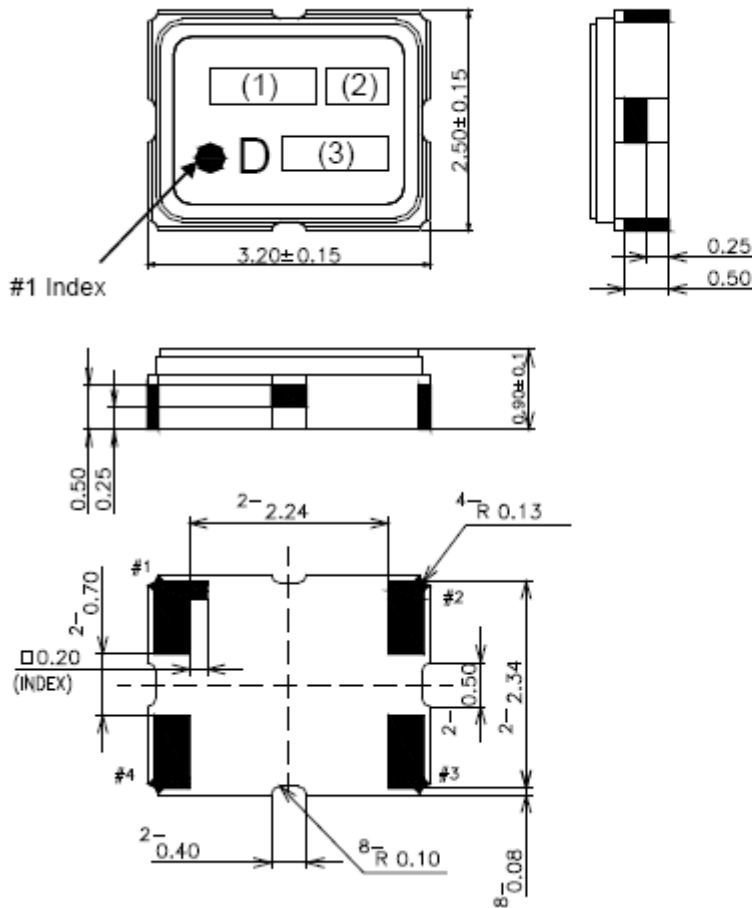


| | | | | | | |
|-----------------------------|--|--|------|------|--------|--------|
| Phase Noise | Phase Noise | | -95 | -90 | dBc/Hz | 10Hz |
| | | | -115 | -110 | | 100Hz |
| | | | -138 | -133 | | 1KHz |
| | | | -140 | -135 | | 10KHz |
| | | | -145 | -140 | | 100KHz |
| | | | -148 | -143 | | 1MHz |
| Environmental Conditions | Operable Temperature | -40 | | +85 | °C | |
| | Storage Temperature | -55 | | +105 | °C | |
| | ESD Level | Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010. | | | | |
| | | Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010. | | | | |
| | Moisture Sensitivity Level | Level 2. | | | | |
| | Vibration | Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z) .IEC 68-2-06 Test Fc. | | | | |
| Shock | 100g; 6ms; half sine wave (3 times for each 3 directions X ,Y , Z),IEC 68-2-27 Test Ea/Severity 50A. | | | | | |



2、 Mechanical Structure(mm)

Outline



Pin Connections

| Pin No. | Connection |
|---------|------------|
| #1 | V_{CONT} |
| #2 | GND |
| #3 | Output |
| #4 | V_{CC} |

Marking

- (1) Frequency 10.00 (MHz, 4digits)
- (2) Model code AN
- (3) Date code Year (1digit) +Week (2digits)
e.g.2017/01/01 → 701

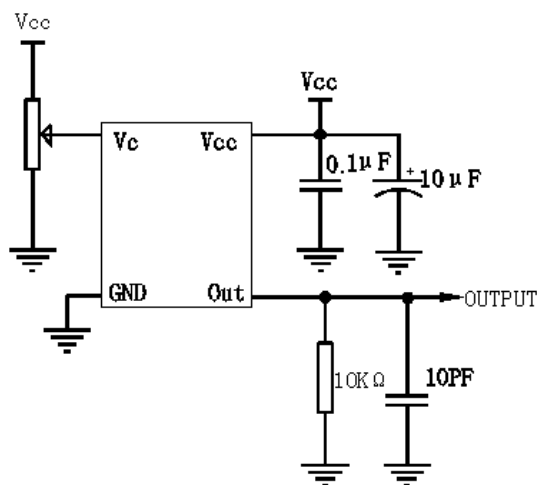
unit: mm

Dimensional Tolerance: ± 0.15

(Unless otherwise noted)

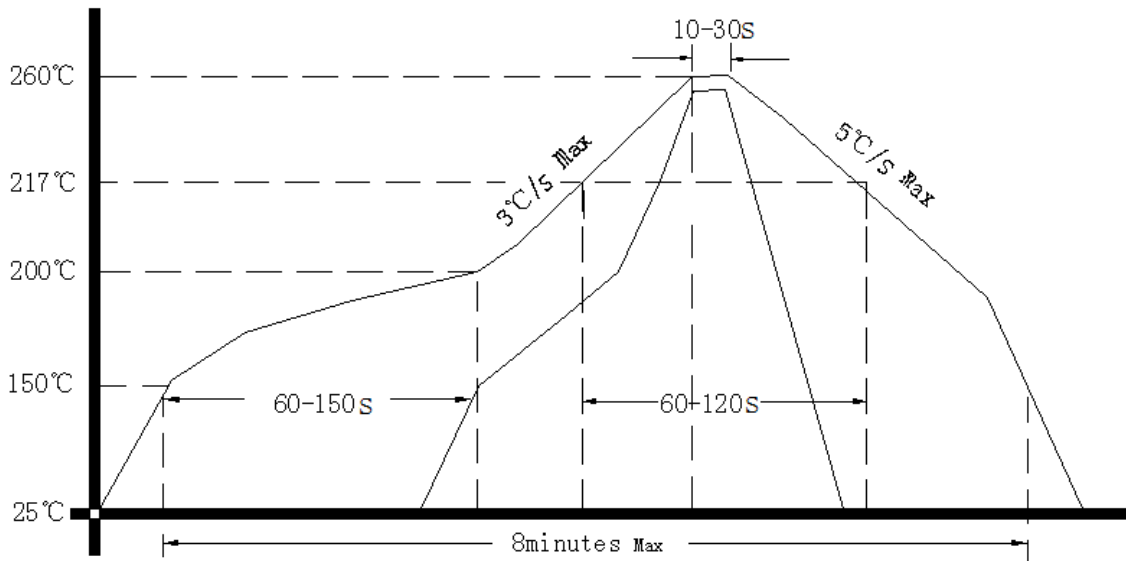
Note1: Tolerance ± 0.2 mm without mark

3、 Test Circuit





4、 Reflow Soldering Curve (RoHS)



5、 Package: Tape & Reel (mm)

