

Travelling Merchant: _____

DATASHEET

Standard: **T22-F513-19.20MHz**

P/N: _____

| Plot | | | The Label |
|------------------|---------|----------|------------------------|
| Drew | Audited | Approved | Stamp, please! Thanks! |
| | | | |
| Date: 2021.09.29 | | | |

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Table of amendment

| Version | Revision contents | Prepared by | Revised date |
|---------|-------------------|--------------|--------------|
| 1.0 | The first issued | <i>Amway</i> | 2021.09.29 |
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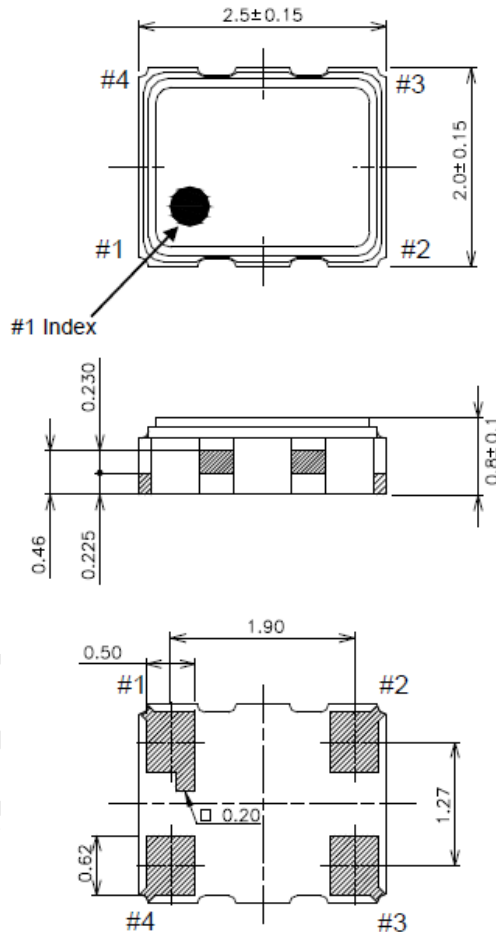
1、Electrical Parameters

| MODEL: T22-F513-19.20MHZ | | | | | | |
|--------------------------|---|-------------------|------|------|------------------|--|
| Item | Description | Parameters | | | Unit | Test Condition |
| | | Min. | Typ. | Max. | | |
| Output | Frequency | 19.20 | | | MHz | |
| | Output Waveform | Clipped Sine Wave | | | | |
| | Vp-p | 0.8 | | | V | |
| | Load | 10KΩ//10pF | | | | |
| Frequency Stabilities | Frequency Tolerance vs. Operating Temperature Range | -0.5 | | +0.5 | $\times 10^{-6}$ | T_A varied from -30°C to 85°C , Ref. to Frequency $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$. |
| | | -1.5 | | +1.5 | $\times 10^{-6}$ | T_A varied from -40°C to -30°C , Ref. to Frequency $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$. |
| | Nominal Frequency Tolerance | -1.5 | | +1.5 | $\times 10^{-6}$ | After 2 times reflow,Ref.to nominal Frequency ($T_A=25^{\circ}\text{C}$),leave after Reflow in 2h or more at room ambient |
| | 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, $V_c=1.65\text{V}$ and $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$. |
| | Frequency Tolerance vs. Load | -0.2 | | +0.2 | $\times 10^{-6}$ | 10%Load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.65\text{V}$ and $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$. |
| | Aging Tolerance 1 Years | -1 | | +1 | $\times 10^{-6}$ | $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=3.3\text{V}$, and after 1h of operation. |
| | Aging Tolerance 10 Years | -5 | | +5 | $\times 10^{-6}$ | |
| Phase Noise | Phase Noise @25°C | | -130 | | dBc/Hz | 1KHz |
| Power Supply | Operating Current | | | 1.5 | mA | @25°C |
| | Supply Voltage | 3.13 | 3.3 | 3.47 | V | |
| Voltage Control | Frequency tuning range | | | -15 | $\times 10^{-6}$ | $V_c=0.65\text{V}$. measurement referenced to $V_c=1.65\text{V}$. |
| | | -1.5 | | +1.5 | $\times 10^{-6}$ | $V_c=1.65\text{V}$. measurement referenced to Exactly 19.20MHz. |
| | | +15 | | | $\times 10^{-6}$ | $V_c=2.65\text{V}$. measurement referenced to $V_c=1.65\text{V}$. |
| | Slope | Positive | | | | |
| | Input Impedance | 100 | | | KΩ | |



| | | | | | | |
|--------------------------|---|---|--|-----|----|--|
| Environmental Conditions | Operable Temperature | -40 | | +85 | °C | |
| | Storage Temperature | -40 | | +85 | °C | |
| | ESD Level | Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010. | | | | |
| | | Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C. | | | | |
| | 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)



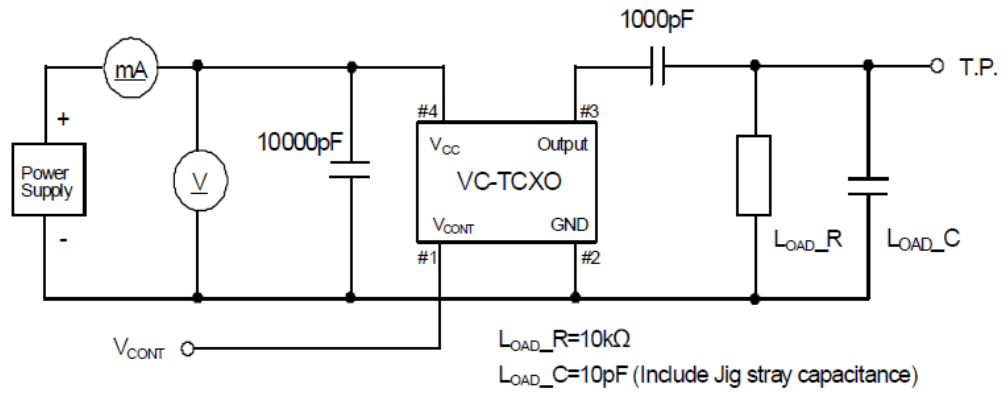
Pin Connections

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

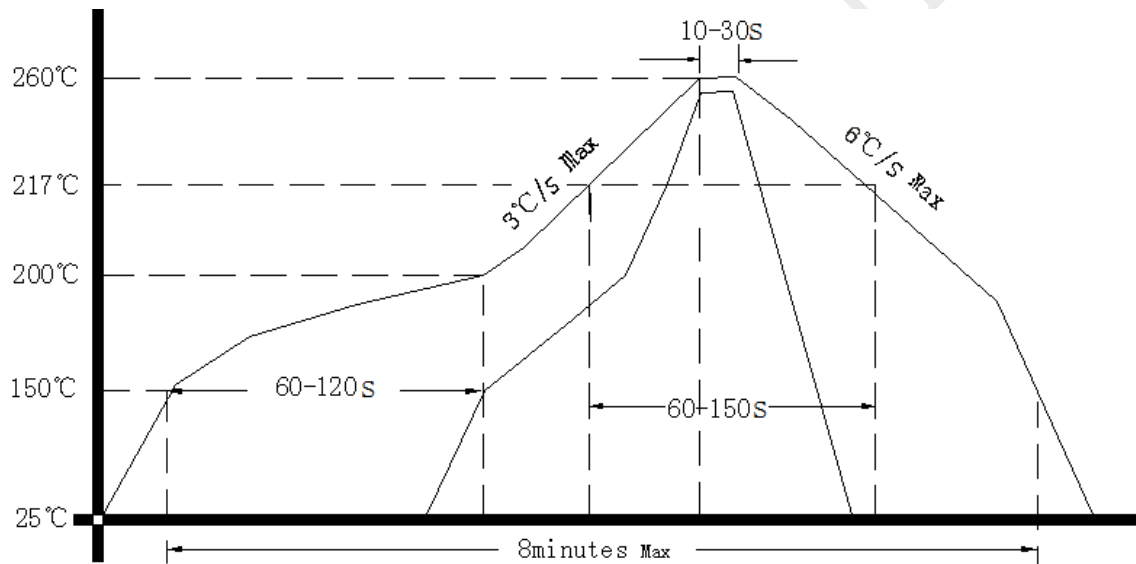
Note1: Tolerance ± 0.2 mm without mark



3、 Test Circuit



4、 Reflow Soldering Curve (RoHS)



5、 Package: Tape & Reel (mm)

