

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard:           **T32-S513-18.432MHz**          

P/N: \_\_\_\_\_

| Plot             |         |          | The Label              |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2023.09.19 |         |          |                        |

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## 1. Electrical Parameters

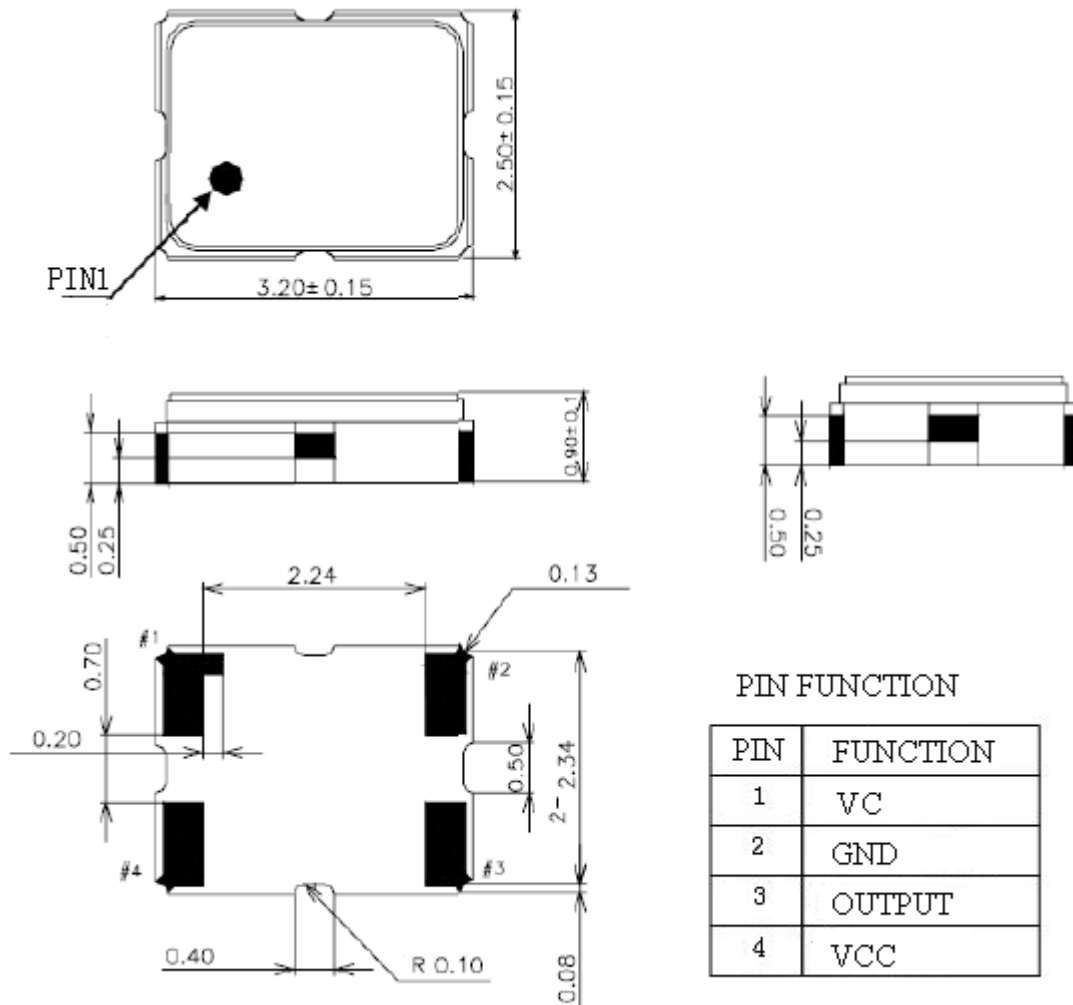
| MODEL: T32-S513-18.432MHz |   |                   |      |       |                  |  |
|---------------------------|---|-------------------|------|-------|------------------|--|
| Item                      | Description   | Parameters        |      |       | Unit             | Test Condition   |
|                           |   | Min.              | Typ. | Max.  |                  |  |
| Output                    | Frequency   | 18.432            |      |       | MHz              |  |
|                           | Output Waveform                                     | Clipped Sine Wave |      |       |                  |  |
|                           | Vp-p  | 0.8               |      |       | V                |  |
|                           | Start Up Time                                       |                   |      | 2     | ms               | @90% of final Vout level   |
|                           | Load  | 10KΩ//10pF        |      |       |                  |  |
| Frequency Stabilities     | Frequency Tolerance vs. Operating Temperature Range | -0.5              |      | +0.5  | $\times 10^{-6}$ | T <sub>A</sub> varied from -40°C to 85°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$ , V <sub>cc</sub> =3.3V, O <sub>load</sub> =10KΩ//10pF, temperature variable speed less than 2°C per minute. |
|                           | Nominal Frequency Tolerance                         | -1                |      | +1    | $\times 10^{-6}$ | Measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V within 30 days after ex-works.  |
|                           | Frequency Tolerance vs. Supply Voltage              | -0.2              |      | +0.2  | $\times 10^{-6}$ | measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>cc</sub> varied from 3.135V to 3.465V, V <sub>c</sub> =1.65V and O <sub>Load</sub> =10KΩ//10pF.  |
|                           | Frequency Tolerance vs. Load                        | -0.2              |      | +0.2  | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V and O <sub>Load</sub> =10KΩ//10pF.   |
|                           | Aging Tolerance Per Day                             | -0.02             |      | +0.02 | $\times 10^{-6}$ | T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V and after 1h of operation.  |
|                           | Aging Tolerance 1 Year                              | -1                |      | +1    | $\times 10^{-6}$ |  |
| Power Supply              | Operating Current                                   |                   |      | 3     | mA               | @25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V, O <sub>Load</sub> =10KΩ//10pF.  |
|                           | Supply Voltage                                      | 3.135             | 3.3  | 3.465 | V                |  |
| Phase Noise               | Phase Noise @25°C                                   |                   | -80  | -75   | dBc/Hz           | 10Hz   |
|                           |   |                   | -105 | -100  |                  | 100Hz  |
|                           |   |                   | -135 | -130  |                  | 1KHz   |
|                           |   |                   | -145 | -140  |                  | 10KHz  |
|                           |   |                   | -150 | -145  |                  | 100KHz   |
|                           |   |                   | -155 | -150  |                  | 1MHz   |



|                          |  |   |  |      |                  |  |
|--------------------------|--|---|--|------|------------------|--|
| Voltage Control          | Frequency tuning range   |   |  | -10  | $\times 10^{-6}$ | $V_c=0V$ . measurement referenced to $V_c=1.65V$ .         |
|                          |  | -1  |  | +1   | $\times 10^{-6}$ | $V_c=1.65V$ . measurement referenced to Exactly 18.432MHz. |
|                          |  | +10   |  |      | $\times 10^{-6}$ | $V_c=3.3V$ . measurement referenced to $V_c=1.65V$ .       |
|                          | Linearity  |   |  | 10   | %                |  |
|                          | Slope  | Positive  |  |      |                  |  |
|                          | Input Impedance  | 100   |  |      |                  | K $\Omega$   |
| Environmental Conditions | Operable Temperature   | -40   |  | +85  | $^{\circ}C$      |  |
|                          | Storage Temperature  | -55   |  | +105 | $^{\circ}C$      |  |
|                          | 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 1.  |  |      |                  |  |
|                          | 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)

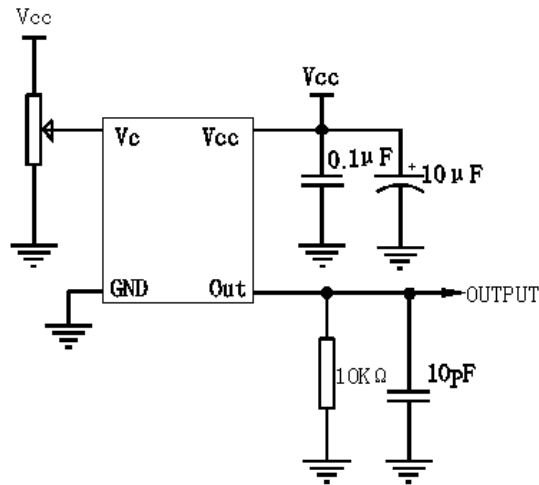


**Note1:** Tolerance  $\pm 0.1$ mm without mark

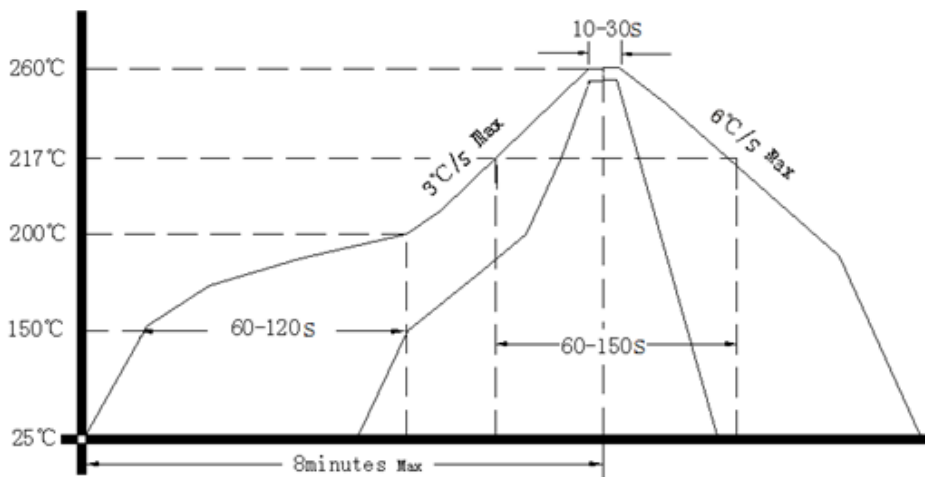
**Note2:** Referential Weight 0.02g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: Tape & Reel (mm)

