

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

# DATASHEET

Standard:     **T32-S519-24.00MHz**    

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

| Plot             |         |          | The Label              |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2023.02.08 |         |          |                        |

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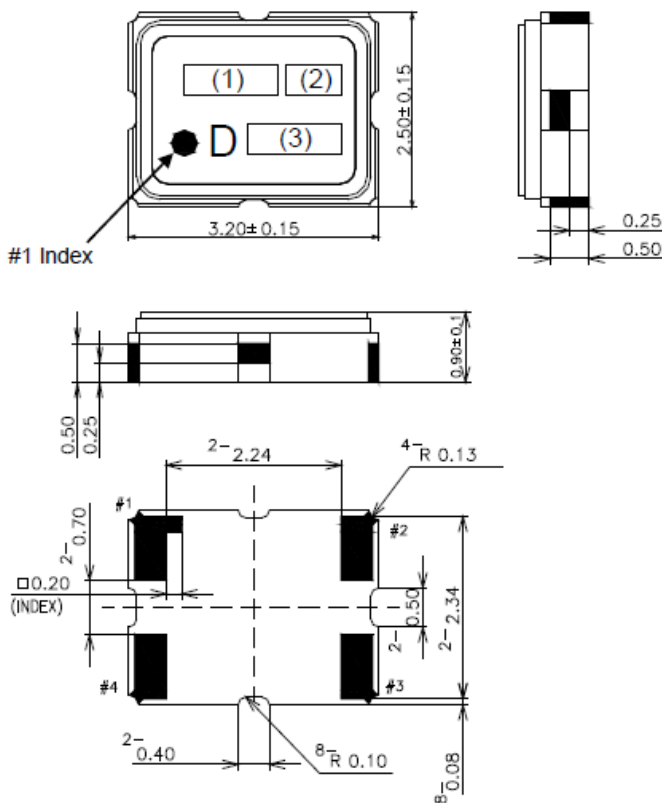
## 1. Electrical Parameters

| MODEL: T32-S519-24.00MHz |   |                   |      |      |                  |  |
|--------------------------|---|-------------------|------|------|------------------|--|
| Item                     | Description   | Parameters        |      |      | Unit             | Test Condition   |
|                          |   | Min.              | Typ. | Max. |                  |  |
| Output                   | Frequency   | 24.00             |      |      | MHz              |  |
|                          | Output Waveform                                     | Clipped Sine Wave |      |      |                  |  |
|                          | Vp-p  | 0.8               |      |      | V                |  |
|                          | Duty Cycle  | 40                | 50   | 60   | %                | @50%   |
|                          | Harmonics Suppression                               |                   |      | -5   | dBc              |  |
|                          | Load  | 10KΩ//10pF        |      |      |                  |  |
|                          | Start-up Time                                       |                   |      | 2    | ms               |  |
| Frequency Stabilities    | Frequency Tolerance vs. Operating Temperature Range | -0.5              |      | +0.5 | $\times 10^{-6}$ | $T_A$ varied from $-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$ , $V_{cc}=3.3\text{V}$ , $O_{load}=10\text{K}\Omega//10\text{pF}$ , temperature variable speed less than $2^{\circ}\text{C}$ per minute. |
|                          | Nominal Frequency Tolerance                         | -1.5              |      | +1.5 | $\times 10^{-6}$ | @ $25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , after 2 times reflow Ref. to before reflow frequency.  |
|                          | 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, and $O_{Load}=10\text{K}\Omega//10\text{pF}$ .  |
|                          | Frequency Tolerance vs. Load                        | -0.2              |      | +0.2 | $\times 10^{-6}$ | 10% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , and $O_{Load}=10\text{K}\Omega//10\text{pF}$ .   |
|                          | Aging Tolerance 1 Year                              | -1                |      | +1   | $\times 10^{-6}$ | $T_A=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , and after 1h of operation.   |
| Power Supply             | Operating Current                                   |                   |      | 2    | mA               | @ $25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $O_{Load}=10\text{K}\Omega//10\text{pF}$ .   |
|                          | Supply Voltage                                      | 3.13              | 3.3  | 3.47 | V                |  |



|                          |  |  |  |      |        |      |
|--------------------------|--|--|--|------|--------|------|
| Phase Noise              | Phase Noise @25°C  |  |  | -130 | dBc/Hz | 1KHz |
| 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; 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      | GND             |
| #2      | GND             |
| #3      | Output          |
| #4      | V <sub>CC</sub> |

### Marking

|                |   |
|----------------|---|
| (1) Frequency  | 24.00 (MHz, 4digits)                                |
| (2) Model code | BN  |
| (3) Date code  | Year (1digit) +Week (2digits)<br>e.g.2017/1/1 → 701 |

unit: mm

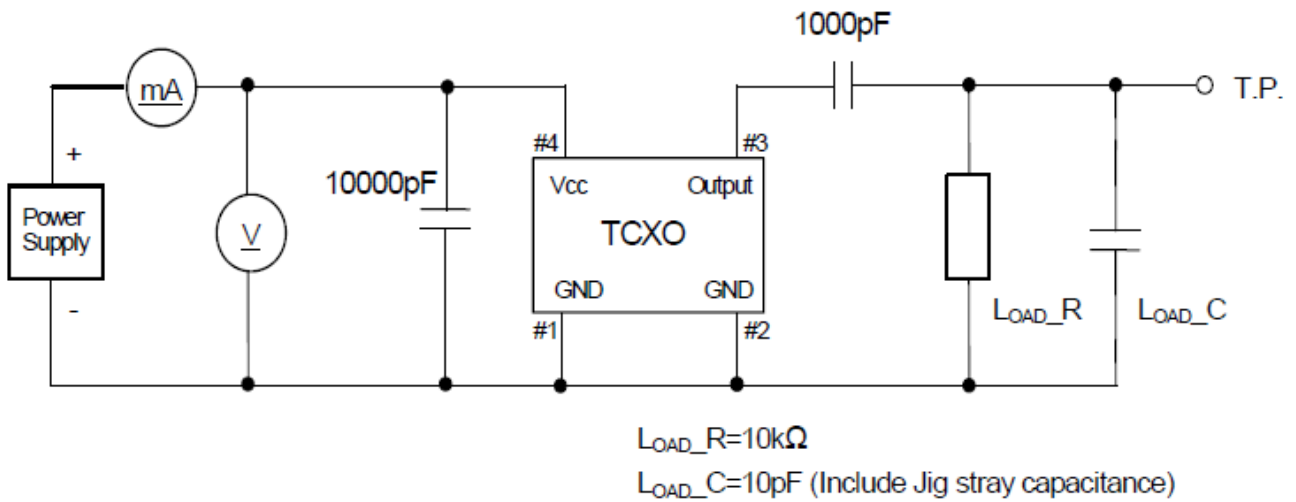
Dimensional Tolerance: ±0.15

(Unless otherwise noted)

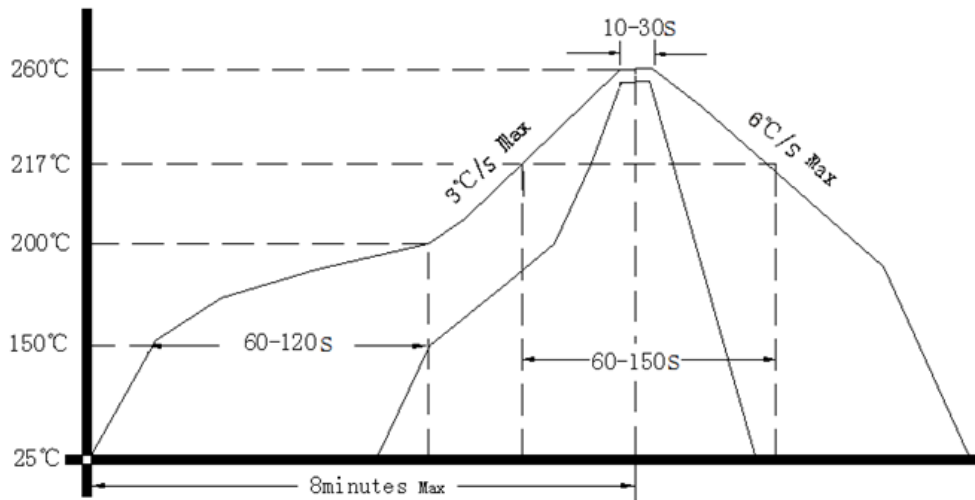
**Note1:** Referential Weight 0.02g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



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

