

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

# DATASHEET

Standard: **T75B-M319-38.88MHz**

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

| Plot             |         |          | The Label              |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2020.12.24 |         |          |                        |

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## 1. Electrical Parameters

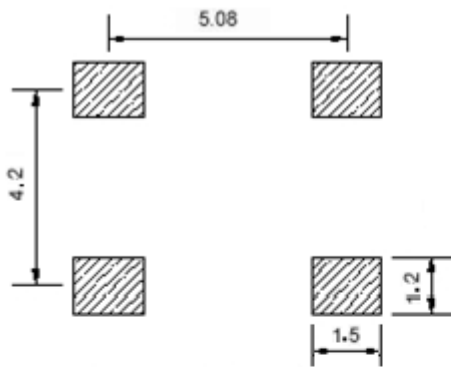
| MODEL: T75B-M319-38.88MHz |   |            |      |       |                  |  |
|---------------------------|---|------------|------|-------|------------------|--|
| Item                      | Description   | Parameters |      |       | Unit             | Test Condition   |
|                           |   | Min.       | Typ. | Max.  |                  |  |
| Output                    | Frequency   | 38.88      |      |       | MHz              |  |
|                           | Output Waveform                                     | HCMOS      |      |       |                  |  |
|                           | Output Low Voltage                                  |            |      | 0.4   | V                | $V_{cc}=3.3V, O_{load}=15\text{ pF}$   |
|                           | Output High Voltage                                 | 2.4        |      |       | V                | $V_{cc}=3.3V, O_{load}=15\text{ pF}$   |
|                           | Duty Cycle  | 45         | 50   | 55    | %                | @50%   |
|                           | Rise / Fall Time<br>(10%~90%)                       |            |      | 8     | ns               | @25°C  |
|                           | Load  | 15         |      |       | pF               |  |
| Frequency Stabilities     | Frequency Tolerance vs. Operating Temperature Range | -0.05      |      | +0.05 | $\times 10^{-6}$ | $T_A$ varied from -40°C to 105°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15\text{ pF}$ , temperature variable speed less than 2°C per minute. |
|                           | Initial Frequency Tolerance                         | -1         |      | +1    | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V$ within 30 days after ex-works.   |
|                           | Frequency Tolerance vs. Supply Voltage              | -0.1       |      | +0.1  | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A=25^\circ\text{C}, V_{cc}$ varied from 3.13V to 3.47V, and $O_{Load}=15\text{ pF}$ .  |
|                           | Frequency Tolerance vs. Load                        | -0.1       |      | +0.1  | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, O_{Load}=15\text{ pF}$ .  |
|                           | Aging Tolerance Per Day                             | -0.01      |      | +0.01 | $\times 10^{-6}$ | $T_A=25^\circ\text{C}, V_{cc}=3.3V$ , and after 1h of operation.   |
|                           | Aging Tolerance 1 Year                              | -1         |      | +1    | $\times 10^{-6}$ |  |
| Power Supply              | Current Consumption                                 |            |      | 10    | mA               | @25°C, $V_{cc}=3.3V, O_{Load}=15\text{ pF}$ .  |
|                           | Supply Voltage                                      | 3.13       | 3.3  | 3.47  | V                |  |



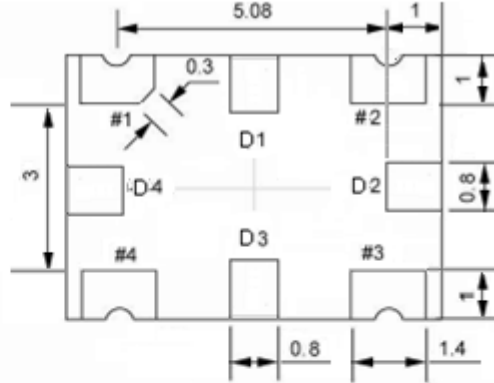
|                             |   |   |      |      |        |        |
|-----------------------------|---|---|------|------|--------|--------|
| Phase Noise                 | Phase Noise<br>@25°C  |   | -90  | -85  | dBc/Hz | 10Hz   |
|                             |   |   | -115 | -110 |        | 100Hz  |
|                             |   |   | -135 | -130 |        | 1KHz   |
|                             |   |   | -148 | -143 |        | 10KHz  |
|                             |   |   | -150 | -145 |        | 100KHz |
|                             |   |   | -151 | -146 |        | 1MHz   |
| Environmental<br>Conditions | Operable Temperature  | -40   |      | +105 | °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<br>Level   | Level 3.  |      |      |        |        |
|                             | Vibration   | Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min,<br>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<br>Test Ea/Severity 50A. |   |      |      |        |        |



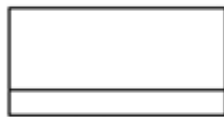
## 2. Mechanical Structure(mm)



Solder pad layout



Bottom view



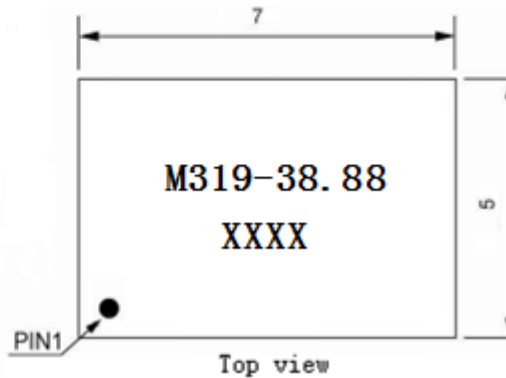
Right view



Side view

PIN FUNCTION

| PIN            | FUNCTION |
|----------------|----------|
| D1, D2, D3, D4 | NC       |
| 1              | NC       |
| 2              | GND      |
| 3              | OUTPUT   |
| 4              | VCC      |

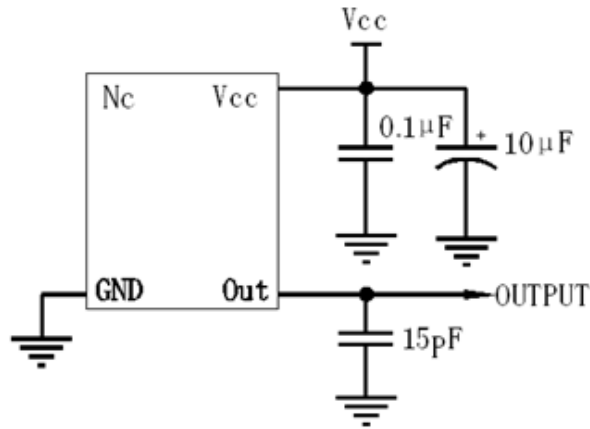


Top view

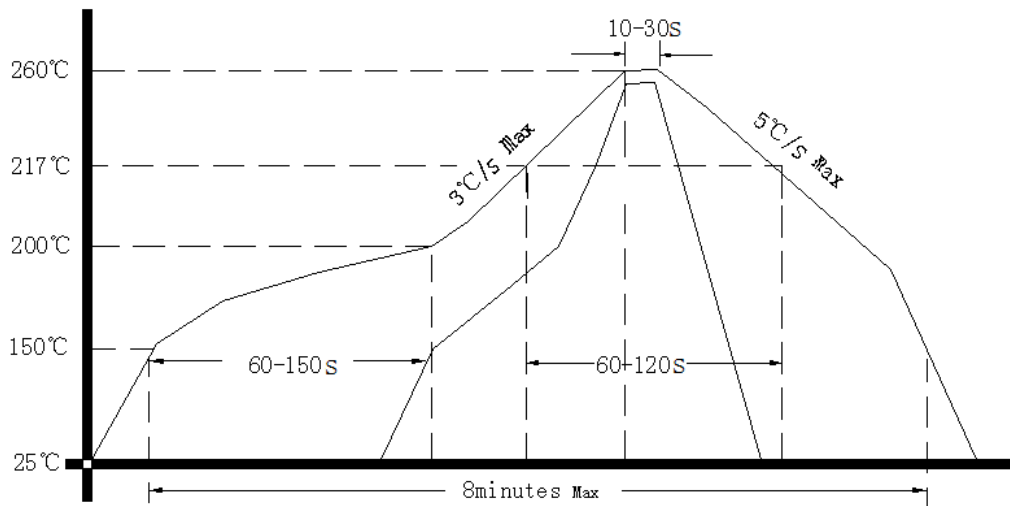
- Note1:** Tolerance  $\pm 0.2\text{mm}$  without mark
- Note2:** Referential Weight 0.2g
- Note3:** The first two xx representative: week  
After two xx representative: year
- Note4:** NC is not connect



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



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

