

**Customer Code:** \_\_\_\_\_

# DATASHEET

**DAPU P/N:** T2016C-B5A9CD-38.40MHz-D1

| <b>DAPU</b>     |                |                 | <b>Customer Approval</b> |
|-----------------|----------------|-----------------|--------------------------|
| Drew            | Audited        | Approved        |                          |
| Jieshu<br>ZHENG | Jianhua<br>LIN | Gangtao<br>FENG |                          |
| Date:           | 2025/1/17      |                 |                          |
|                 |                |                 | Stamp, please! Thanks!   |

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**Table of amendment**

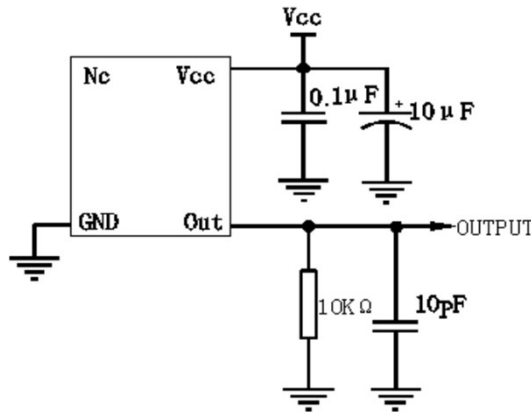
| Version | Revision contents | Prepared by     | Revised date |
|---------|-------------------|-----------------|--------------|
| 1.0     | The first issued  | Jieshu<br>ZHENG | 2025/1/17    |
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## 1、Electrical Parameter

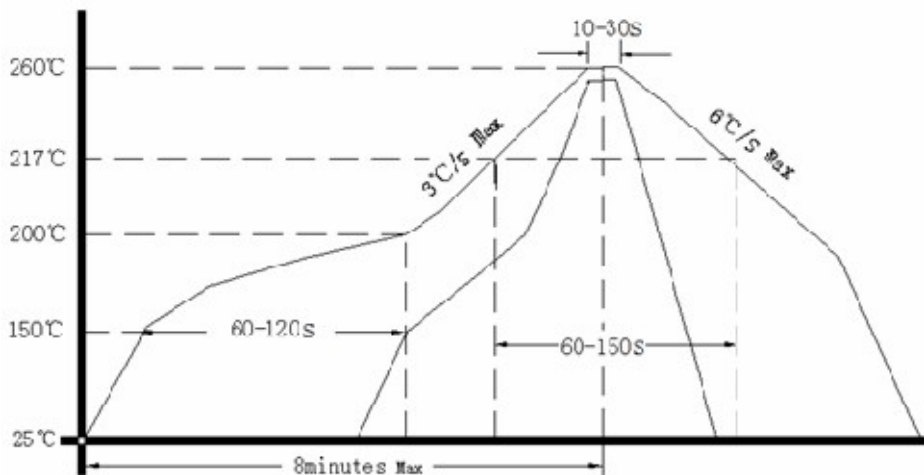
| MODEL:                |                        | T2016C-B5A9CD-38.40MHz-D1 |      |      |                  |   |
|-----------------------|------------------------|---------------------------|------|------|------------------|---|
| No.                   | Description            | Parameters                |      |      | Units            | Test Condition  |
|                       |                        | Min.                      | Typ. | Max. |                  |   |
| Output                | Frequency              | 38.400                    |      |      | MHz              |   |
|                       | Output Waveform        | Clipped Sine Wave         |      |      | -                |   |
|                       | Vp-p                   | 0.8                       |      |      | V                |   |
|                       | Spurious Suppression   |                           |      | -8   | dBc              |   |
|                       | Load                   | 10KΩ//10pF                |      |      | -                |   |
| Frequency Stabilities | Frequency Tolerance    | -1.5                      |      | 1.5  | $\times 10^{-6}$ | @25±2°C, 2H, after 2 times reflow soldering, base on nominal frequency.   |
|                       | vs. Temperature        | -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 <sub>ref</sub> =(f <sub>max</sub> +f <sub>min</sub> )/2, V <sub>CC</sub> =3.3V, O <sub>load</sub> =10KΩ//10pF, temperature variable speed less than 2°C per minute. |
|                       | vs. Supply Voltage     | -0.1                      |      | 0.1  | $\times 10^{-6}$ | measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>CC</sub> =3.3V±10%, and O <sub>Load</sub> =10KΩ//10pF.  |
|                       | vs. Load               | -0.1                      |      | 0.1  | $\times 10^{-6}$ | 10% load change measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>CC</sub> =3.3V, and O <sub>Load</sub> =10KΩ//10pF.   |
|                       | Aging Tolerance 1 Year | -1                        |      | 1    | $\times 10^{-6}$ | T <sub>A</sub> =25°C, V <sub>CC</sub> =3.3V, and after 1h of operation.   |
|                       | Clock Drift            | -15                       |      | 15   | ppb/s            | -40~85°C, 0.17°C/s  |
|                       | Frequency Slope        | -0.1                      |      | 0.1  | ppm/°C           | T <sub>A</sub> varied from -40°C to 85°C  |
| Power Supply          | Current consumption    |                           |      | 2.5  | mA               | @25°C, V <sub>CC</sub> =3.3V, O <sub>Load</sub> =10KΩ//10pF.  |
|                       | Start up Time          |                           |      | 2    | ms               | More than 90% of final output voltage   |
|                       | Supply Voltage         | 1.71                      | 3.30 | 3.63 | V                |   |
| SSB Phase Noise       | Phase Noise@25±2°C     |                           |      | -50  | dBc/Hz           | 1Hz   |
|                       |                        |                           |      | -83  |                  | 10Hz  |
|                       |                        |                           |      | -113 |                  | 100Hz   |
|                       |                        |                           |      | -138 |                  | 1KHz  |
|                       |                        |                           |      | -145 |                  | 10KHz   |
|                       |                        |                           |      | -153 |                  | 100KHz  |
|                       |                        |                           |      | -155 |                  | 1MHz  |
|                       |                        |                           |      |      |                  |   |

|                          |  |  |  |     |    |  |
|--------------------------|--|--|--|-----|----|--|
| Environmental Conditions | Operable Temperature   | -40  |  | 85  | °C |  |
|                          | Storage Temperature  | -55  |  | 105 | °C |  |
|                          | ESD Level  | Human Body Model, class 2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.  |  |     |    |  |
|                          |  | Machine Model, class B: 200V; JEDEC JESD22-A115C.  |  |     |    |  |
|                          | Moisture Sensitivity Level   | Level 3.   |  |     |    |  |
|                          | 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 direction s X ,Y, Z ), IEC 68-2-27 Test Ea/Severity 50A. |  |  |     |    |  |
| Full Package Storage     | Relative humidity (%)  | 20%~70%  |  |     |    |  |
|                          | Temperature (°C)   | -10~35°C   |  |     |    |  |

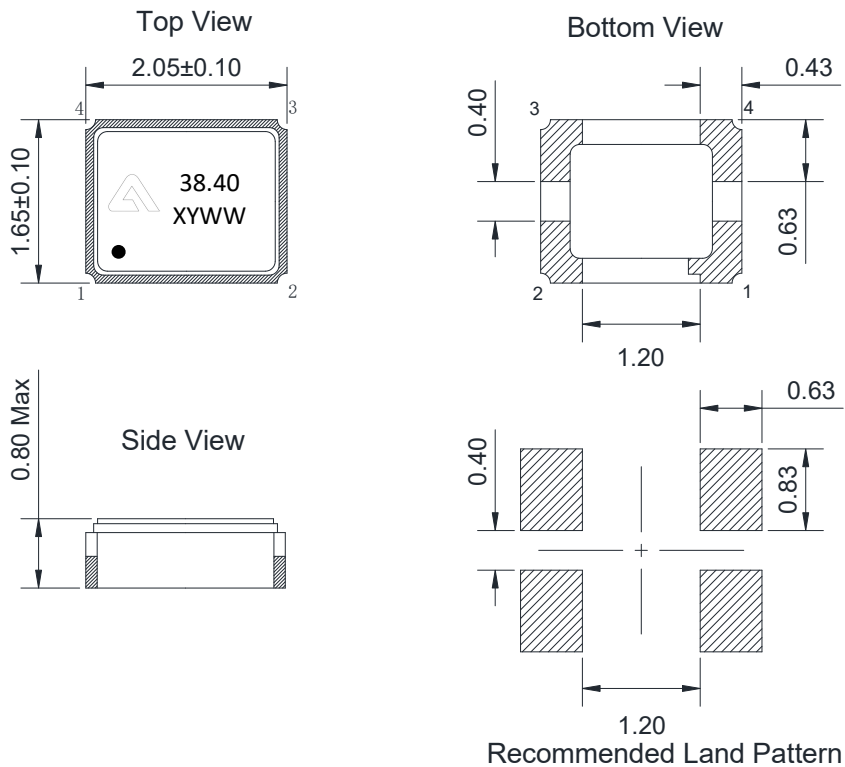
## 2、 Test Circuit



## 3、 Reflow Soldering Curve (RoHS)



#### 4、 Mechanical Structure(mm)



Note: X representative internal code ,Y representative year, WW representative week

| PIN NAME | CONNECTION       |
|----------|------------------|
| PIN1     | NC               |
| PIN2     | GND              |
| PIN3     | F <sub>OUT</sub> |
| PIN4     | V <sub>CC</sub>  |