

Customer Code: _____

DATASHEET

DAPU P/N: DPX3212M000008AA

| DAPU | | | Customer Approval |
|------------------|---------|----------|------------------------|
| Drew | Audited | Approved | Stamp, please! Thanks! |
| Jack | David | William | |
| Date: 2022.05.18 | | | |

Guangdong Dapu Telecom Technology Co.,Ltd

Building 5, No.24, Industrial East Road, Songshanhu Park, Dongguan, Guangdong, P.R. China

TEL: 0086-0769-88010888 FAX: 0086-0769-81800098

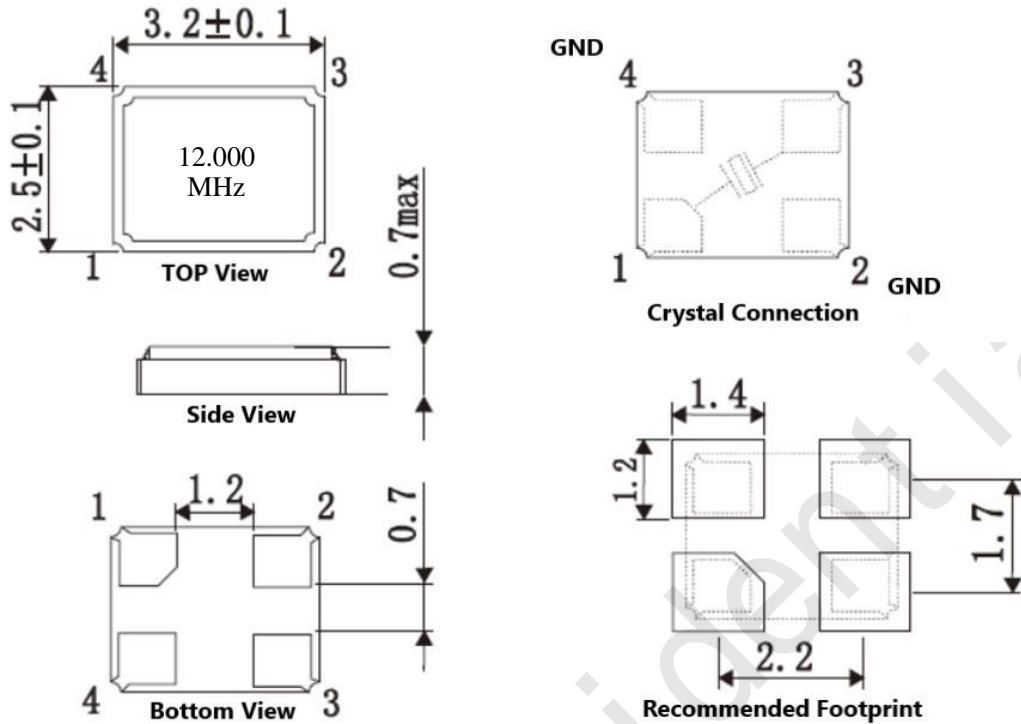


1、Electrical Parameters

| MODEL: DPX3212M000008AA | | | | | | | |
|-------------------------|------------------------------|------|----------------------|------|------|------------------|---|
| For Automotive | | | | | | | |
| No. | Parameters | SYM. | Electrical Spec. | | | | Notes |
| | | | Min. | Typ. | Max. | Units | |
| 1 | Standard | - | Conforms to AEC-Q200 | | | | |
| 2 | Nominal Frequency | FL | 12.00 | | | MHz | |
| 3 | Oscillation Mode | - | Fundamental | | | | |
| 4 | Load Capacitance | CL | 8 | | | pF | |
| 5 | Frequency Tolerance | - | -15 | | +15 | $\times 10^{-6}$ | At 25°C |
| 6 | Frequency Stability | - | -50 | | +50 | $\times 10^{-6}$ | Over Operating Temperature Range (Reference 25°C) |
| 7 | Operating Temperature | Topr | -40 | ~ | +125 | °C | |
| 8 | Storage Temperature | Tstg | -55 | | +125 | °C | |
| 9 | Drive Level | DL | | 100 | 200 | μ W | |
| 10 | Equivalent Series Resistance | ESR | | | 120 | Ω | |
| 11 | Shunt Capacitance | - | | | 3.0 | pF | |
| 12 | Insulation Resistance | IR | 500 | | | M Ω | At DC 100V |
| 13 | Aging | - | -3 | | +3 | $\times 10^{-6}$ | First year at 25°C |

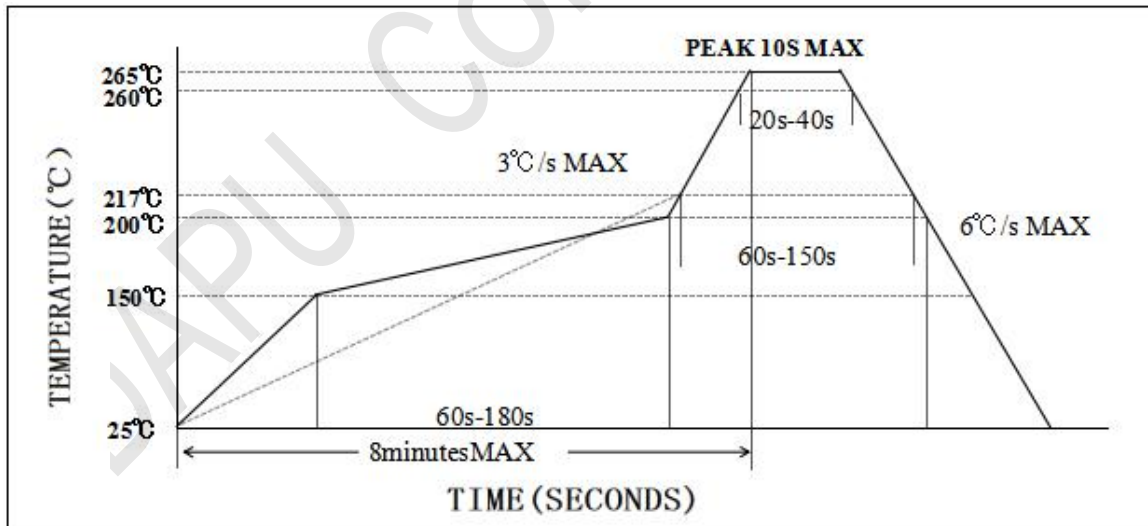


2、Mechanical Structure(mm)



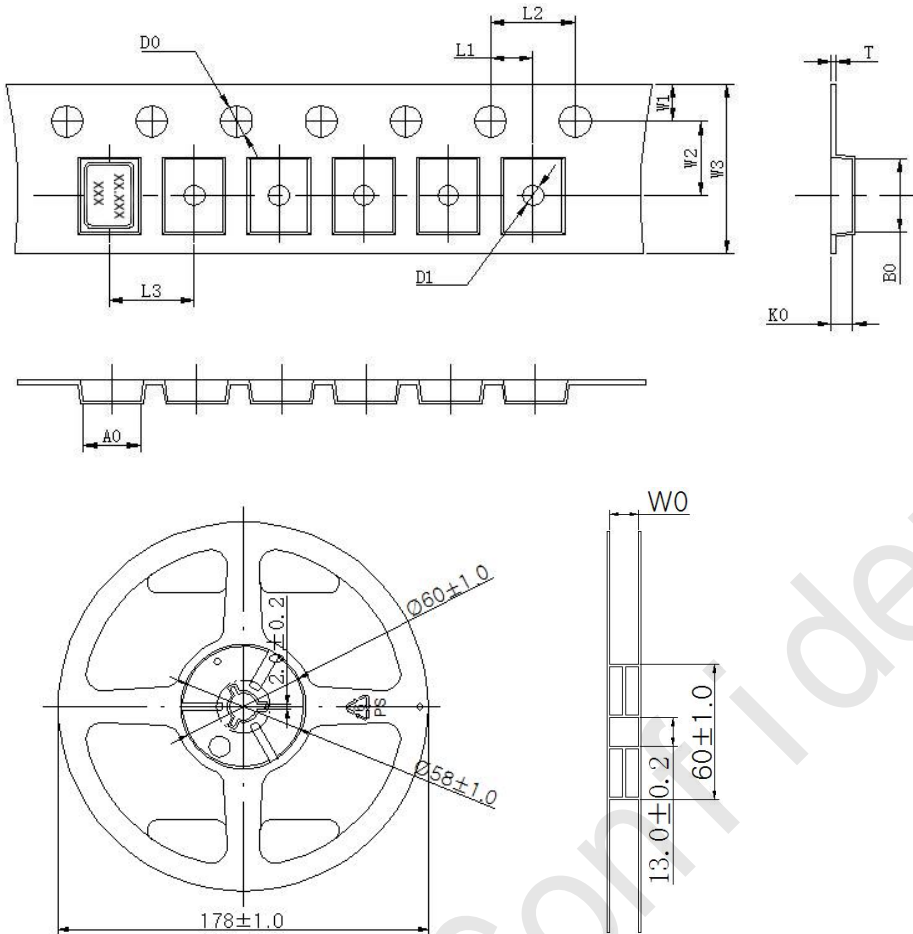
Note1: Tolerance $\pm 0.2\text{mm}$ without mark

3、Reflow Soldering Curve(RoHS)





4、 Package: Tape & Reel (mm)



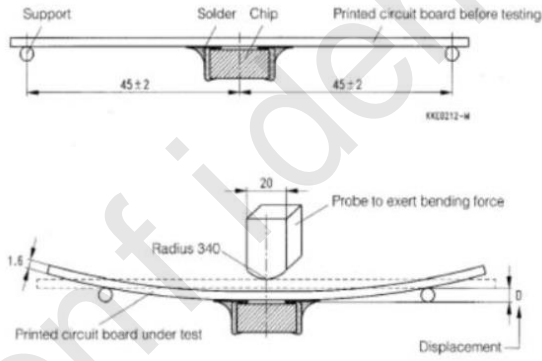
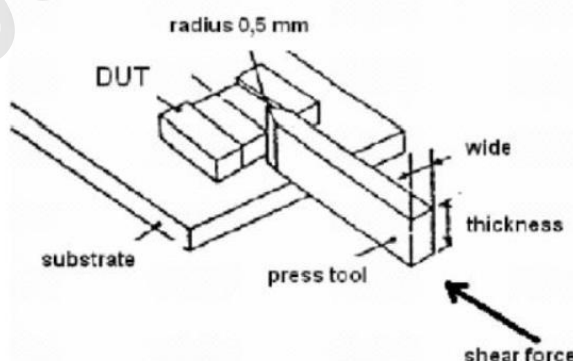
| | |
|----|-----------|
| L1 | 2.00±0.1 |
| L2 | 4.00±0.1 |
| L3 | 4.00±0.1 |
| D0 | 1.50±0.1 |
| D1 | 1.00±0.1 |
| W0 | 8.30±0.2 |
| W1 | 1.75±0.1 |
| W2 | 3.50±0.1 |
| W3 | 8.00±0.1 |
| A0 | 2.72±0.1 |
| B0 | 3.46±0.1 |
| K0 | 1.00±0.1 |
| T | 0.25±0.05 |

5、 Reliability Test Specification

5.1 Reliability Test (Reference AEC-Q200)

| NO. | Test Items | Test Standard | Test Condition | Standard |
|-----|--------------------------|------------------------|---|----------|
| 1 | High temperature storage | MIL-STD-202 Method 108 | The crystal was placed at a temperature of 125°C ± 2°C for 1000 hours. | A、 C、 D |
| 2 | Temperature cycle | JESD22 Method JA-104 | Crystal do 1000 cycles according to the table below temperature. | A、 C、 D |
| 3 | Temperature and humidity | MIL-STD-202 Method 103 | The crystal is placed for 1000 hours at a temperature of 85°C ± 2°C and a humidity of 85% Time. | A、 C、 D |
| 5 | shock | MIL-STD-202 Method 213 | shock method:half sine wave 100G Duration:6ms | A、 C |



| | | | | |
|----|------------------------------|------------------------|--|-------|
| | | | Direction:X, Y, Z Axial, 6 faces, 18 shocks in total. | |
| 6 | Vibration | MIL-STD-202 Method 204 | Vibration frequency:10~2000Hz Vibration amplitude:1.5mm Scan time:20 min Directions:X, Y, Z (12 cycles in each of the three directions) | A、C |
| 7 | Resistance to soldering heat | MIL-STD-202 Method 210 | Reflow soldering: Peak temperature:260±5℃, time: 10s±1s. | A、C、D |
| 8 | Solderability | J-STD-002 | Soldering temperature:245℃±5℃ Immersion time:5 seconds±0.5 seconds Flux:Rosin Resin Methanol Solvent (1 : 4) | E |
| 9 | Panel bending | AEC-Q200-005 | Apply pressure to the center of the product until it bends to a minimum of 2mm and keep 60±5 seconds.  | A、C |
| 10 | Terminal strength | AEC-Q200-006 | Apply a force of 1.8Kg laterally for 60±1 seconds.  | AC |

5.2 Test judgment

| Specification | |
|---------------|---|
| A | Frequency Variation: Within ±5ppm or meet customer specifications. |
| B | Frequency Variation: Within ±10ppm or meet customer specifications. |
| C | Resonant resistance (RR) variation: within ±20% or 5Ω (whichever is greater). |
| D | Test after 24±2 hours under normal temperature and humidity. |
| E | At least 95% of the immersed end is covered with new welding material. |