

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

# DATASHEET

DAPU P/N: DPX3216M000008AA

| DAPU            |         |          | Customer Approval      |
|-----------------|---------|----------|------------------------|
| Drew            | Audited | Approved | Stamp, please! Thanks! |
| Jack            | David   | William  |                        |
| Date: 2022.2.20 |         |          |                        |

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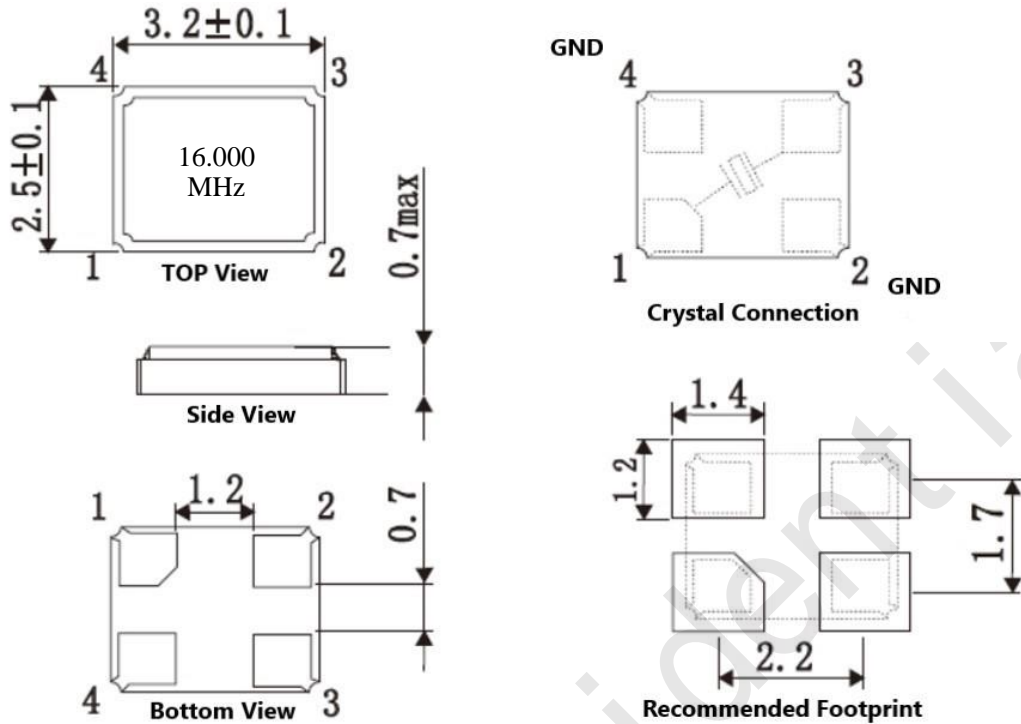


## 1、Electrical Parameters

| MODEL: DPX3216M000008AA |                              |      |                      |      |      |                  |   |
|-------------------------|------------------------------|------|----------------------|------|------|------------------|---|
| For Automotive          |                              |      |                      |      |      |                  |   |
| No.                     | Parameters                   | SYM. | Electrical Spec.     |      |      |                  | Notes   |
|                         |                              |      | Min.                 | Typ. | Max. | Units            |   |
| 1                       | Standard                     | -    | Conforms to AEC-Q200 |      |      |                  |   |
| 2                       | Nominal Frequency            | FL   | 16.00                |      |      | MHz              |   |
| 3                       | Oscillation Mode             | -    | Fundamental          |      |      |                  |   |
| 4                       | Load Capacitance             | CL   | 8                    |      |      | pF               |   |
| 5                       | Frequency Tolerance          | -    | -10                  |      | +10  | $\times 10^{-6}$ | 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   | 1                    | 10   | 100  | $\mu$ W          |   |
| 10                      | Equivalent Series Resistance | ESR  |                      |      | 60   | $\Omega$         |   |
| 11                      | Shunt Capacitance            | -    |                      |      | 3.0  | pF               |   |
| 12                      | Insulation Resistance        | IR   | 500                  |      |      | M $\Omega$       | At DC 100V  |
| 13                      | Aging                        | -    | -3                   |      | +3   | $\times 10^{-6}$ | First year at 25°C                                |

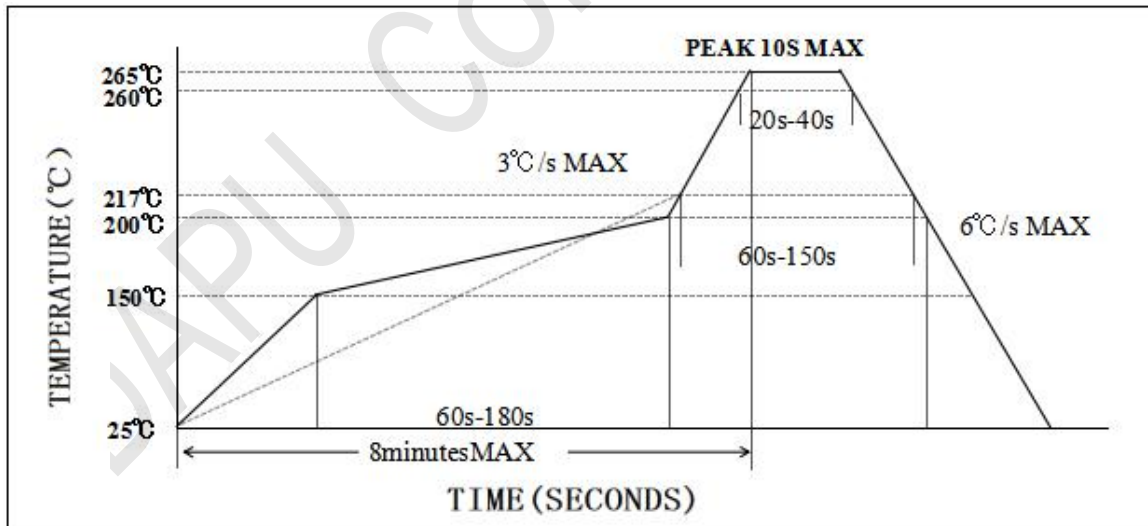


## 2、Mechanical Structure(mm)



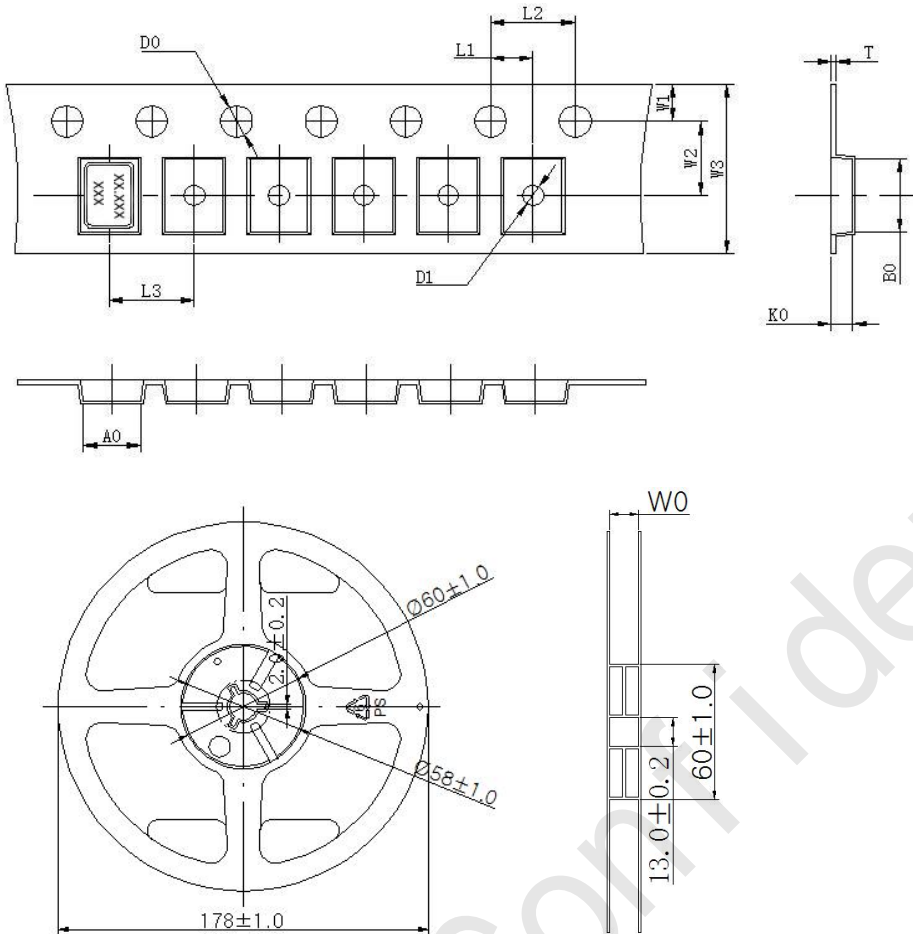
Note1: Tolerance  $\pm 0.2\text{mm}$  without mark

## 3、Reflow Soldering Curve(RoHS)





#### 4、 Package: Tape & Reel (mm)



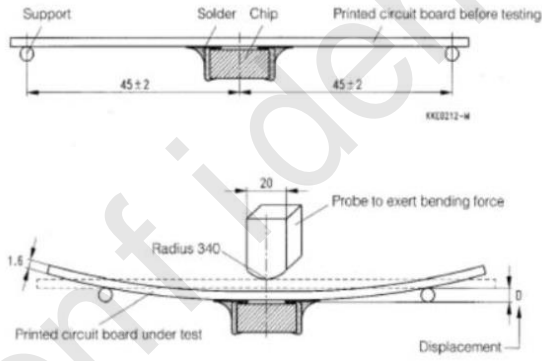
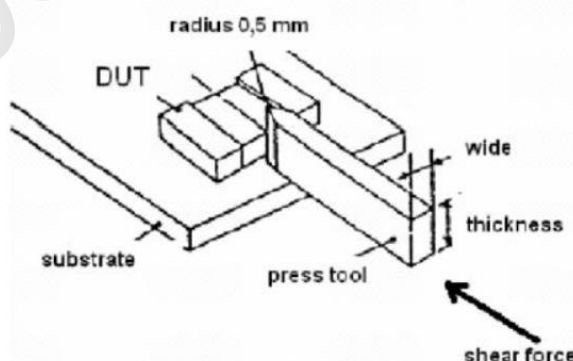
|    |           |
|----|-----------|
| L1 | 2.00±0.1  |
| L2 | 4.00±0.1  |
| L3 | 4.00±0.1  |
| D0 | 1.50±0.1  |
| D1 | 1.00±0.1  |
| W0 | 8.30±0.2  |
| W1 | 1.75±0.1  |
| W2 | 3.50±0.1  |
| W3 | 8.00±0.1  |
| A0 | 2.72±0.1  |
| B0 | 3.46±0.1  |
| K0 | 1.00±0.1  |
| T  | 0.25±0.05 |

#### 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.<br>                            | 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<br>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<br>Vibration amplitude:1.5mm<br>Scan time:20 min<br>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:<br>Peak temperature:260±5℃,<br>time: 10s±1s.   | A、C、D |
| 8  | Solderability                | J-STD-002              | Soldering temperature:245℃±5℃<br>Immersion time:5 seconds±0.5 seconds<br>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.<br> | A、C   |
| 10 | Terminal strength            | AEC-Q200-006           | Apply a force of 1.8Kg laterally for 60±1 seconds.<br>   | 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.        |