

Customer Code: _____

DATASHEET

DAPU P/N: DPX2140M000008AA

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

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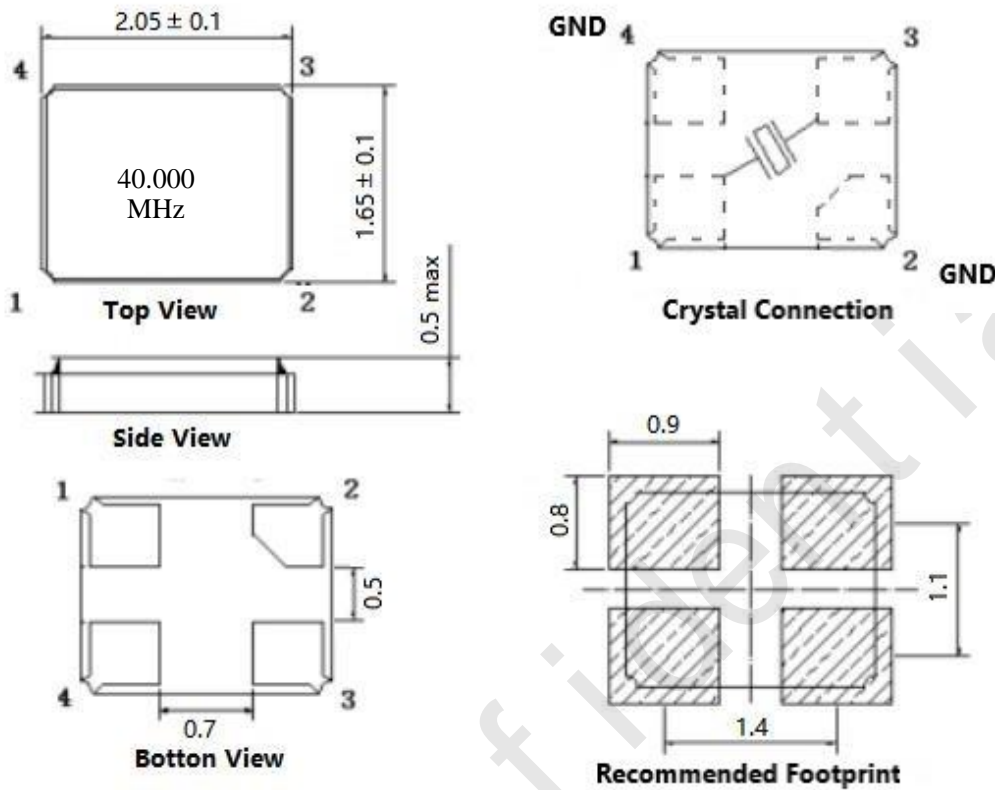
1、Electrical Parameters

MODEL: DPX2140M000008AA**For Automotive**

No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Standard	-	Conforms to AEC-Q200				
2	Nominal Frequency	FL	40.00			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	1	50	200	μ W	
10	Equivalent Series Resistance	ESR			80	Ω	
11	Shunt Capacitance	-			5.0	pF	
12	Insulation Resistance	IR	500			M Ω	At DC 100V
13	Aging	-	-3		+3	$\times 10^{-6}$	First year at 25°C

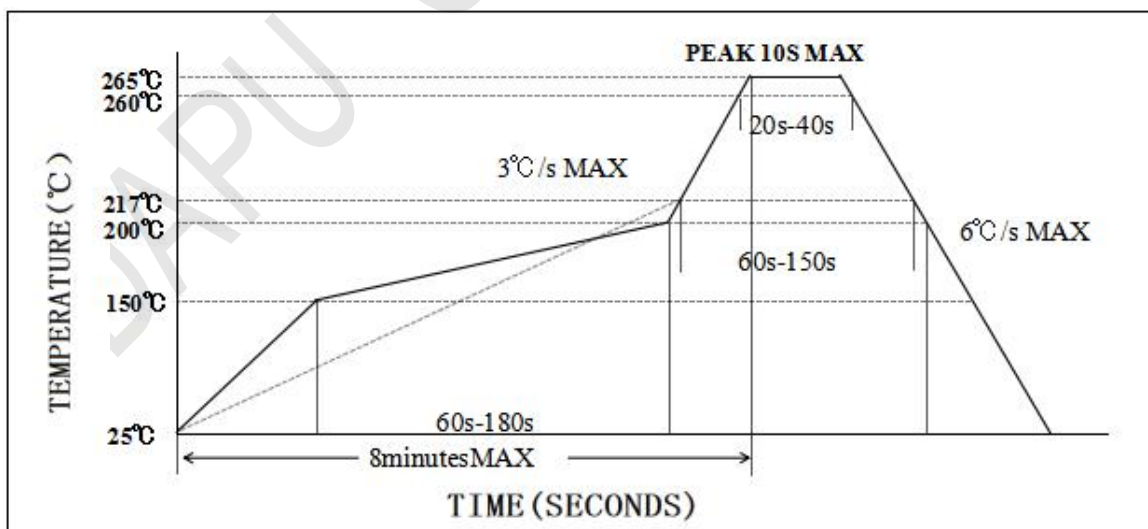


2、Mechanical Structure(mm)



Note1: Tolerance ± 0.2 mm without mark

3、Reflow Soldering Curve(RoHS)





4、 Package: Tape & Reel (mm)

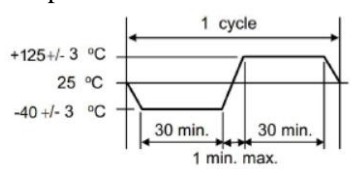
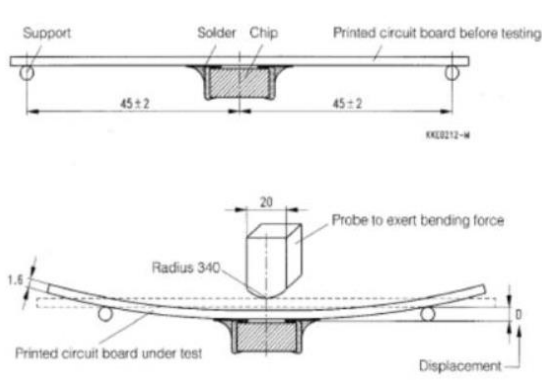


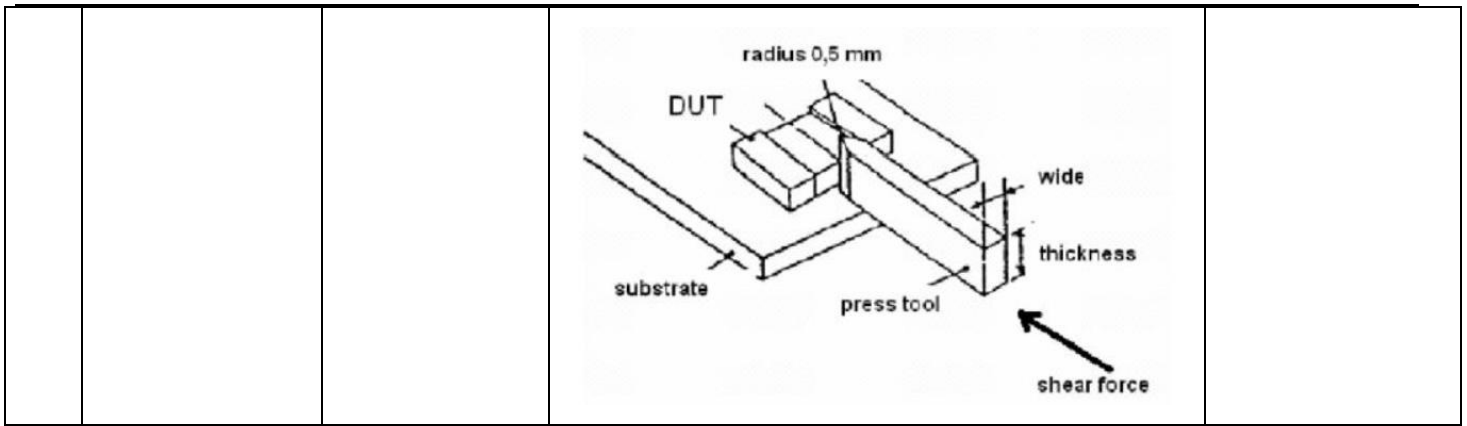
L1	2.00±0.1
L2	4.00±0.1
L3	4.00±0.1
D0	1.50±0.1
D1	0.6±0.1
W0	8.50±0.2
W1	1.75±0.1
W2	3.50±0.1
W3	8.00±0.1
A0	1.85±0.1
B0	2.25±0.1
K0	0.65±0.1
T	0.25±0.05



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 $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 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 $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a humidity of 85% Time.	A、 C、 D
5	shock	MIL-STD-202 Method 213	shock method:half sine wave 100G Duration:6ms Direction:X, Y, Z Axial, 6 faces, 18 shocks in total.	A、 C
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: $260 \pm 5^{\circ}\text{C}$, time: $10\text{s} \pm 1\text{s}$.	A、 C、 D
8	Solderability	J-STD-002	Soldering temperature: $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 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 ± 5 ppm or meet customer specifications.
B	Frequency Variation: Within ± 10 ppm or meet customer specifications.
C	Resonant resistance (RR) variation: within $\pm 20\%$ 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.

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