

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

# DATASHEET

**DAPU P/N:** DPX2124M000008AA02

<b>DAPU</b>			<b>Customer Approval</b>
Drew	Audited	Approved	
Jieshu ZHENG	Jianhua LIN	Gangtao FENG	
Date: 2024/6/13			

Stamp, please! Thanks!

## Guangdong Dapu Telecom Technology Co.,Ltd

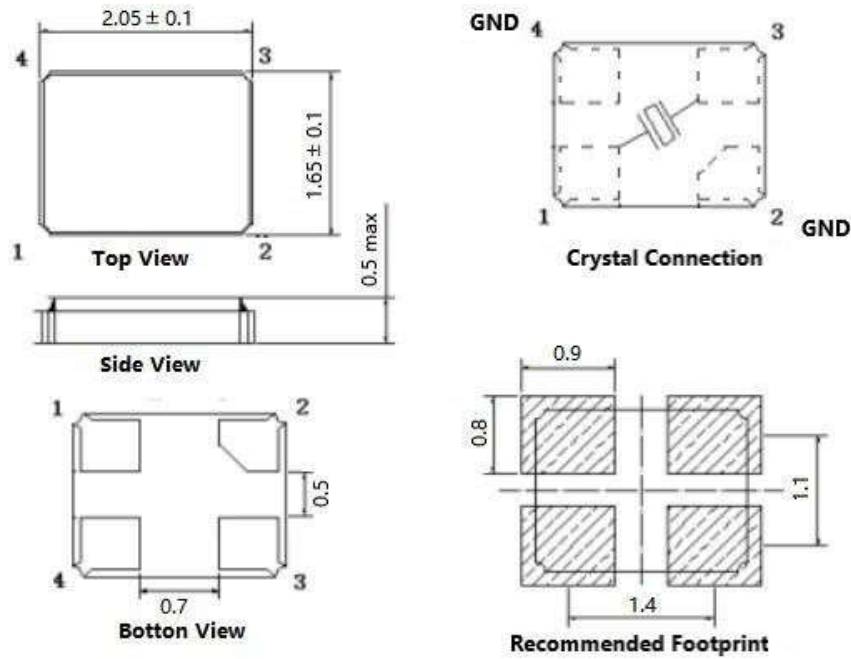
Bldg 5, SSL Modern Enterprise Accelerator Zone, Dongguan City, Guangdong Province, PRC China  
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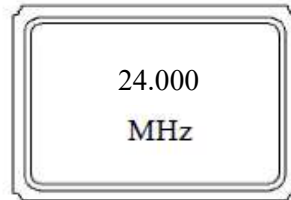
## 1、Electrical Parameter

<b>MODEL :</b>		DPX2124M000008AA02					
<b>For Automotive</b>							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Specification	-	2016			-	
2	Nominal Frequency	FL	24.000			MHz	
3	Oscillation Mode	-	Fundamental			-	
4	Load Capacitance	CL	8			pF	
5	Frequency Tolerance	-	-20		20	$\times 10^{-6}$	At 25°C
6	Frequency Stability	-	-35		35	$\times 10^{-6}$	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	100	200	$\mu$ W	
10	Equivalent Series Resistance	ESR			120	$\Omega$	
11	Shunt Capacitance	C0			3	pF	
12	Insulation Resistance	IR	500			M $\Omega$	At DC 100V
13	Aging	-	-2		2	$\times 10^{-6}$	First year at 25°C
14	Standard		AEC-Q200				

## 2、 Mechanical Structure

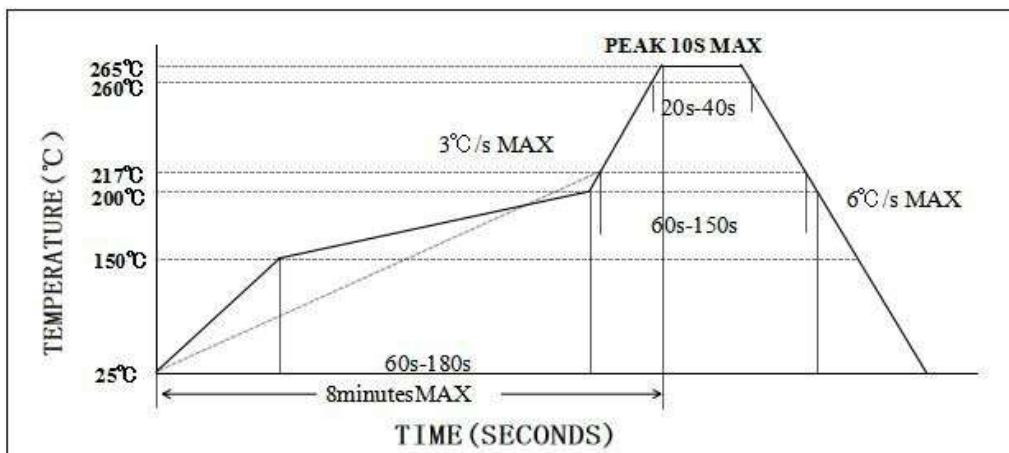


## 3、 Marking

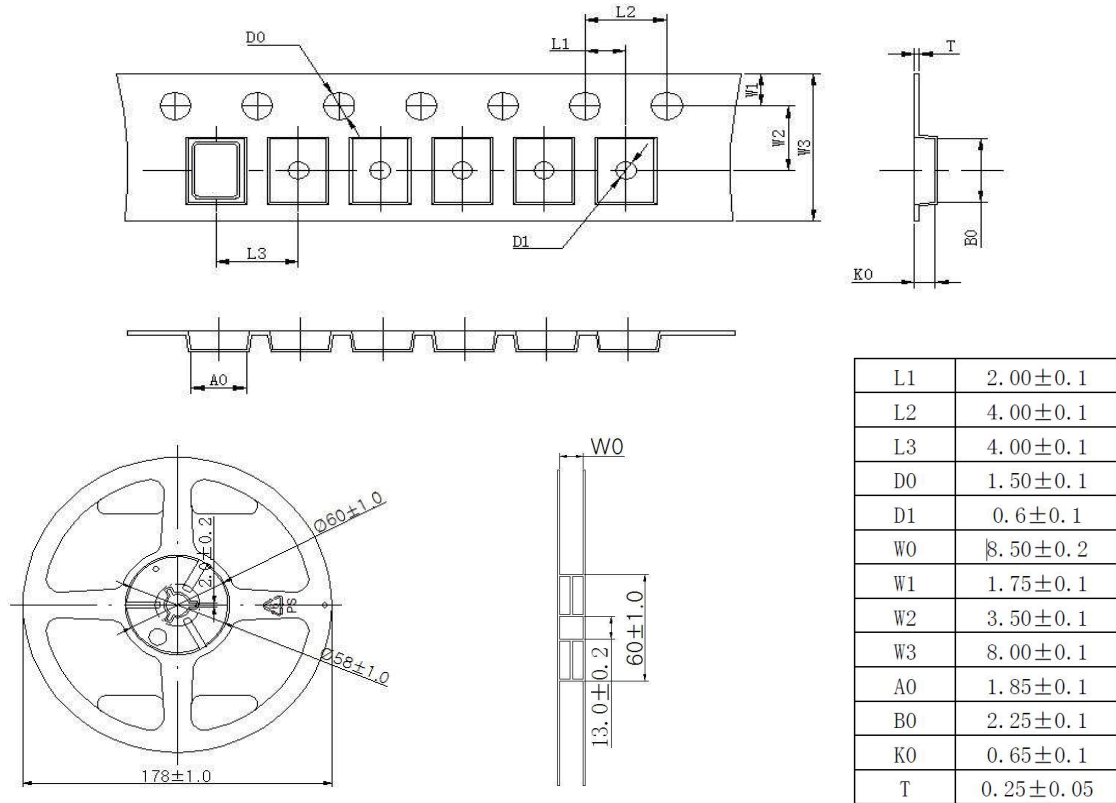


24.000 ----- Nominal frequency

## 4、 Reflow Soldering Curve (RoHS)

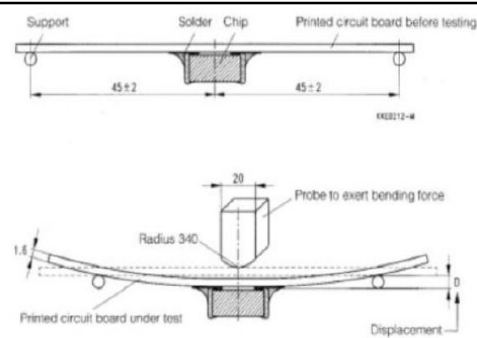
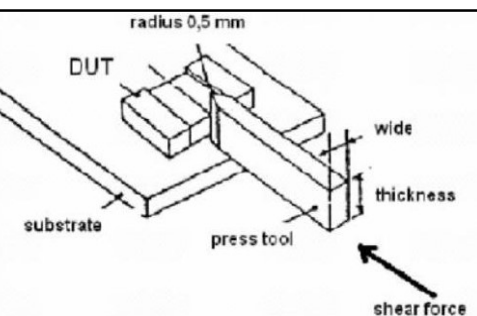


## 5、 Package: Tape & Reel (mm)



## 6、 Reliability Test Specification

6.1 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±2°C for 1000 hours.	A
2	Temperature cycle	JESD22 Method JA-104	Cystal do 1000 cycles according to the table below temperature.	A
3	Temperature and humidity	MIL-STD-202 Method 103	The crystal is placed for 1000 hours at a temperature of 85±2°C and a humidity of 85% Time.	A
4	Life span	MIL-STD-202 Method 108	The crystal is placed at a temperature of 105°C ± 2°C for 1000 hours (applied rated VDD).	A

NO.	Test Items	Test Standard	Test Condition	Standard
5	Shock	MIL-STD-202 Method 213	Shock method: half sine wave 100G Duration: 6ms Direction: X, Y, Z Axia l, 6 faces, 18 shocks in total	A
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
7	Resistance to soldering heat	MIL-STD-202 Method 210	Reflow soldering: Peak temperature:260±5°C time: 10s±1s.	A
8	Solderability	J-STD-002	Soldering temperature:245±5°C Immersion time:5±0.5 seconds Flux Rosin: Resin Methanol Solve nt ( 1 : 4 )	B
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
10	Terminal strength	AEC-Q200-006	Apply a force of 1.8Kg laterally for 60±1 seconds. 	A



## 6.2 Test Judgment

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