

Customer Code: _____

DATASHEET

DAPU P/N: DPX3132K768009A0

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Jack	David	William	
Date: 2022.03.05			

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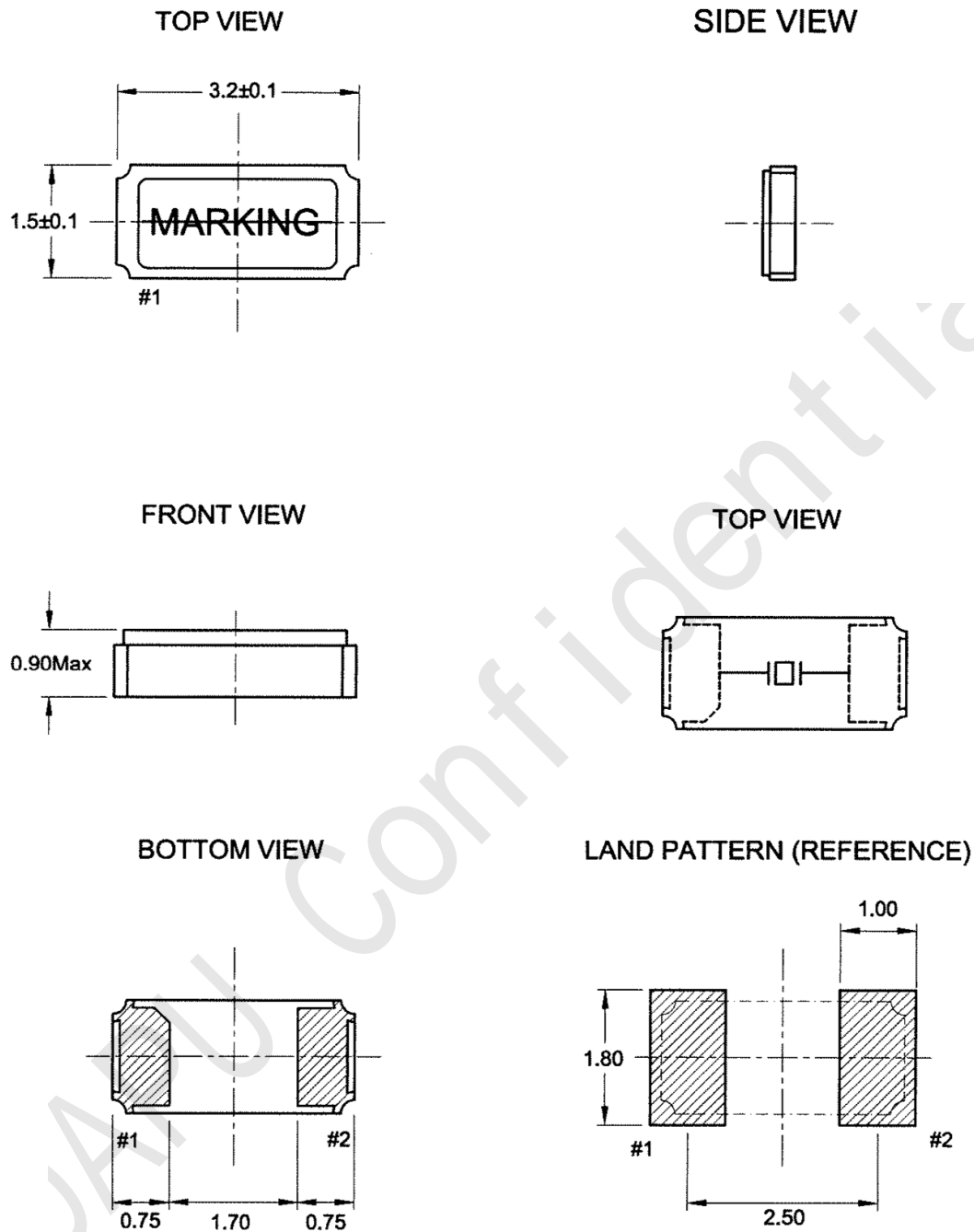


1、Electrical Parameters

MODEL: DPX3132K768009A0							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	FL	32.768			KHz	
2	Load Capacitance	CL	9			pF	
3	Frequency Tolerance	-	-20		+20	$\times 10^{-6}$	At 25°C , DL=0.1 μ W
4	Temperature Coefficient	-	-0.02	-0.03	-0.04	ppm/(°C) ²	
5	Operating Temperature	Topr	-40	~	+85	°C	
6	Storage Temperature	Tstg	-55		+125	°C	
7	Drive Level	DL		0.1	0.5	μ W	
8	Equivalent Series Resistance	ESR			70	K Ω	
9	Motional Capacitance	C ₀		1.1		pF	
10	Shunt Capacitance	C ₁		4.7		pF	
11	Insulation Resistance	IR	500			M Ω	At DC 100V
12	Quality Factor	Q	13				
13	Aging	-	-3		+3	$\times 10^{-6}$	First year at 25°C



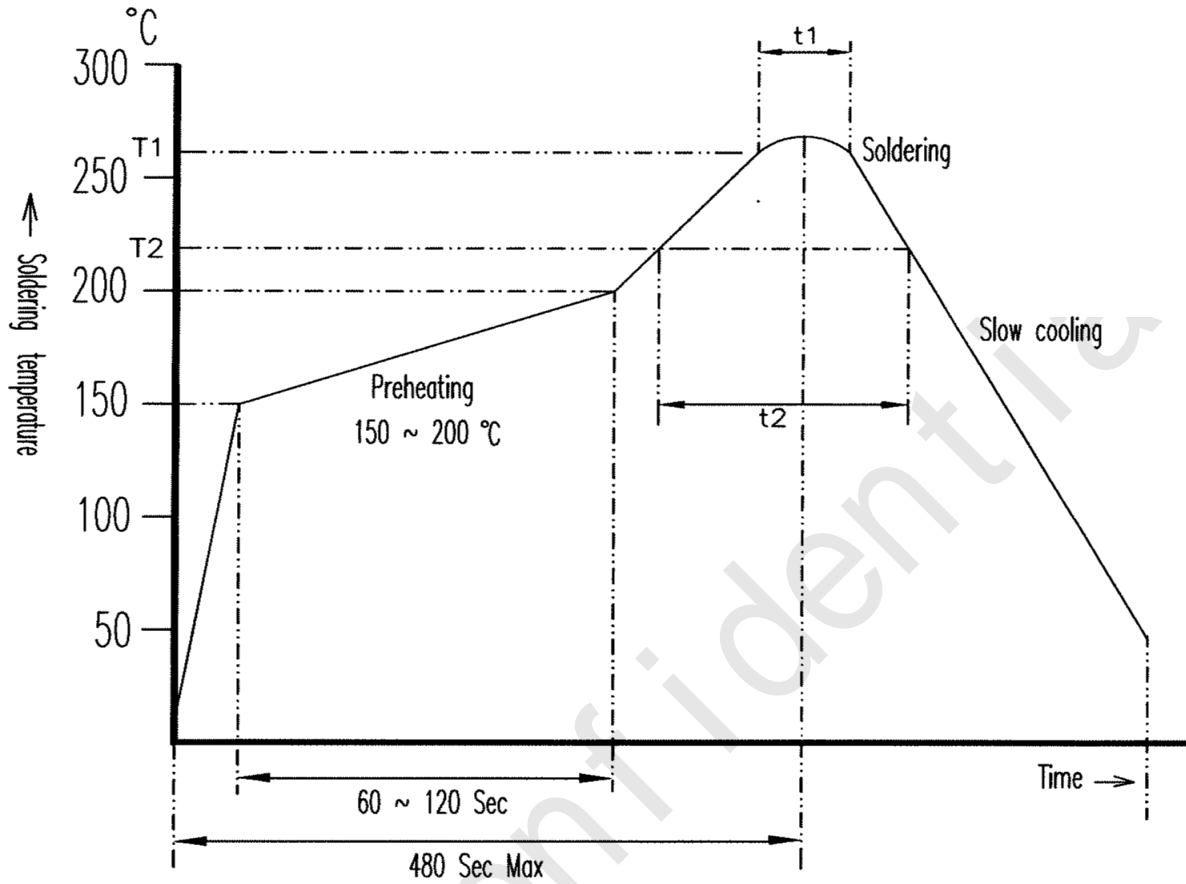
2、Mechanical Structure(mm)



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



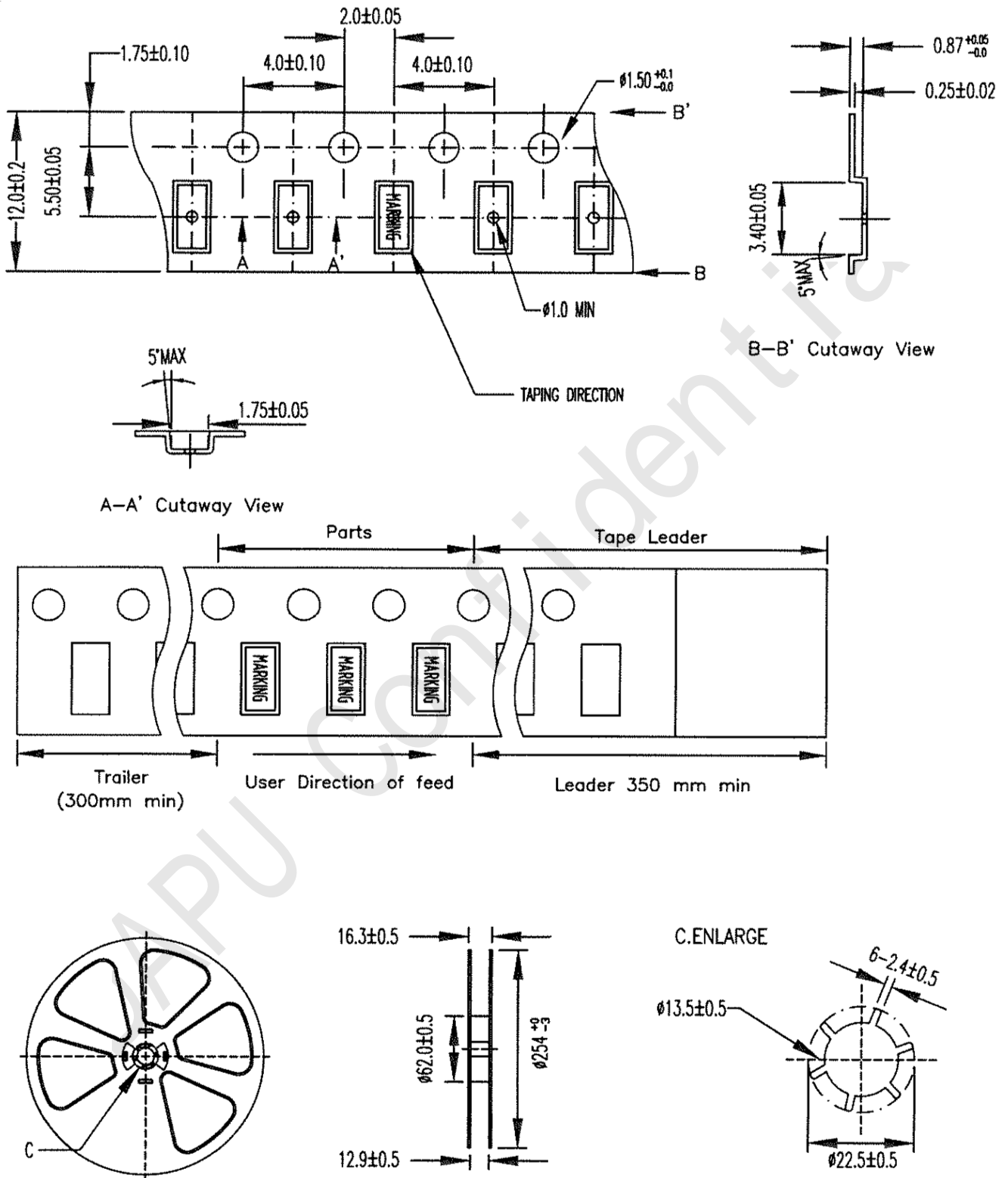
3、 Reflow Soldering Curve(RoHS)



Application	Temperature/Time	T1/t1	T2/t2
Lead Free		260±5°C/10±5 Sec	217°C Min/60~150 Sec
Non Lead Free		240±5°C/10±5 Sec	183°C Min/60~150 Sec



4、 Packing Method Sketch Map (Unit: mm)





5、 Reliability Test Specification

1. ENVIRONMENTAL PERFORMANCE

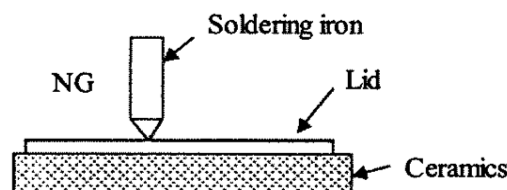
ITEM	CONDITION										
1. HIGH TEMPERATURE STORAGE	STORED AT $85\pm 2^{\circ}\text{C}$ FOR $500\pm 12\text{H}$. (If Customer's temperature request is higher than the standard, Temperature test must be done for customer requirements.) THEN $25\pm 2^{\circ}\text{C}$ OVER 2H BEFORE TESTING.										
2. LOW TEMPERATURE STORAGE	STORED AT $-40\pm 2^{\circ}\text{C}$ FOR $500\pm 12\text{H}$. (If Customer's temperature request is lower than the standard, Temperature test must be done for customer requirements.) THEN $25\pm 2^{\circ}\text{C}$ OVER 2H BEFORE TESTING.										
3. HIGH TEMP. & HUMIDITY	STORED AT $60\pm 2^{\circ}\text{C}$ AND HUMIDITY 90~95% FOR $500\pm 12\text{H}$. THEN $25\pm 2^{\circ}\text{C}$ OVER 2H BEFORE TESTING.										
4. TEMPERATURE CYCLE	THE CRYSTAL UNIT SHALL BE SUBJECTED TO 100 SUCCESSIVE CHANGE OF TEMPERATURE CYCLES, THEN $25\pm 2^{\circ}\text{C}$ OVER 2 H BEFORE TESTING, EACH CYCLE AS BELLOW : <table border="1"> <thead> <tr> <th>TEMPERATURE</th> <th>DURATION</th> </tr> </thead> <tbody> <tr> <td>1. $-40+0/-6^{\circ}\text{C}$</td> <td>30\pm3 MINUTES</td> </tr> <tr> <td>2. $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$</td> <td>2~3 MINUTES</td> </tr> <tr> <td>3. $85+4/-0^{\circ}\text{C}$</td> <td>30 \pm3 MINUTES</td> </tr> <tr> <td>4. $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$</td> <td>2~3 MINUTES</td> </tr> </tbody> </table>	TEMPERATURE	DURATION	1. $-40+0/-6^{\circ}\text{C}$	30 \pm 3 MINUTES	2. $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$	2~3 MINUTES	3. $85+4/-0^{\circ}\text{C}$	30 \pm 3 MINUTES	4. $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$	2~3 MINUTES
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2. MECHANICAL PERFORMANCE

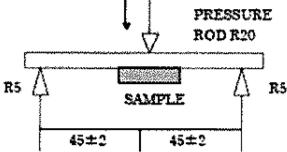
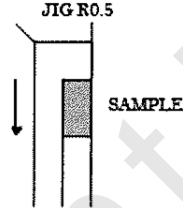
ITEM	CONDITION
5. RESISTANCE TO SOLDERING HEAT	REFLOW CHART AS ATTACH SHEET. TWICE PASS.
6. DROP	Dummy : 150 g, Height : 180 cm, Dropped Cycle : 3 Cycle, DROP IT ONTO A CONCRETE BOARD FOR 6 DIRECTIONS (XX',YY'ZZ'). THIS SHOULD BE 1 CYCLE.
7. VIBRATION	FREQUENCY : 10~60Hz, AMPLITUDE (TOTAL EXCURSION) : 1.5mm \pm 15%, SWEEP TIME(PERIOD) : 2~3 min, 3 DIRECTION (X, Y, Z) EACH FOR 2 Hrs.
8. FINE LEAK	HELIUM BOMBING 5.0~5.5 Kgf / cm ² FOR 2 HOURS.

(Remark)

Please note that parts should specify above test condition each by each article not all at once. Also the variation of series resistance should $\pm 20\%$ min or $\pm 15\text{k}\Omega$ min which ever big value on above test. Please do not touch by hot soldering iron and do not put shock on top lid.





9. TERMINAL STRENGTH	<p>SHALL BE PRESSURIZED AT A SPEED OF APPROX.0.5mm/sec IN THE DIRECTION INDICATED BY THE ARROW UNTIL THE BENDING WIDTH REACHES 3mm AND HELD FOR 5 SECONDS.</p> 
10. STICKING TENDENCY	<p>A R0.5 JIG SHALL BE USED TO APPLY A 10N DEAD LOAD IN THE DIRECTION INDICATED BY THE ARROW TO THE ELEMENT AND RETAIN IT FOR 10 SECONDS.</p> 
11. ELEMENT ASSEMBLY STRENGTH	<p>A R0.5 PRESSURIZED BAR SHALL BE USED TO APPLY A 10N LOAD IN THE CENTER OF ELEMENT AND RETAIN IT FOR 10 SECONDS.</p> 