

Customer:     Dynabook    

# SPECIFICATION

DAPU P/N:     DPX3132K768009A0    

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Jack	David	William	
Date: 2022.04.21			

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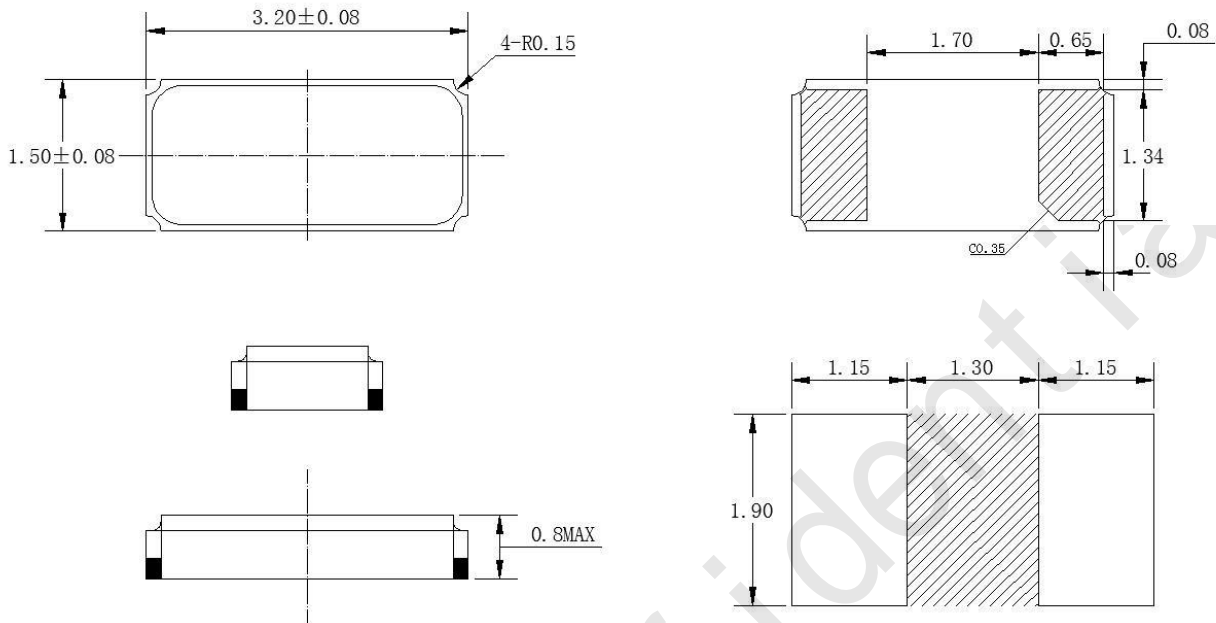
## 1、Electrical Parameters

MODEL: DPX3132K768009A0							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	FL	32.768			KHz	
2	Oscillation Mode	-	Fundamental				
3	Load Capacitance	CL	9			pF	
4	Frequency Tolerance	-	-20		+20	$\times 10^{-6}$	At 25°C
5	Temperature Coefficient	-	-0.028	-0.034	-0.040	ppm/(°C) <sup>2</sup>	
6	Operating Temperature	Topr	-40	~	+85	°C	
7	Storage Temperature	Tstg	-55		+125	°C	
8	Drive Level	DL			1	$\mu$ W	
9	Equivalent Series Resistance	ESR			70	K $\Omega$	
10	Shunt Capacitance	C <sub>0</sub>		1.2		pF	
11	Motional Capacitance	C <sub>1</sub>		4.1		fF	
12	Quality Factor	Q	15000				
13	Insulation Resistance	IR	500			M $\Omega$	At DC 100V
14	Aging	-	-3		+3	$\times 10^{-6}$	First year at 25°C



## 2、Mechanical Structure

### 2.1 Dimensions



Unit: mm

**Note1:** Tolerance  $\pm 0.1$  mm without mark

### 2.2 Marking



----- DAPU LOGO

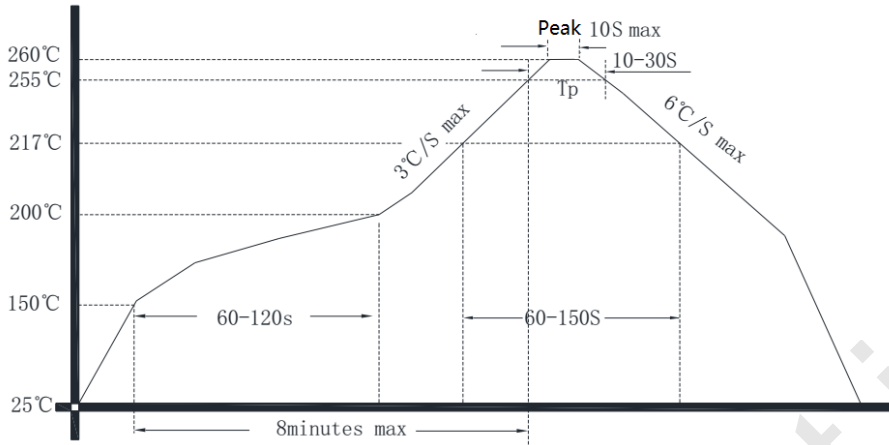
32.768 ----- Frequency

XXYY ----- Manufactured day: XX YY  
Year Week

for example, 2208 means the manufactured day is the 8th week of 2022.



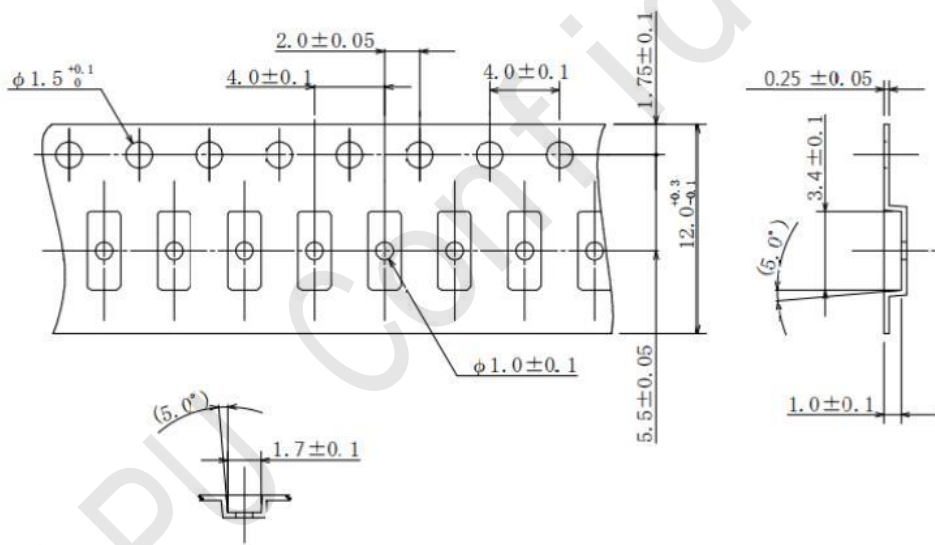
### 3、Reflow Soldering Curve



REFER: JEDEC J-STD-020D

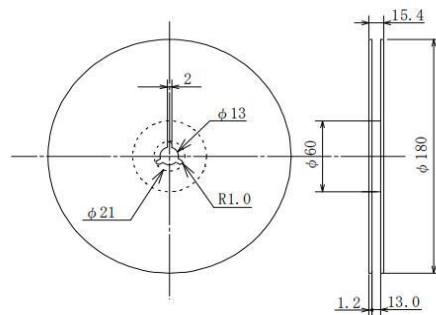
### 4、Packing Information

#### 4.1 Tape Dimensions



Unit: mm

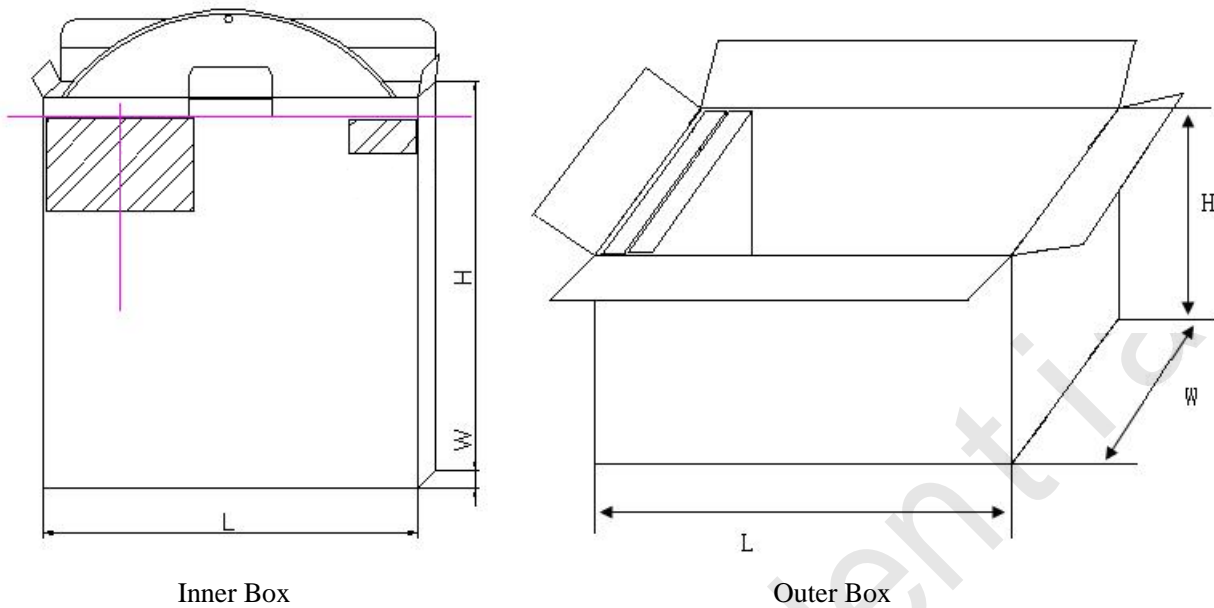
#### 4.2 Reel Dimensions



Unit: mm



### 4.3 Box Information And Packing Quantity



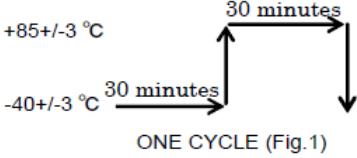
Type	Size (L*W*H)	Quantity
Inner Box	180*20*180mm	3000pcs
Outer Box	240*200*200mm	30000pcs
Reel	/	3000pcs

## 5、Reliability Test Specification

### 5.1 Reliability Test

NO.	Test Items	Test Standard	Test Condition	Specifications
1	Drop test	GB/T2423.8	Drop from 100cm height on 3cm hard wooden board for 3 times.	B、C
2	Vibration	GB/T2423.10	Frequency: 10~2000Hz; Vibration: 1.5min, 1.5mm; Direction: X, Y, Z; Duration: 2 hours/direction.	A、C
3	Solderability	IEC60068-2-58	Solder bath temperature: 235±5°C; Dwell time: 5±0.5 seconds; Dwell depth: 0.5 mm.	D
4	Reflow	J-STD-020	Preheat temperature: 180°C; Preheat time: 60~120 seconds; Peak temperature 260°C; Dwell time: 10±1S.	B、C
5	High temperature storage	GB/T2423.2	Temperature: 85°C; Duration: 1000hours.	B、C
6	Low temperature storage	GB/T2423.1	Temperature: -40°C; Duration: 1000hours.	A、C
7	Temperature Shock	GB/T2423.22	Do 1000 cycles at the following temperature	B、C



			Temperature cycle as shown in (Fig.1) for 1000 cycle.  	
8	High temperature high humidity storage	GB/T2423.3	Temperature: 85°C; Humidity: 85%; Duration: 1000hours.	B、C

### 5.2 Reliability judgment

Specification	
A	Frequency Variation: $\Delta F/F \leq \pm 10\text{ppm}$ or meet customer specifications.
B	Frequency Variation: $\Delta F/F \leq \pm 20\text{ppm}$ or meet customer specifications.
C	Resonant resistance (RR) variation: within $\pm 20\%$ or 15 K $\Omega$ (whichever is greater).
D	At least 95% of the immersed end is covered with new welding material.

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