

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

# DATASHEET

DAPU P/N: DPA5348M0000ECB0

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Jack	David	William	
Date: 2023.04.13			

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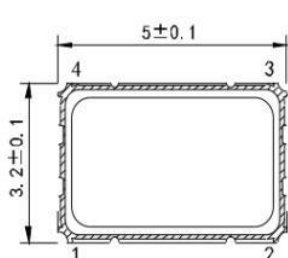
## 1、 Electrical Parameters

MODEL: DPA5348M0000ECB0							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	FL	48.00			MHz	
2	Oscillation Mode	-	Fundamental				
3	Frequency Stability	-	-25		+ 25	$\times 10^{-6}$	Includes frequency tolerance@25°C, frequency stability VS.operating temperature range
4	Operating Temperature	Topr	-40	~	+ 85	°C	
5	Storage Temperature	Tstg	-55	~	+ 125	°C	
6	Supply Voltage	V <sub>DD</sub>	1.62		3.63	V	V <sub>DD</sub> ±10%
7	Input Current	I <sub>cc</sub>			10	mA	
8	Output waveform	-	CMOS				
9	Output Load	CL	15			pF	
10	Output Voltage High	V <sub>OH</sub>	90%			V <sub>DD</sub>	
11	Output Voltage Low	V <sub>OL</sub>			10%	V <sub>DD</sub>	
12	Rise Time	T <sub>r</sub>			4	ns	10%-90%V <sub>DD</sub> Level
13	Fall Time	T <sub>f</sub>			4	ns	90%-10%V <sub>DD</sub> Level
14	Aging	-	-3		+ 3	$\times 10^{-6}$	First Year at 25°C
15	Tri-State Output Enable	-	80%			V <sub>DD</sub>	Pin 1, OE
16	Tri-State Output Disable	-			20%	V <sub>DD</sub>	Pin 1, OE
17	Duty Cycle	-	40	~	60	%	
18	Start-Up Time	T <sub>start</sub>			3	ms	Measured from the time V <sub>DD</sub> reaches its rated minimum value

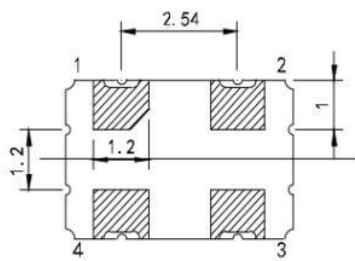


## 2、 Mechanical Structure

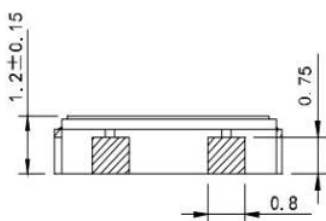
### 2.1 Dimensions



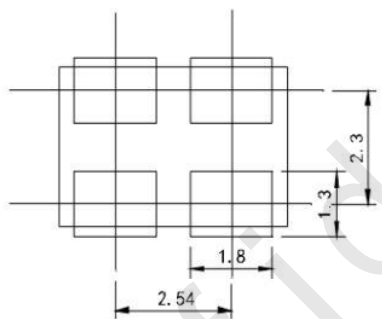
[ TOP VIEW ]



[ BOTTOM VIEW ]



[ SIDE VIEW ]



[Suggested solder pad layout]

Pin	Function
1	Tri-State
2	GND
3	Output
4	V <sub>DD</sub>

Unit: mm

### 2.2 Marking



----- DAPU LOGO

48.000 ----- Frequency

XXYY ----- Manufactured day: XX YY

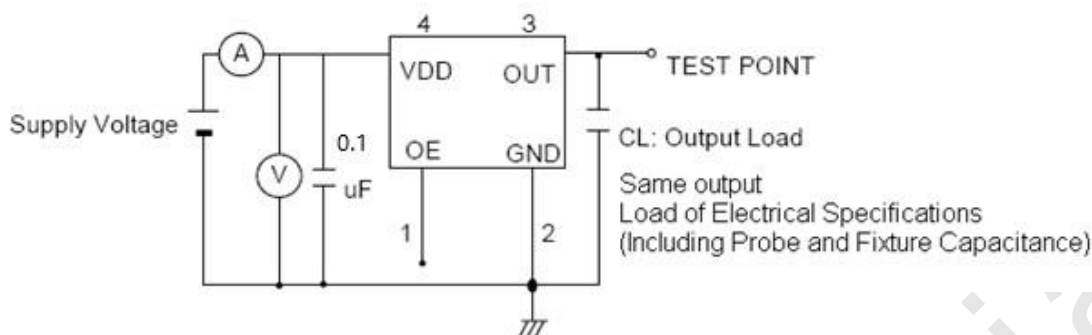
Year Week



----- Pin 1



### 3、 Test Circuit

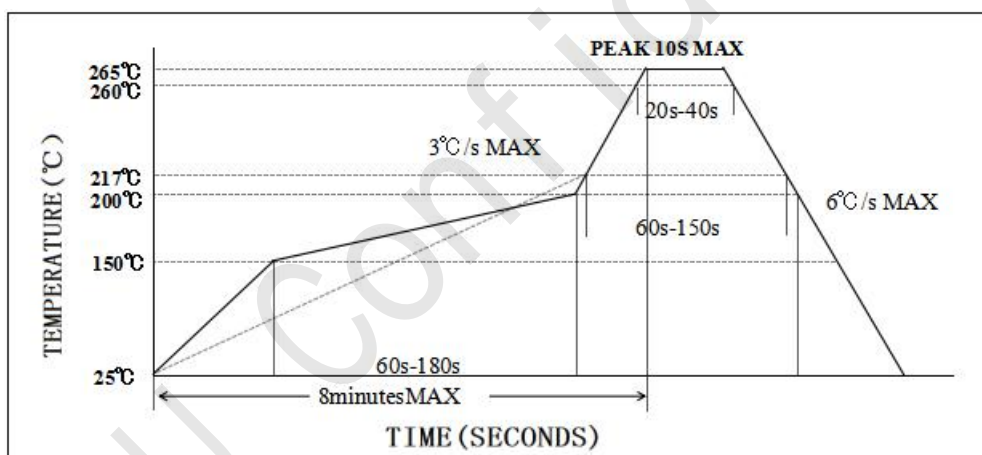


Control input (output enable/disable)

Logic 1 or open on pad 1: Oscillator output

Logic 0 on pad 1 : Disable output to high impedance

### 4、 Reflow Soldering Curve (RoHS)



### 5、 Electro-static Discharges

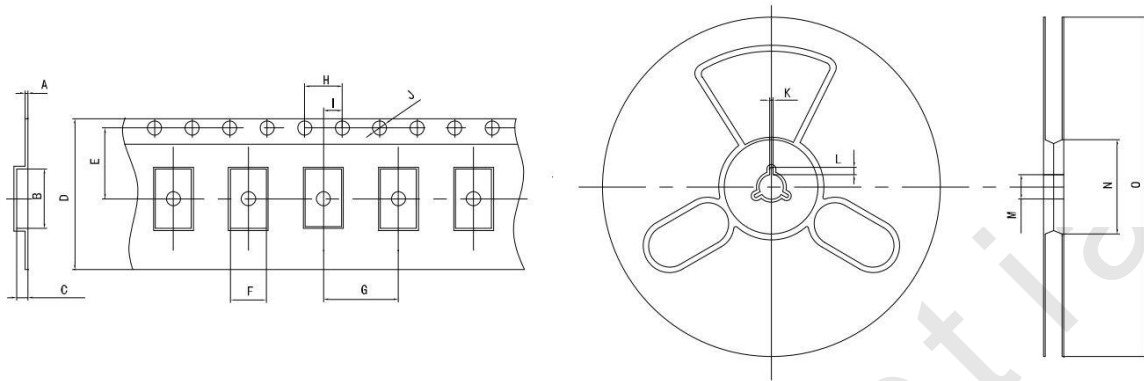
HBM: Class3A

MM: ClassC

CDM: ClassIV



## 6、Package: Tape & Reel (mm)



TEYE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5×3.2 SMD	0.30	7.50	1.45	12.00	5.50	3.70	8.00	4.00	2.00	1.50	2.00	4.00	13.00	60.00	180.00

## 7、Reliability Test Specification

NO.	Test Items	Test Standard	Test Condition	Specifications
1	Drop test	GB/T2423.8	Drop from 150cm height on 3cm hard wooden board for 3 times	Electrical performance meets specification requirements
2	Mechanical shock	GB/T2423.5	Peak: 100g; Waveform: Half-sine; Velocity Change: 1000m/s <sup>2</sup> ; Duration: 0.5ms; 3 times/direction, Direction: +X, -X, +Y, -Y, +Z, -Z.	
3	Vibration	GB/T2423.10	Frequency: 10~2000Hz; Vibration:20min, 1.52mm; Direction: X, Y, Z; Duration: 2 hours/direction.	
4	Solderability	IEC60068-2-58	Soldering temperature:245°C ± 5°C Immersion time:5 seconds ± 0.5 seconds Flux:Rosin Resin Methanol Solvent ( 1 : 4 )	
5	Resistance to soldering heat	IEC60068-2-58	Reflow soldering: Solder temperature 260±5°C, Immersion time:10±1 S	
6	High temperature storage	GB/T2423.2	Temperature: 125°C±2°C; Duration: 500±12hours;	
7	Low	GB/T2423.1	Temperature: -40°C±2°C;	



	temperature storage		Duration: 500±12hours;
8	Temperature Shock	GB/T2423.22	<p>Do 10 cycles at the following temperature</p> <p>The diagram illustrates a temperature shock cycle. The vertical axis shows three temperature levels: +125 ± 3 °C, 25 °C, and -55 ± 3 °C. The horizontal axis represents time. A single cycle is shown as a trapezoidal wave. It starts at 25 °C, ramps down to -55 ± 3 °C, stays there for 30 minutes, ramps up to +125 ± 3 °C, stays there for 30 minutes, and then ramps back down to 25 °C. The total duration of one cycle is labeled as 10 min. max. A horizontal double-headed arrow above the cycle is labeled '1 cycle'.</p>
9	High temperature high humidity storage	GB/T2423.3	<p>Temperature: 85°C±3°C; Humidity: 85%; Duration: 500hours;</p>

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