

Customer Code: _____

DATASHEET

PRODUCT: _____ OSC 3225

DAPU P/N: _____ DPA3216M0000ECBA

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
LIN Jianhua	David	William	
Date: 2023.06.19			

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1、Electrical Parameters

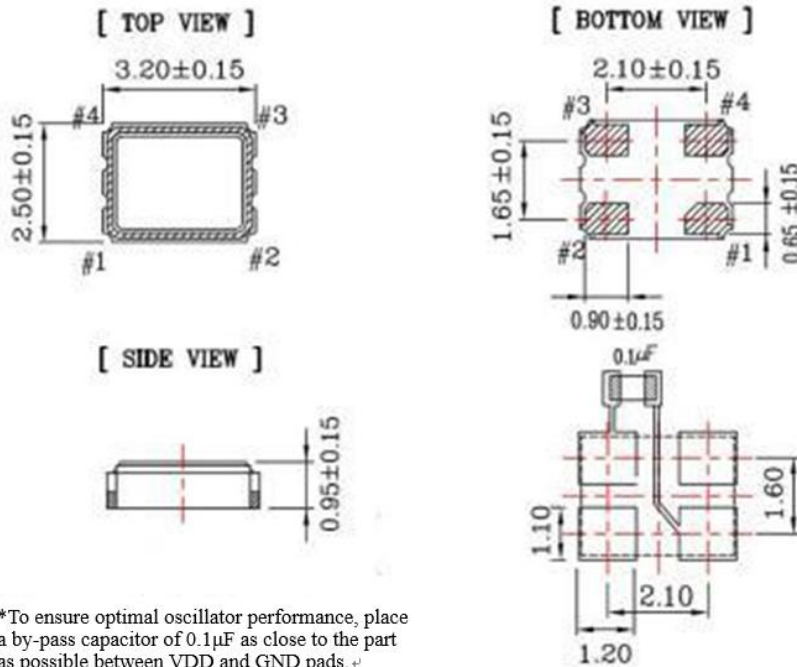
MODEL: DPA3216M0000ECBA							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Standard	-	Conforms to AEC-Q100				
2	Nominal Frequency	FL	16.00			MHz	
3	Oscillation Mode	-	Fundamental				
4	Frequency Tolerance	-	-10		+ 10	$\times 10^{-6}$	At 25°C
5	Frequency Stability	-	-25		+ 25	$\times 10^{-6}$	Over Operating Temperature Range
6	Operating Temperature	Topr	-40	~	+ 105	°C	
7	Storage Temperature	Tstg	-55	~	+ 125	°C	
8	Supply Voltage	V _{DD}	1.62	3.3	3.63	V	
9	Input Current	I _{cc}			10	mA	
10	Output waveform	-	CMOS				
11	Output Load	CL	15			pF	
12	Output Voltage High	V _{OH}	90%			V _{DD}	
13	Output Voltage Low	V _{OL}			10%	V _{DD}	
14	Rise/Fall Time	T _r 、 T _f			5	ns	
15	Aging	-	-3		+ 3	$\times 10^{-6}$	First Year at 25°C
16	Tri-State Output Enable	-	70%			V _{DD}	Pin 1, OE
17	Tri-State Output Disable	-			30%	V _{DD}	Pin 1, OE
18	Duty Cycle	-	45	~	55	%	
19	Start-Up Time	T _{start}			2	ms	Measured from the time V _{DD} reaches its rated minimum value

NOTE: If there is no special indication, the test conditions are GND = 0V, V_{DD} = 3.3V, Ta = - 40 °C ~ + 105 °C



2、 Mechanical Structure(mm)

2.1 Dimensions

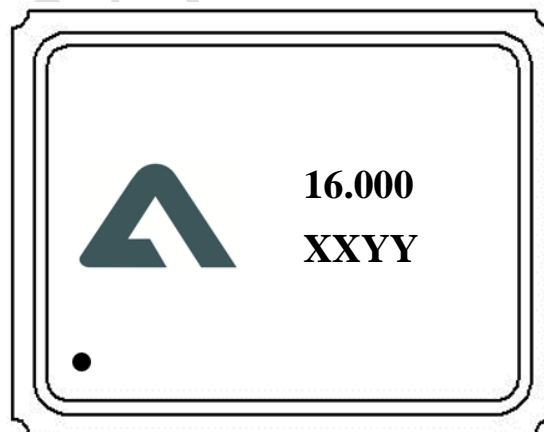


Pin	Function
#1	Tri-State
#2	GND
#3	Output
#4	V _{DD}

*To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between VDD and GND pads.

Unit: mm

2.2 Marking



----- DAPU LOGO

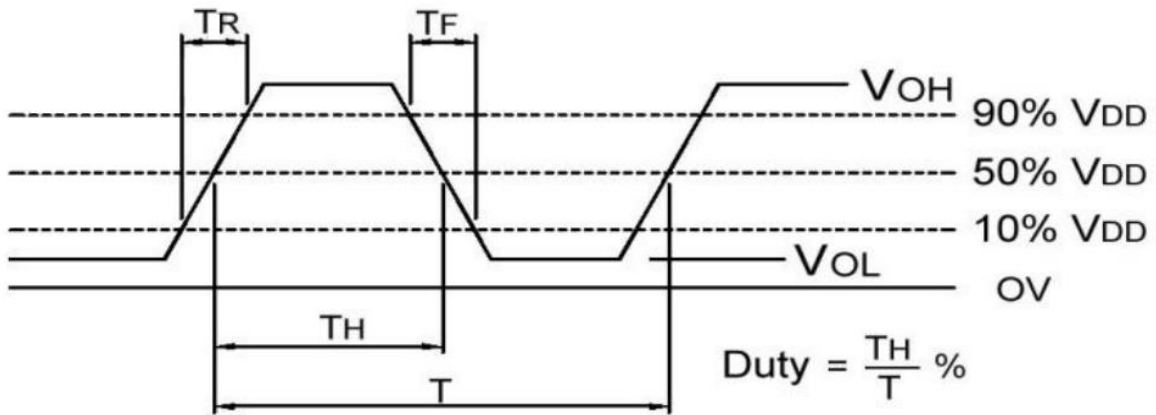
16.000 ----- Frequency

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

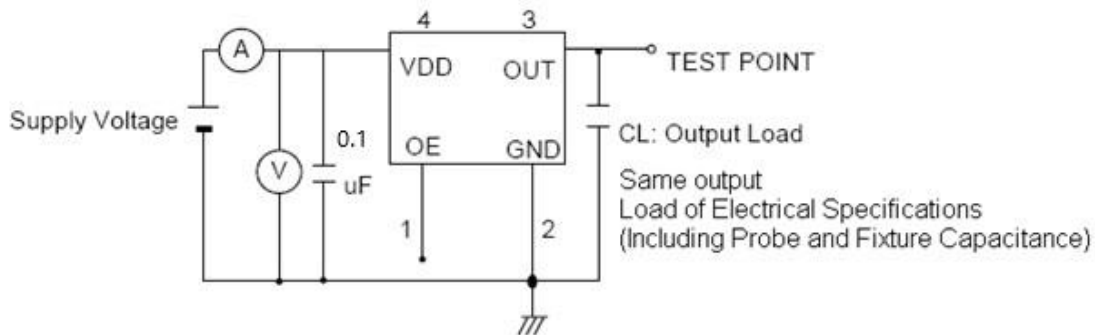
● ----- Pin 1



3、 Output Waveform

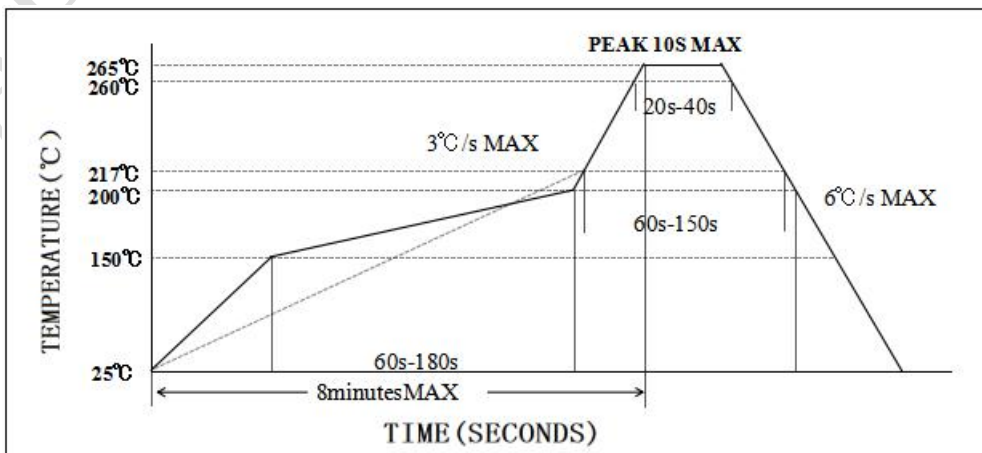


4、 Test Circuit



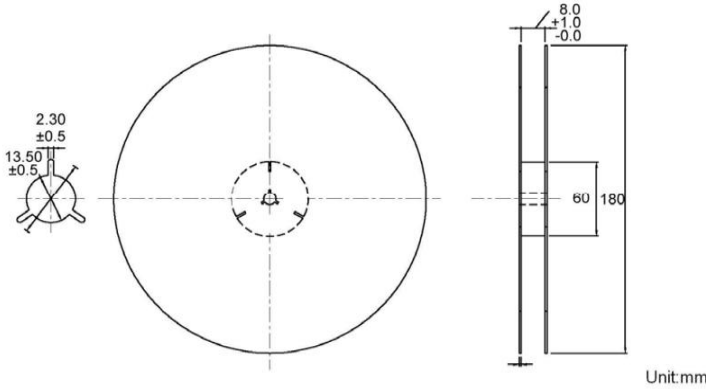
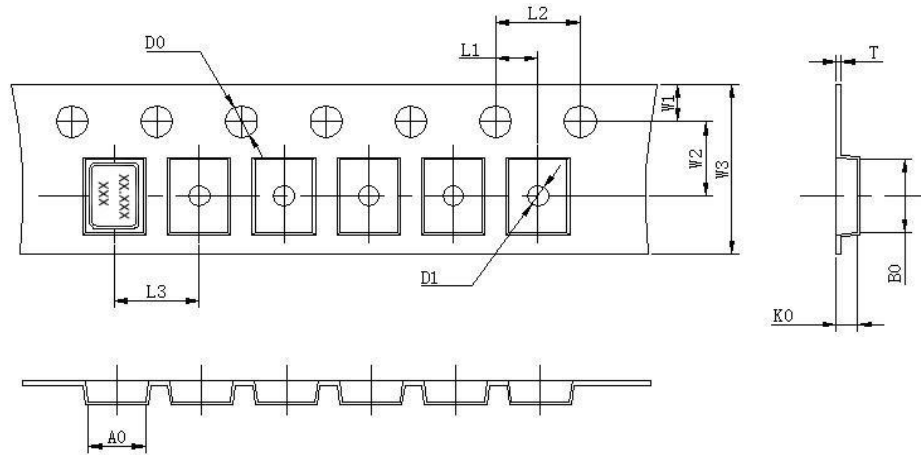
- Control input (output enable/disable)
- Logic 1 or open on pad 1: Oscillator output
- Logic 0 on pad 1 : Disable output to high impedance

5、 Reflow Soldering Curve (RoHS)





6、 Package: Tape & Reel (mm)



L1	2.00 ±0.1
L2	4.00 ±0.1
L3	4.00 ±0.1
D0	1.55 ±0.05
D1	1.20 ±0.5
W1	1.75 ±0.1
W2	3.50 ±0.1
W3	8.00 ±0.2
A0	2.7 ±0.1
B0	3.4 ±0.1
K0	1.40 ±0.1
T	0.25 ±0.05

7、 Reliability Test Specification

7.1 Reliability Test

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°C±2°C for 1000 hours	A
2	Temperature cycle	JESD22 Method JA-104	Crystal 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 105°C±2°C and a humidity of	A



			85% Time.	
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
5	Shock	MIL-STD-202 Method 213	Shock method: half sine wave 100G Duration:6ms	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	ESD HBM	MIL-STD-883H	Zap 3 pulse(s), Interval: 1.0 Sec.	Class3A
9	ESD MM	JEDEC EIA/JESD22-A115	Zap 3 pulse(s), Interval: 1.0 Sec.	ClassC

7.2 Test judgment

Specification	
A	Test after 24±2 hours under normal temperature and normal humidity, and meet Electrical performance requirements
B	At least 95% of the immersed end is covered with new welding material.

7.3 ESD Classification

HBM	Class 0 : < 250V. Class 1A : ≧250V , <499V Class 1B : ≧ 500V , <999V Class 1C : ≧1000V , <1999V Class 2 : ≧2000V , <3999V Class 3A : ≧4000V , <7999V Class 3B : ≧8000V
MM	Class A : < 200V. Class B : ≧200V , <400V Class C : ≧ 400V

Notes

- * This product meets the requirements of environmental protection standards, please contact us when you need a test report.
- *This product is suitable for automotive applications such as car multimedia, car navigation, clock, PEPS, etc., if there are applications in automobile driving safety such as engine control unit, brake system control unit, airbag, electronic stability control program, etc., please communicate with us in advance.