

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

# DATASHEET

DAPU P/N: 079A-K312-10.00MHz-A

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.11.20			

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## 1. Electrical Parameters

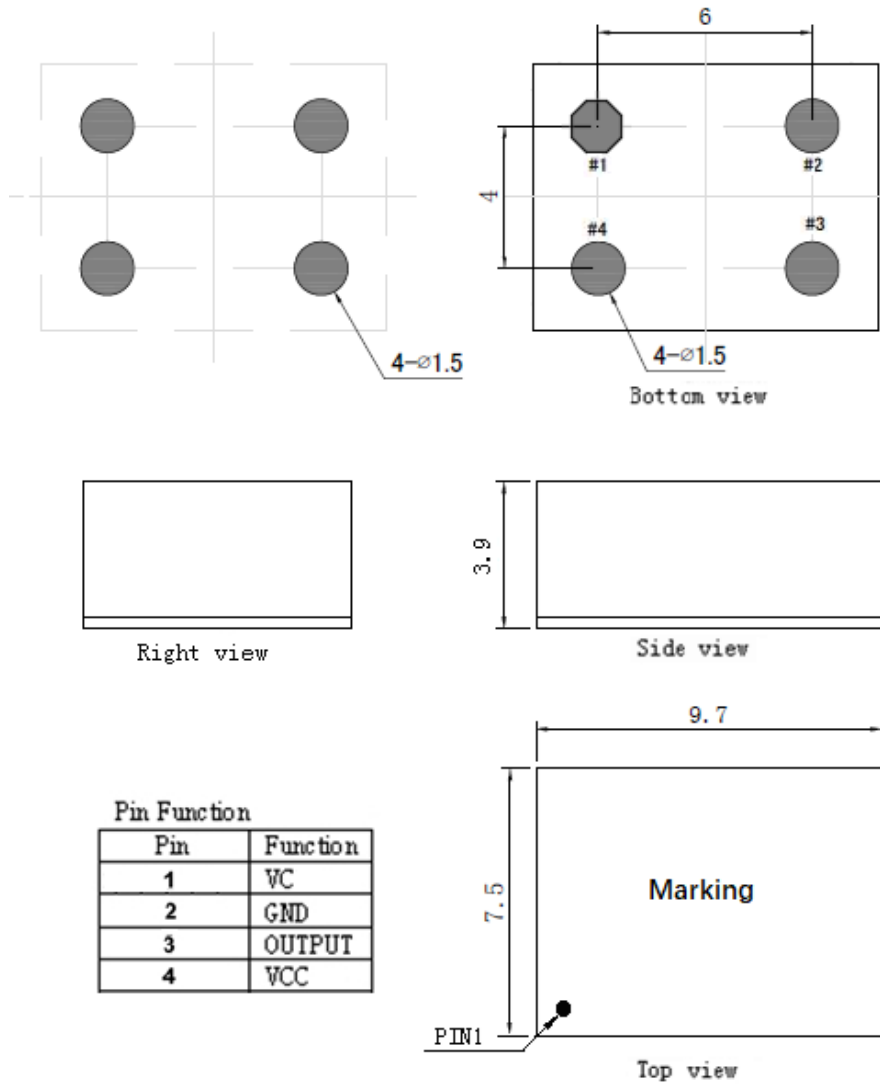
MODEL: O79A-K312-10.00MHz-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15pF$
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load	15			pF	
	Frequency Tolerance vs. Operating Temperature Range	-0.02		+0.02	$\times 10^{-6}$	$T_A$ varied from $-40^{\circ}C$ to $95^{\circ}C$ , measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, O_{load}=15pF$ , temperature variable speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-1.5		+1.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 3.135V to 3.465V, $V_c=1.65V$ and $O_{Load}=15pF$ .
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$ , and $O_{Load}=15pF$ .
	Frequency Slope	-1		+1	$\times 10^{-9}/^{\circ}C$	Temperature ramp $\leq 1^{\circ}C/minute$
	Aging Tolerance Per Day	-2		+2	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C,$
Aging Tolerance Per Year	-0.5		+0.5	$\times 10^{-6}$	$V_{cc}= 3.3V, V_c =1.65V$ , and after 30 days of operation.	



Power Supply	Supply Voltage	3.135	3.3	3.465	V	
	Steady Consumption			230	mA	@25°C
	Warm up current			600	mA	
Voltage Control Characteristics	Frequency Tuning Range	-5		-2	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-0.5		+0.5	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to exactly 10.00MHz
		+2		+5	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Phase Noise	Phase Noise @25°C		-80	-70	dBc/Hz	1Hz
			-110	-105		10Hz
			-146	-138		100Hz
			-157	-151		1KHz
			-161	-156		10KHz
			-164	-159		100KHz
			-165	-161		1MHz
Environmental Conditions	Operating Temperature	-40		+95	°C	
	Operable Temperature	-45		+105	°C	
	Storage Temperature	-55		+105	°C	
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.				
	Moisture Sensitivity Level	Level 3.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~500Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z), IEC 68-2-06 Test Fc.				
Shock	50g; 11ms; half sine wave (3 times for each 3 directions X, Y, Z), IEC 68-2-27 Test Ea/Severity 50A.					
Full Package Storage	Relative humidity (%)	20% ~ 70%				
	Temperature (°C)	-10~35°C				



## 2. Mechanical Structure (mm)



Marking:



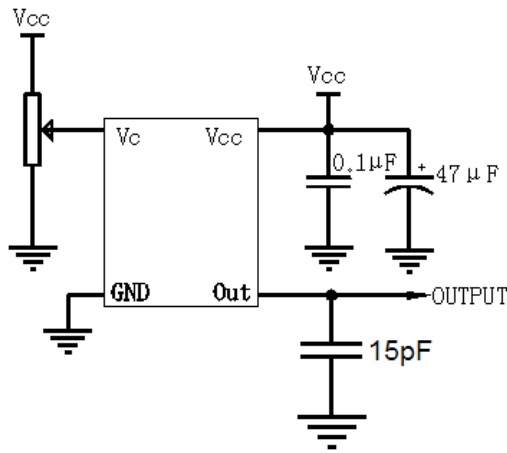
**Note1:** Tolerance  $\pm 0.30$ mm without mark

**Note2:** The first two xx representative: week  
After two xx representative: year

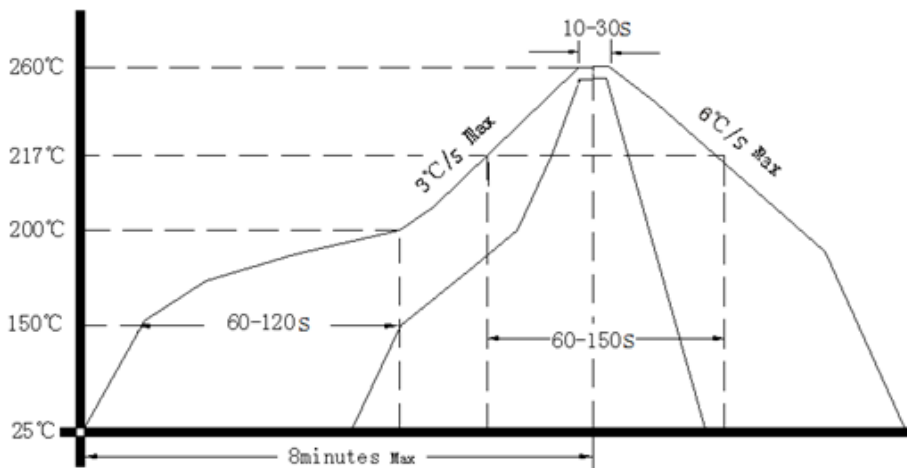
**Note3:** Referential weight 0.7g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



Note: passing through reflow upside down is not supported

### 5. Package: Tape & Reel (mm)

