

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard:           **O79A-K319-19.20MHz**          

P/N: \_\_\_\_\_

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2022.06.16			

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## 1. Electrical Parameters

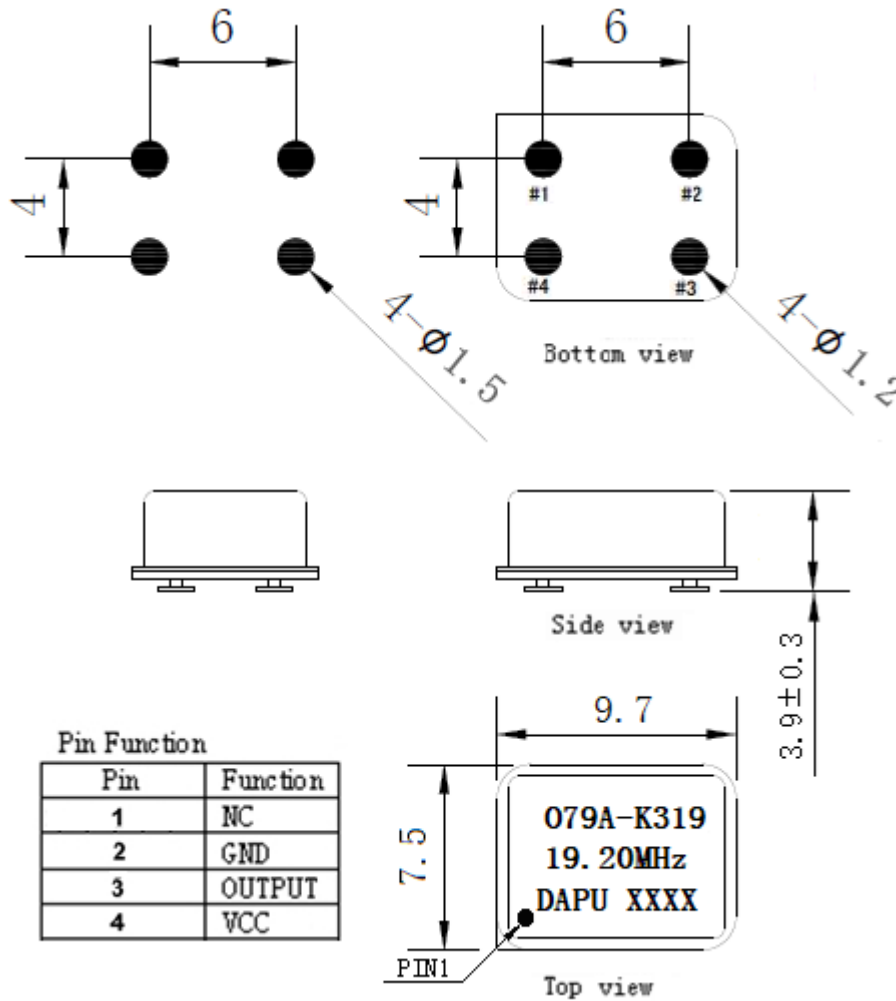
MODEL: O79A-K319-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	10%~90%
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	$T_A$ varied from $-40^{\circ}\text{C}$ to $95^{\circ}\text{C}$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15\text{ pF}$ , temperature variable speed less than $2^{\circ}\text{C}$ per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}, V_{cc}=3.3V$ within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}, V_{cc}$ varied from 3.13V to 3.47V, and $O_{Load}=15\text{ pF}$ .
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	10% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}, V_{cc}=3.3V, O_{Load}=15\text{ pF}$ .
	Reflow shift	-0.2		+0.2	$\times 10^{-6}$	Pre to post reflow $\Delta F$ (measured $\geq 60\text{ min}$ after reflow)
	Frequency slope	-0.5		+0.5	$\times 10^{-9}/^{\circ}\text{C}$	$T_{amb}$ slope $\pm 1^{\circ}\text{C}/\text{min}$ with any temperature window over operating temperature range. Includes also hysteresis effects. Slope measurement for device qualification as described in the related note.
	Aging Tolerance Per Day	-2		+2	$\times 10^{-9}$	$T_A=25^{\circ}\text{C}, V_{cc}=3.3V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.5		+0.5	$\times 10^{-6}$	



Power Supply	Steady Consumption			230	mA	@25°C
	Warm up current			600	mA	
	Warm up Time			60	s	Time until RF output is within $\pm 0.025$ ppm referenced to last frequency reading 1 h after startup, T <sub>A</sub> varied from -40°C to 95°C.
	Supply Voltage	3.13	3.3	3.47	V	
Phase Noise	Phase Noise @25°C		-80	-70	dBc/Hz	1Hz
			-115	-110		10Hz
			-146	-138		100Hz
			-160	-154		1KHz
			-164	-159		10KHz
			-164	-160		100KHz
			-165	-161		1MHz
Environmental Conditions	Operable Temperature	-40		+95	°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 1.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z ) .IEC 68-2-06 Test Fc.				
Shock	100g; 6ms; half sine wave (3 times for each 3 directions X , Y , Z ),IEC 68-2-27 Test Ea/Severity 50A.					



## 2. Mechanical Structure(mm)



**Note1:** Tolerance  $\pm 0.3\text{mm}$  without mark

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

**Note3:** Referential Weight 0.7g

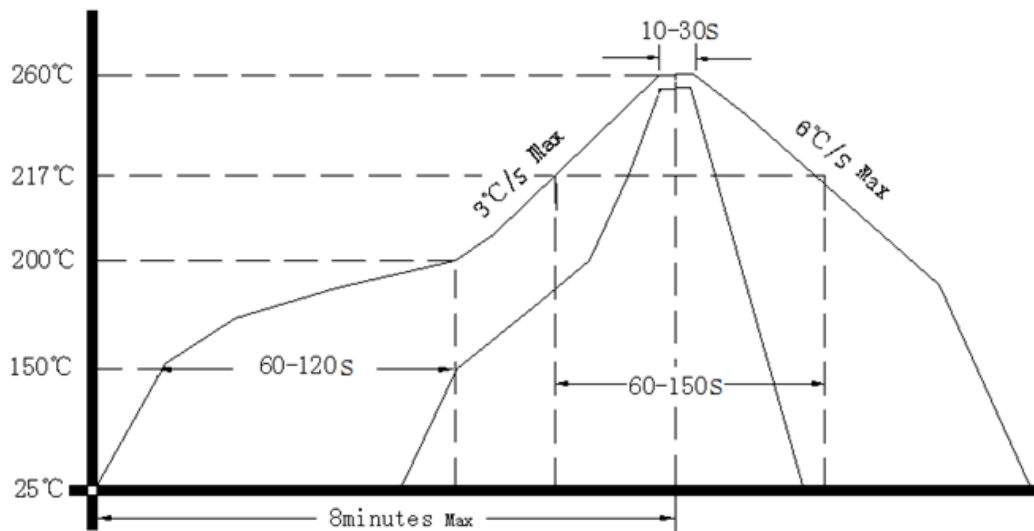
**Note4:** NC is not connect



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



Note: Passing through reflow upside down is not supported

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

