

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

# DATASHEET

Standard:           **O79A-G319-48.00MHz-A**          

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.11.21			

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**Table of amendment**

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2023.03.07
1.1	The “Aging Tolerance Per Day” “Moisture Sensitivity Level” “Reflow Soldering Curve” changed	<i>Amway</i>	2023.03.22
1.2	The “Warm Up Current” “Phase Noise” “Mechanical structure” “Moisture Sensitivity Level” changed	<i>Amway</i>	2023.11.21



## 1. Electrical Parameters

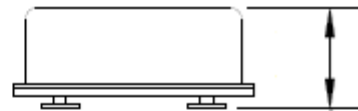
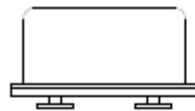
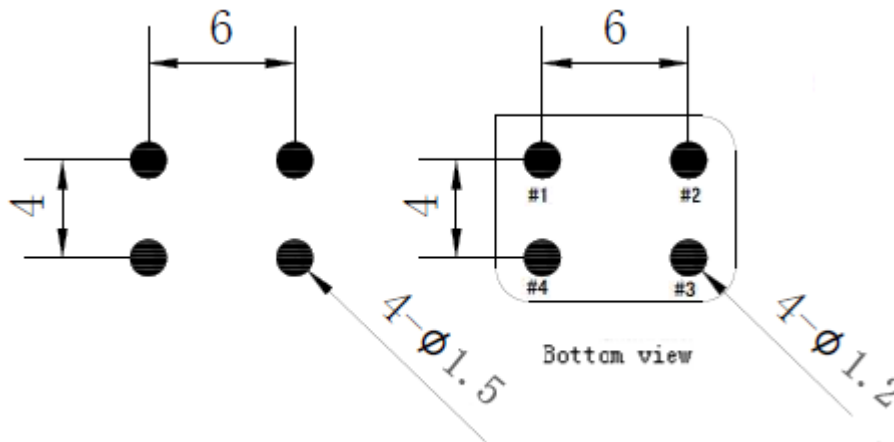
MODEL: O79A-G319-48.00MHz-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	48.00			MHz	
	Output Waveform	LVCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	@25°C
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from -40°C to 95°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°C per minute.
	Initial Frequency Tolerance	-2		+2	$\times 10^{-6}$	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	-0.01		+0.01	$\times 10^{-6}$	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	-0.01		+0.01	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, O_{Load}=15\text{ pF}$ .
	Frequency Slope	-1.5		+1.5	$\times 10^{-9}/^\circ\text{C}$	Temperature ramp $\leq 1^\circ\text{C}/\text{minute}$
	G-Sensitivity			3	$\times 10^{-9}/\text{G}$	Gamma vector of all three axes from 30Hz to 1500Hz
	Reflow Shift	-0.5		+0.5	$\times 10^{-6}$	After 1 hour at 25°C
	Aging Tolerance Per Day	-8		+8	$\times 10^{-9}$	$T_A=25^\circ\text{C}, V_{cc}=3.3V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
	Steady Consumption			250	mA	@25°C
	Warm Up Current			600	mA	
	Supply Voltage	3.13	3.3	3.47	V	
	Warm Up Time			3	Min	@25 °C within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 1 hour on.



Phase Noise	Phase Noise @25°C		-65	-60	dBc/Hz	1Hz
			-102	-95		10Hz
			-135	-130		100Hz
			-155	-150		1KHz
			-162	-157		10KHz
			-165	-158		100KHz
			-165	-158		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.					

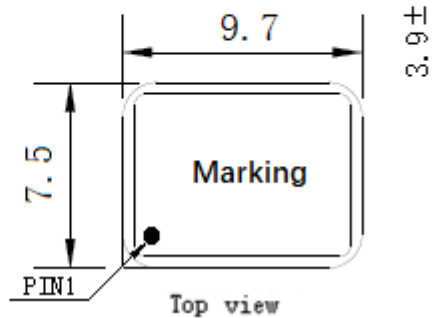


## 2. Mechanical Structure(mm)



Side view

Pin Function	
Pin	Function
1	NC
2	GND
3	OUTPUT
4	VCC



Top view

Marking:



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

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

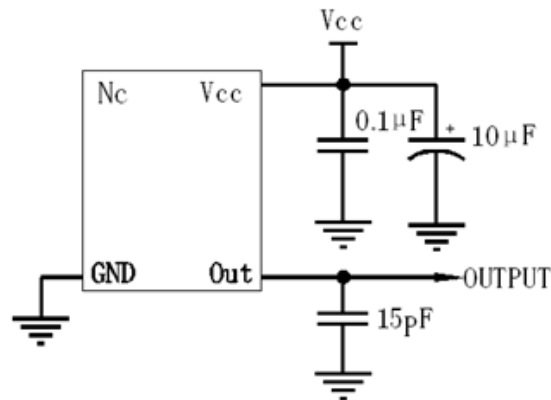
After two xx representative: year

**Note3:** Referential Weight 0.7g

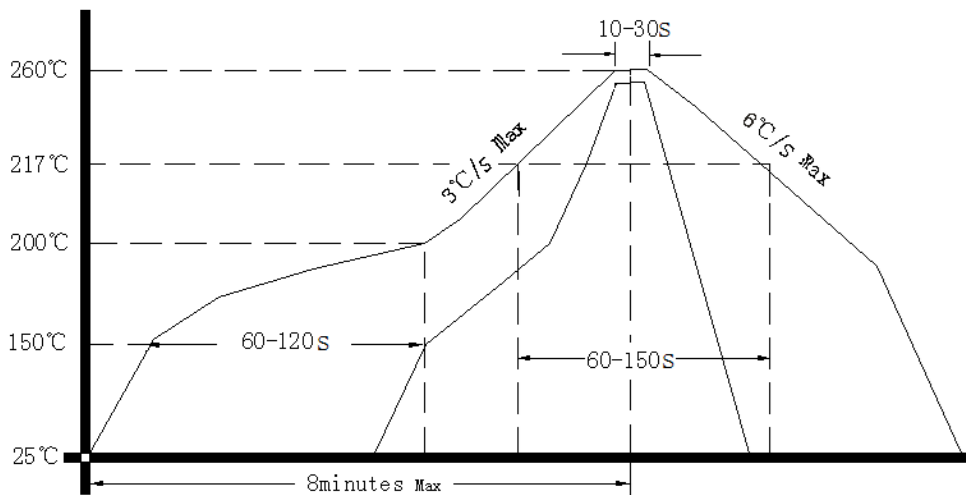
**Note4:** NC is not connect



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



Note: Passing through reflow upside down is not supported

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

