Customer Code: _____

DATASHEET

DAPU P/N: **O79A-3701-30.72MHz**

Customer P/N: _____

DAPU			Customer Approval
Drew	Audited	Approved	
Amway.wei	Vic wang	Jason Zhao	
Date: 2022.08.01			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2019.11.07
1.1	Add “Total Tolerance” The “Initial Frequency Tolerance” “current” “Moisture Sensitivity Level” “Reflow Soldering Curve” “slope” “Mechanical Structure” “Package” changed, “	Amway	2022.05.06
1.2	The “Frequency Tuning Range” changed	Amway	2022.06.30
1.3	The “Tuning Slope” “Linearity” changed	Amway	2022.08.01

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1. Electrical Parameters

MODEL： O79A-3701-30.72MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		30.72		MHz	
	Output Waveform		LVCMOS			
	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	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	
	Sub Harmonics			-40	dBc	
	Non Harmonic Spurious			-60	dBc	
	Load		15		pF	
Frequency Stabilities	Total Tolerance	-2.4		+2.4	$\times 10^{-6}$	Including calibration at 25℃, V_c=1.25V, reflow, temperature, supply voltage, load changes and 10years aging reference to Fn
	Frequency Tolerance vs. Operating Temperature Range	-0.02		+0.02	$\times 10^{-6}$	T_A varied from -40℃ to 95℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, V_c=1.25V, O_{load}=15pF, temperature variable speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.25V, 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℃, V_{cc} varied from 3.234V to 3.366V, V_c=1.25V, and O_{Load}=15pF.
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	10% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.25V,and O_{Load}=15pF.
	Reflow shift	-0.2		+0.2	$\times 10^{-6}$	Pre to post reflow △F(measured≥60 minutes after reflow)
	Frequency Slope	-0.5		+0.5	$\times 10^{-9}$/℃	Temperature ramp rate ≤ 1℃/minute
	Short-Term Stability: Allan Variance			0.1	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 1hour ref. to 25℃; 1s.

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	Aging Tolerance Per Day	-3		+3	$\times 10^{-9}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.25V, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.3		+0.3	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-2.0		+2.0	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.13	3.3	3.47	V	.
	Steady Consumption			600	mW	@25℃
	Warm up current			1650	mW	
	Warm up time			1	min	@25℃ within $\pm 0.02 \times 10^{-6}$ of final frequency with reference after 1hours on .
Voltage Control Characteristics	Frequency Tuning Range	-4		-2.4	$\times 10^{-6}$	V_c=0V. measurement referenced to V_c=1.25V
		-0.5		+0.5	$\times 10^{-6}$	V_c=1.25V. measurement referenced to exactly 30.72MHz
		+2.4		+4	$\times 10^{-6}$	V_c=2.5V. measurement referenced to V_c=1.25V
	Tuning Slope	1.92	2.5	3.2	$\times 10^{-6}$/V	
	Linearity			5	%	
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise		-73	-60	dBc/Hz	1Hz
			-105	-100		10Hz
			-135	-130		100Hz
			-157	-152		1KHz
			-160	-155		10KHz
			-160	-155		100KHz
			-161	-155		1MHz
Environmental Conditions	Operable Temperature	-40		+95	℃	
	Storage Temperature	-55		+105	℃	
	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～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 (℃)	-10~35℃				

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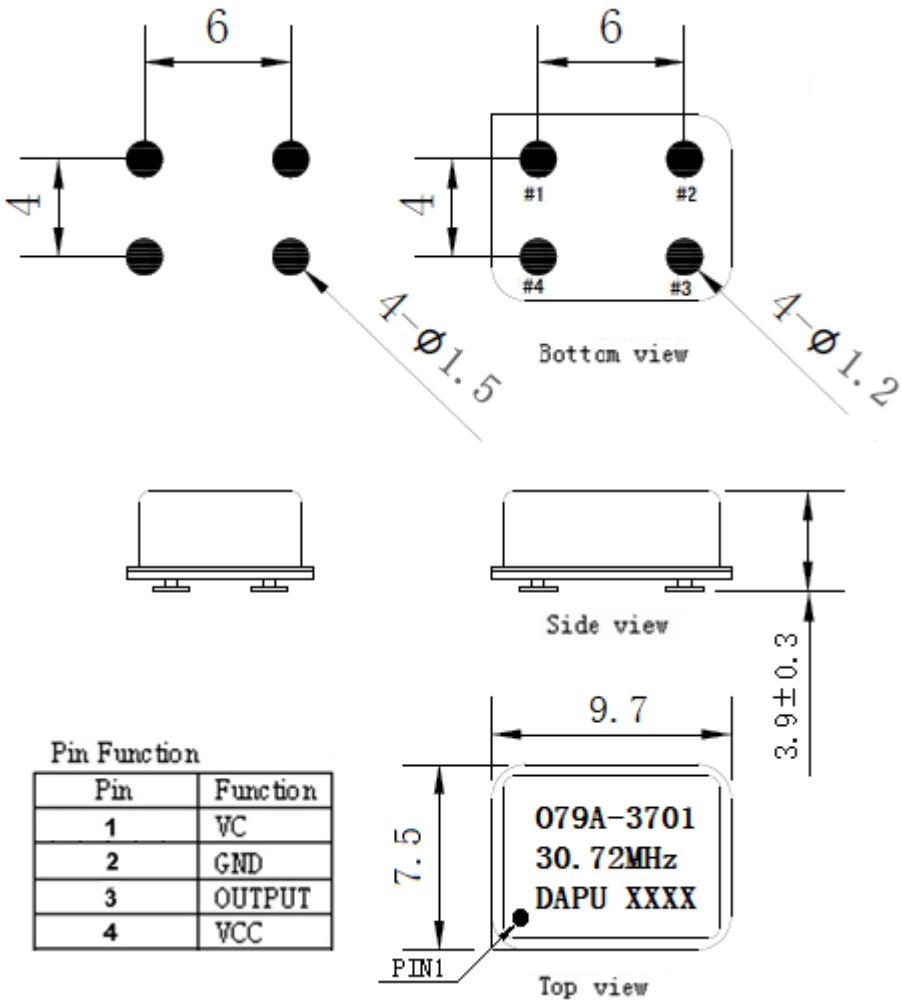
2. Mechanical Structure (mm)



Pin Function

Pin	Function
1	VC
2	GND
3	OUTPUT
4	VCC

Note1: Tolerance ± 0.3mm without mark

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

Note3: Referential weight 0.7g

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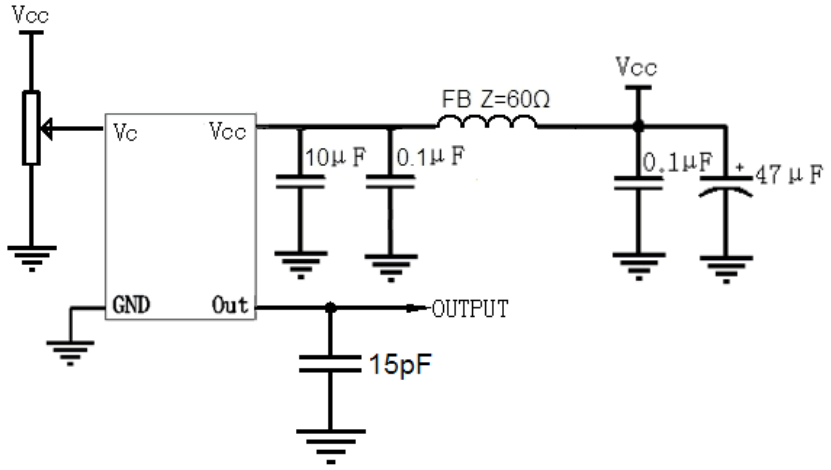
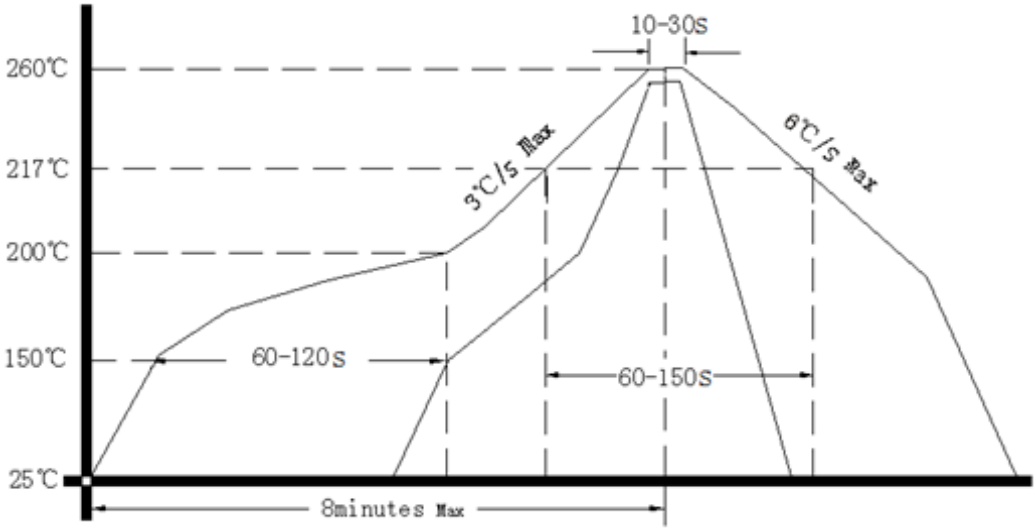
3. Test Circuit

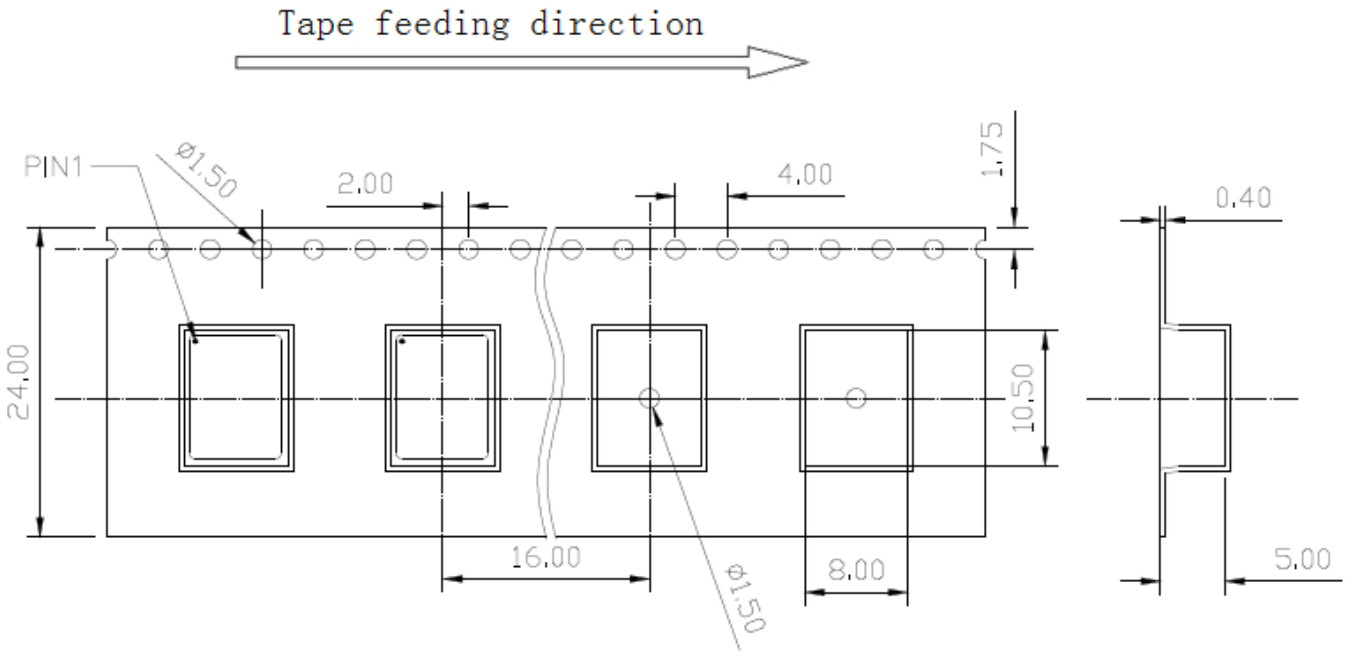


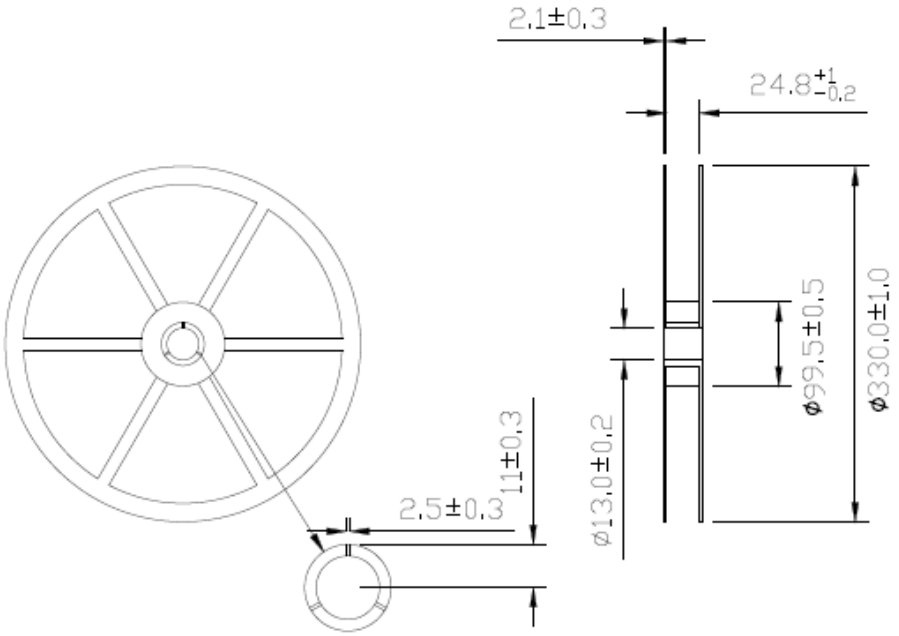
4. Reflow Soldering Curve (RoHS)



Note: passing through reflow upside down is not supported

5. Package: Tape & Reel (mm)





1000pcs/Rel