

Customer Code: _____

DATASHEET

DAPU P/N: 079A-E312-30.72MHz

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2020.09.24			

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1. Electrical Parameters

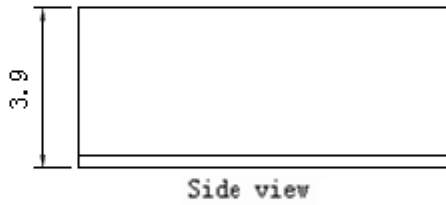
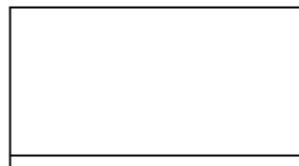
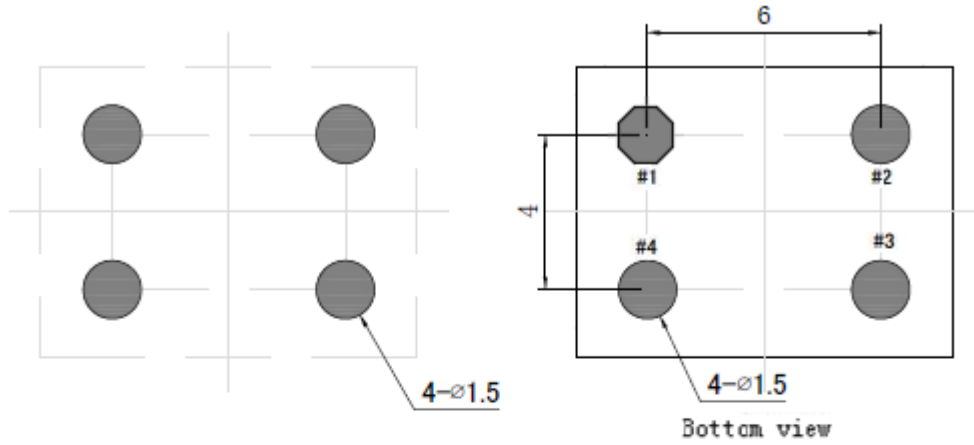
MODEL: O79A-E312-30.72MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	30.72			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	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 $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V, O_{load}=15pF$, temperature variable speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	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	-0.01		+0.01	$\times 10^{-6}$	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	-0.01		+0.01	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$, and $O_{Load}=15pF$.
	Aging Tolerance Per Day	-5		+5	$\times 10^{-9}$	V_{cc}, T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$, and after 1 hour of operation.
	Aging Tolerance Per Year	-0.5		+0.5	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-2.5		+2.5	$\times 10^{-6}$	
Frequency Slope	-0.5		+0.5	$\times 10^{-9}/^{\circ}C$	Temperature ramp $\leq 1^{\circ}C$ /minute	



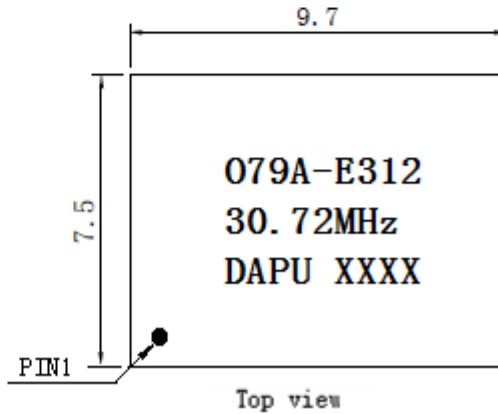
Power Supply	Supply Voltage	3.135	3.3	3.465	V		
	Steady Consumption			240	mA	@25°C	
	Warm up current			600	mA		
	Warm-Up Time			1	minutes	@25°C within $\pm 0.1 \times 10^{-6}$ of final Frequency with reference after 1 hour on.	
	Jitter			0.5	ps	RMS@12KHz to 5MHz	
Voltage Control Characteristics	Frequency Tuning Range			-2.5	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=1.65V$	
		-0.5		+0.5	$\times 10^{-6}$	$V_c=1.65V$. measurement referenced to exactly 30.72MHz	
		+2.5			$\times 10^{-6}$	$V_c=3.3V$. measurement referenced to $V_c=1.65V$	
	Linearity			10	%		
	Slope	Positive					
	Input Impedance	100				K Ω	
Phase Noise	Phase Noise @25°C		-60	-50	dBc/Hz		
			-99	-90			10Hz
			-130	-120			100Hz
			-155	-150			1KHz
			-165	-160			10KHz
			-165	-160			100KHz
			-165	-160			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 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)



Pin Function	
Pin	Function
1	V _C
2	GND
3	OUTPUT
4	V _{CC}



Note1: Tolerance $\pm 0.20\text{mm}$ without mark

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

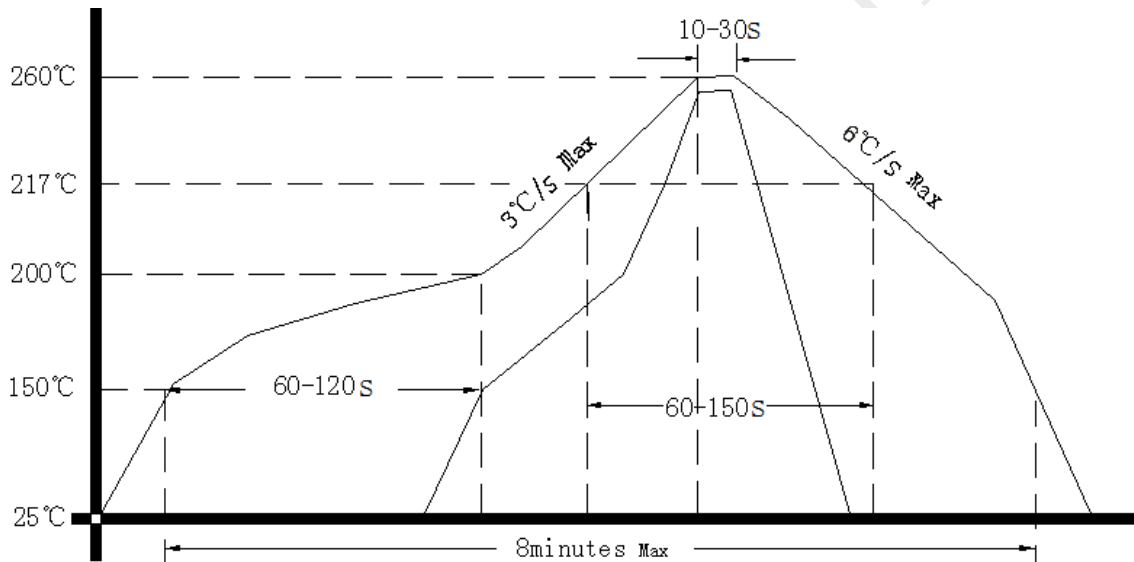
Note3: Referential weight 0.2g



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

