Customer Code : A008

DATASHEET

DAPU P/N: **O75A-0801-20.00MHz**

Customer P/N:

DAPU			Customer Approval
Drew	Audited	Approved	
Amway.wei	Xu ming	Jason zhao	
Date: 2023.10.08			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

Building 5, No.24, Industrial East Road, Songshanhu Park, Dongguan, Guangdong, P.R. China

TEL：0086-0769-88010888 FAX：0086-0769-81800098

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Songshanhu Park, Dongguan,
Guangdong, P.R. China
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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2023.10.08

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Guangdong, P.R. China
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1. Electrical Parameters

MODEL： O75A-0801-20.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		20.00		MHz	
	Output Waveform		LVTTL			
	Output Overshoot			10	%	
	Output Low Voltage			0.4	V	Vcc=3.3V, load=15pF
	Output High Voltage	2.6			V	Vcc=3.3V, load=15pF
	Duty Cycle	45		55	%	
	Rise / Fall Time (10%~90%)			4	ns	
	Load	13.5	15	16.5	pF	
	Start-up time			10	ms	
	Sprious			-90	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-10		+10	$\times 10^{-9}$	TA varied from -40℃ to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, Vcc=3.3V, load=15pF, temperature variable speed less than 2℃per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with TA=25℃, Vcc=3.3V, and after 15 minutes of operation, within 90 days after ex-works
	Frequency Tolerance vs. Supply Voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed TA=25℃, Vcc varied from 3.234V to 3.366V, and Load=15pF.
	Frequency Tolerance vs. Load	-3		+3	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with TA=25℃, Vcc=3.3V, and Load=15pF.
	G-Sensitivity			1	×10-9/G	Gamma vector of all three axes from 30 Hz to 1500 Hz,
	Micro jump	-0.5		+0.5	$\times 10^{-9}$	Continuous testing for 14 days, temperature Fluctuations< ±5℃,one sampling/10s.
	Retrace	-0.03		+0.03	$\times 10^{-6}$	After 24 hour off at 25℃,15min power on.

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	Reflow shift	-0.1		+0.1	$\times 10^{-6}$	within 90 days after ex-works, put 2 hours after reflow soldering and power on for 5 minutes, relative to the frequency deviation after ex-works.
	Short-Term Stability Allan Variance			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 1hour ref. to 25℃; 1s.
	Aging Tolerance Per Day	-1		+1	$\times 10^{-9}$	Vcc, TA constant measurement referenced to frequency observed with TA=25℃,Vcc=3.3V, and after 30 days of operation. Calculation method: Annual Aging Rate:100*daily aging rate. 10-Years Aging Rate: 6* annual aging rate. 15-Years Aging Rate: 10* annual aging rate.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-0.6		+0.6	$\times 10^{-6}$	
	Aging Tolerance 15 Years	-1		+1	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.135	3.3	3.465	V	
	Steady Consumption			200	mA	@25℃
	Warm up current			600	mA	
Phase Noise	Phase Noise @25℃			-75	dBc/Hz	1Hz
				-105		10Hz
				-135		100Hz
				-155		1KHz
				-160		10KHz
				-162		100KHz
				-162		1MHz
Jitter	Jitter			0.2	ps	RMS (12KHz ~5MHz)

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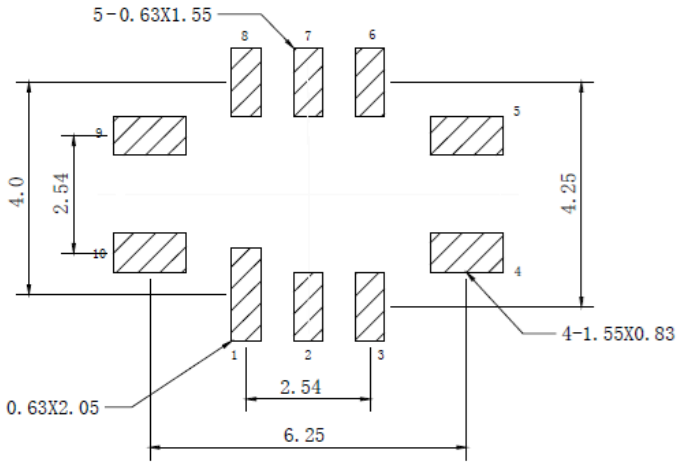
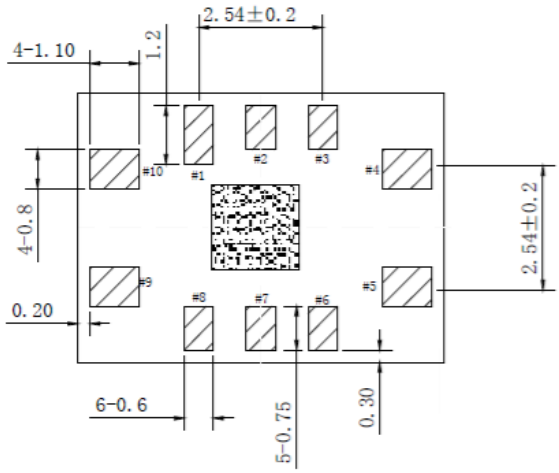
Environmental Conditions	Operating environmental condition	-40		+85	℃	
	Storage Temperature	-55		+105	℃	
	Relative Humidity	5		85	%	
	Pressure	70		106	Kpa	
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.				
	Moisture Sensitivity Level	Level 3.				
	Vibration	Sweep frequency sine wave, frequency: 10-55 Hz, maximum amplitude 1.0 mm (peak value), 55-1 KHz, maximum acceleration 10 g. Each axis 1H (3 axes 6 directions), sweep rate 1 octave/min.				
	Shock	100g; 6ms; half sine wave (3 times for each 3 directions X, Y, Z).				
Full Package Storage	Relative humidity (%)	20%～70%				
	Temperature (℃)	-10~35℃				

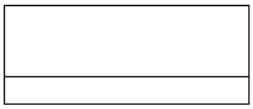
2、Mechanical Structure (mm)



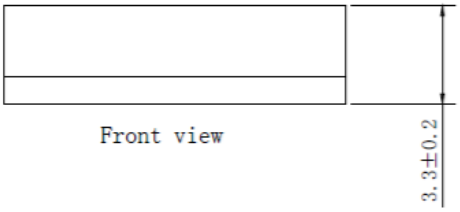
Solder pad layout



Bottom view



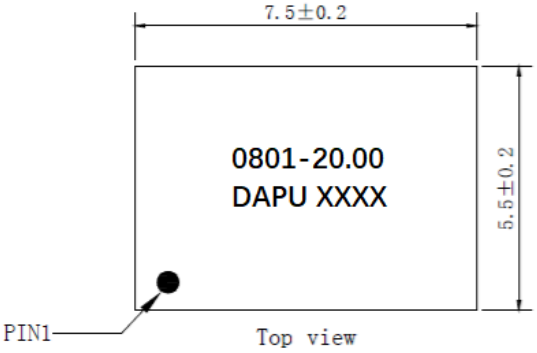
Right view



Front view

Pin Function

Pin	Function
1, 2, 3,6, 7, 8	NC
4	GND
5	OUTPUT
9	VCC
10	NC



Top view

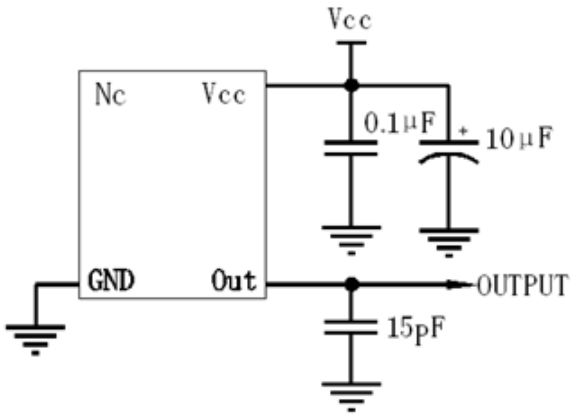
Note1: Tolerance ± 0.20mm without mark

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

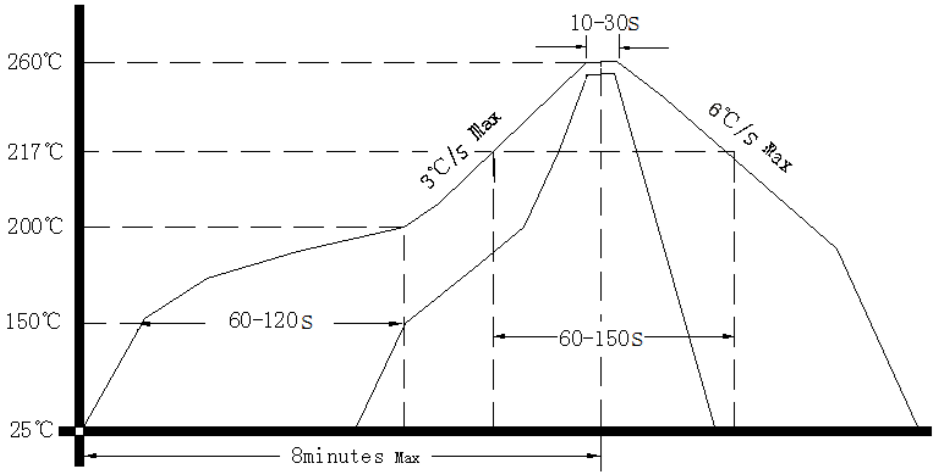
Note3: Referential weight 0.3g

Note4: NC is not connect

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



Passing through reflow upside down is not supported

5. Package: Tape & Reel (mm)