

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

# DATASHEET

Standard: 075A-L312-40.00MHz

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.12.12			

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**Table of amendment**

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2024.12.12

Confidential



## 1. Electrical Parameters

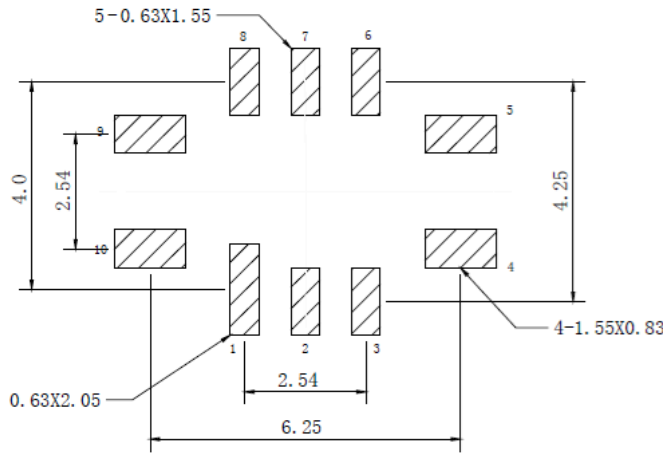
MODEL: O75A-L312-40.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	40.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time			5	ns	10%~90%
	Startup time till valid waveform			15	ms	Time until RF output waveform is within output level, duty cycle and rise/fall time spec
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from $-40^\circ\text{C}$ to $85^\circ\text{C}$ , 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	-1.5		+1.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$ , within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.02		+0.02	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}, V_{cc}$ varied from 3.135V to 3.465V, $V_c=1.65V$ , and $O_{Load}=15\text{ pF}$ .
	Frequency Tolerance vs. Load	-0.022		+0.02	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V, O_{Load}=15\text{ pF}$ .
	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 $25^\circ\text{C}; 1\text{ s}$ .
	Aging Tolerance Per Day	-5		+5	$\times 10^{-9}$	$T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$ , and after 30 days of operation.
	Aging Tolerance Per Year	-0.5		+0.5	$\times 10^{-6}$	



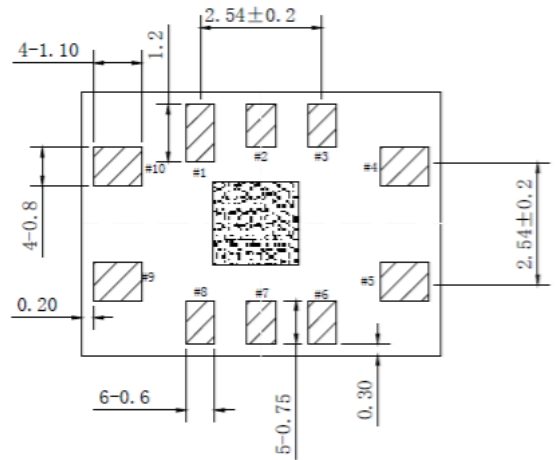
Power Supply	Steady Consumption			230	mA	@25°C
	Warm up current			600	mA	
	Supply Voltage	3.135	3.3	3.465	V	
Phase Noise	Phase Noise @25°C		-110	-100	dBc/Hz	10Hz
			-140	-130		100Hz
			-156	-151		1KHz
			-161	-156		10KHz
			-161	-156		100KHz
			-161	-156		1MHz
Voltage Control Characteristics	Frequency Tuning Range	-8		-3	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-1.5		+1.5	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to Exactly 40.00MHz
		+3		+8	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Environmental Conditions	Operable Temperature	-40		+85	°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~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.					



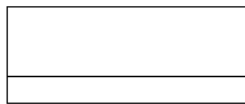
## 2. Mechanical Structure(mm)



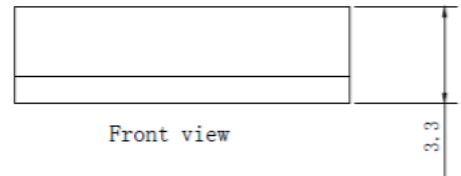
Solder pad layout



Bottom view



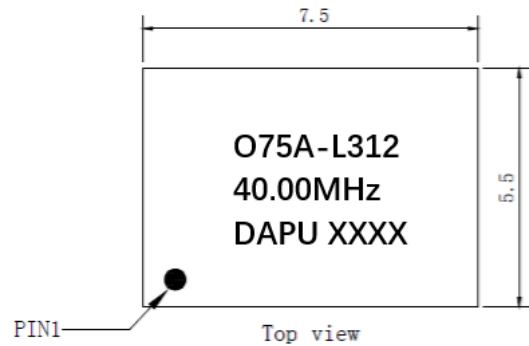
Right view



Front view

Pin Function

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



Top view

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

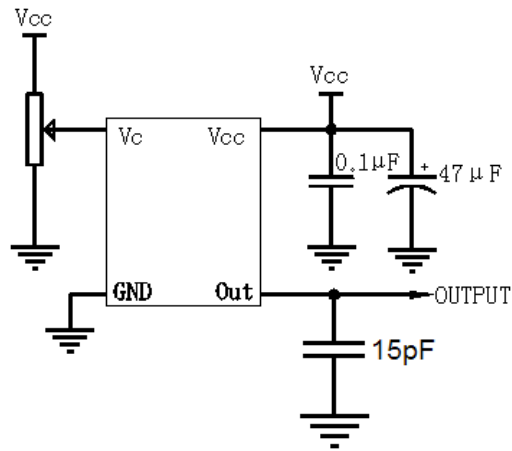
**Note2:** Referential Weight 0.3g

**Note3:** NC is not connect

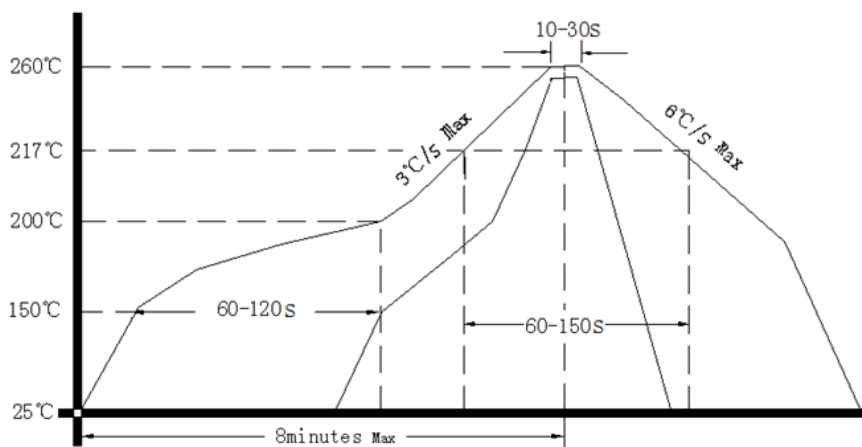
**Note4:** The first two xx representative: year  
After two xx representative: week



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



Note: Passing through reflow upside down is not supported

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

