

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

# DATASHEET

Standard: O22A-G322-24.00MHz

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.02.21			

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## 1. Electrical Parameters

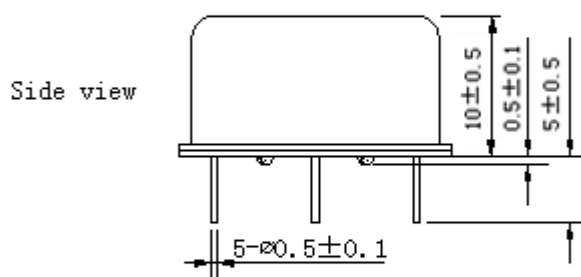
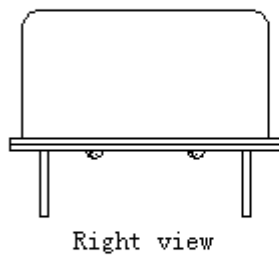
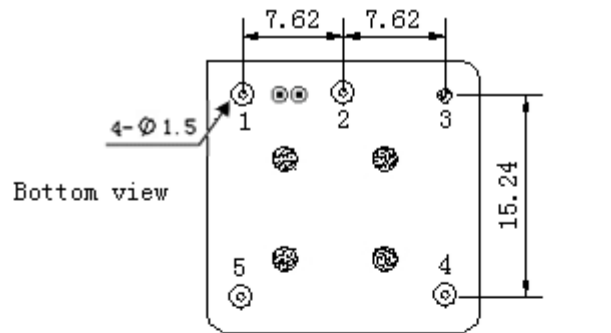
MODEL: O22A-G322-24.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	24.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	3.2			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	$T_A$ varied from $-30^{\circ}C$ to $75^{\circ}C$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$ , $V_{cc}=5.0V, V_c=1.65V, O_{load}=15pF$ , temperature rise speed less than $4^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=1.65V$ , 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 $T_A=25^{\circ}C, V_{cc}$ varied from 4.75V to 5.25V, $V_c=1.65V$ , and $O_{Load}=15pF$ .
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=1.65V$ , and $O_{Load}=15pF$ .
	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 $25^{\circ}C$ ; 1s.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V$ , after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	



Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			600	mA	
Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-0.1		+0.1	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to Exactly 24.00MHz
		+0.5			$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Phase Noise	Phase Noise		-110		dBc/Hz	10Hz
			-135			100Hz
			-145			1KHz
			-150			10KHz
			-152			100KHz
Environmental Conditions	Operable Temperature	-30		+75	°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	Not humidity sensitive.				
	Vibration	In accordance with the regulations of GJB150.16A-2009, the typical Spectral type of the caterpillar car				
Shock	In accordance with the regulations of GJB150.18A-2009, ground equipment impact requirements					
Full Package Storage	Relative humidity (%)	20% ~70%				
	Temperature (°C)	-10~35°C				

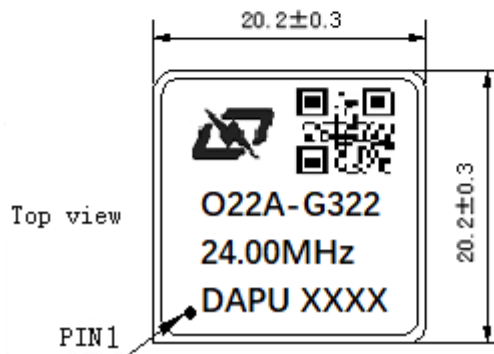


## 2. Mechanical Structure (mm)



### PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	NC	Not Connect
3	GND	GND
4	OUTPUT	RF Output
5	VCC	Supply Voltage



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

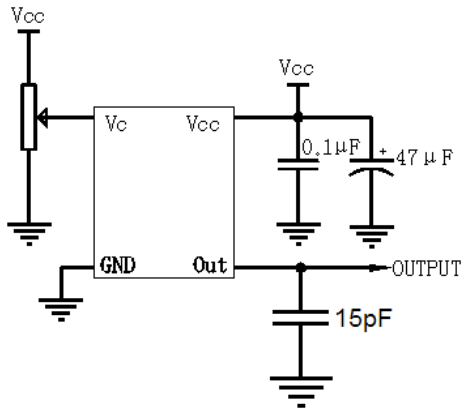
**Note2:** The first two xx representative: week  
After two xx representative: year

**Note3:** Referential weight 8.0g

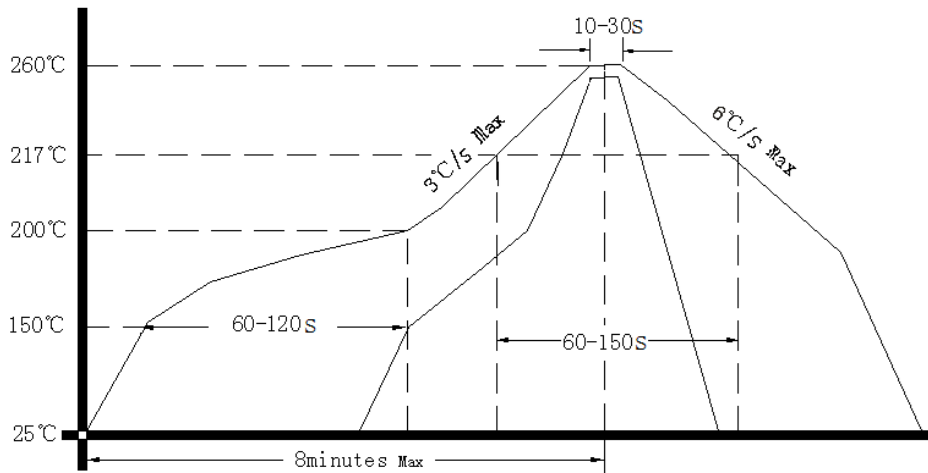
**Note4:** NC is not connect



#### 4. Test Circuit



#### 5. Reflow Soldering Curve (RoHS)



#### 6. Package (mm)

