

Customer Code: \_\_\_\_\_

# DATASHEET

DAPU P/N:           **O22B-G448-10.00MHz**          

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.10.11			

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## 1. Electrical Parameters

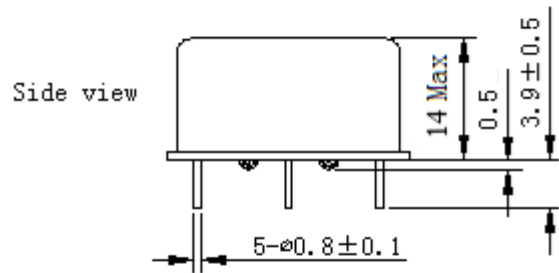
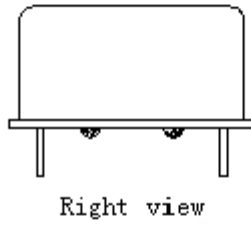
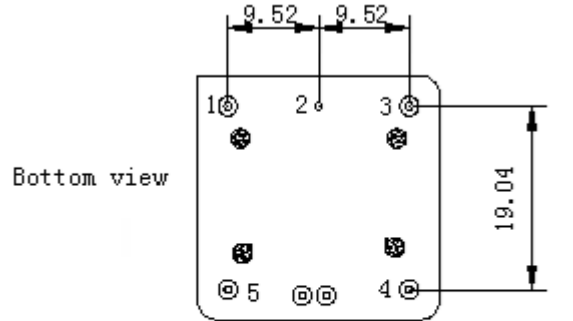
MODEL: O22B-G448-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	7	10	13	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	$T_A$ varied from $-10^{\circ}\text{C}$ to $70^{\circ}\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$ $V_{\text{cc}}=12\text{V}$ , $O_{\text{load}}=50\Omega$ , temperature variable speed less than $2^{\circ}\text{C}$ per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{\text{cc}}=12\text{V}$ , $V_c=5\text{V}$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$ , $V_{\text{cc}}$ varied from 11.88V to 12.12V, $V_c=5\text{V}$ , $O_{\text{load}}=50\Omega$ .
	Frequency Jumps	-5		+5	$\times 10^{-9}$	After 24 hours
	Retrace	-0.05		+0.05	$\times 10^{-6}$	At room temperature, 72 hours on, 24 hours off, after 15 minutes
	Short-Term Stability: Allan Variance		0.01		$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^{\circ}\text{C}$ ; 0.1 to 1s.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	$V_{\text{cc}}, V_c, T_A$ constant Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{\text{cc}}=12\text{V}$ , $V_c=5\text{V}$ , $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance Per Year	-0.1		+0.1	$\times 10^{-6}$	
Aging Tolerance 10 Years	-0.4		+0.4	$\times 10^{-6}$		



Power Supply	Supply Voltage	11.4	12	16	V	
	Steady Consumption			1.5	W	@25°C
	Start-up Consumption			6	W	@0°C
	Warm-Up Time			5	min	@25°C ± 5°C, within ± 0.1 × 10 <sup>-6</sup> of final Frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range			-0.5	× 10 <sup>-6</sup>	V <sub>c</sub> =0V. measurement referenced to V <sub>c</sub> =5V.
		-0.2		+0.2	× 10 <sup>-6</sup>	V <sub>c</sub> =5V. measurement referenced to exactly 10.00MHz.
		+0.5			× 10 <sup>-6</sup>	V <sub>c</sub> =10V. measurement referenced to V <sub>c</sub> =5V.
	Deviation Slope	0.1	0.25	0.4	× 10 <sup>-6</sup> /V	
	Modulation Bandwidth	200			Hz	
	Input Impedance	10			KΩ	
Phase Noise	Phase Noise @25°C		-105		dBc/Hz	1Hz
				-130		10Hz
				-155		100Hz
				-160		1KHz
				-165		10KHz
Environmental Conditions	Operating Temperature	-10		+70	°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	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				

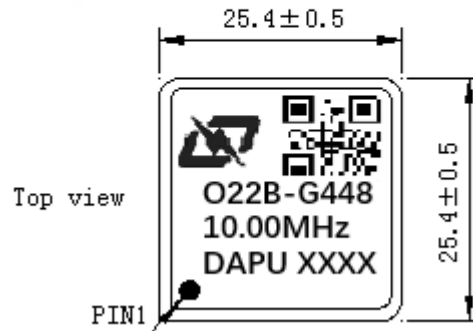


## 2. Mechanical Structure (mm)



### PIN FUNCTION

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



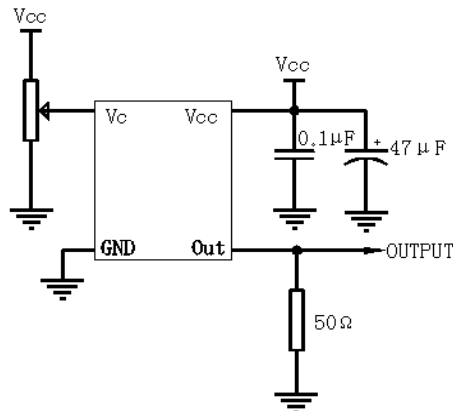
**Note1:** Tolerance  $\pm 0.20\text{mm}$  without mark.

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

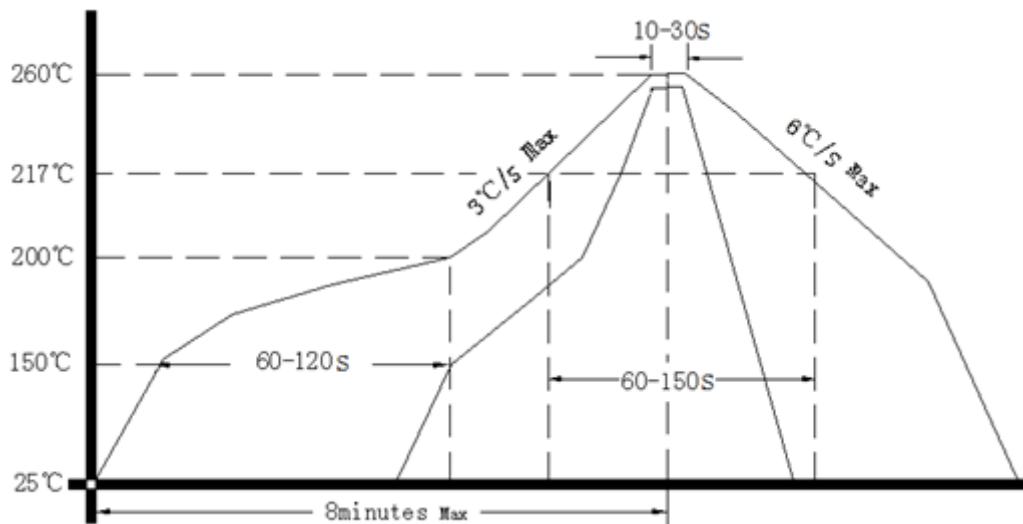
**Note3:** Referential Weight 13.6g.



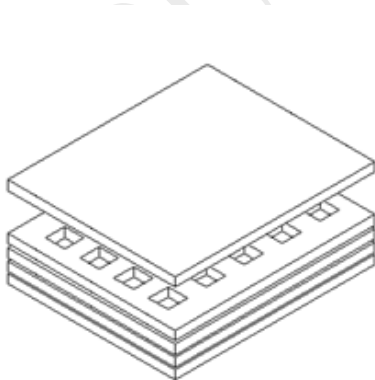
### 3. Test Circuit



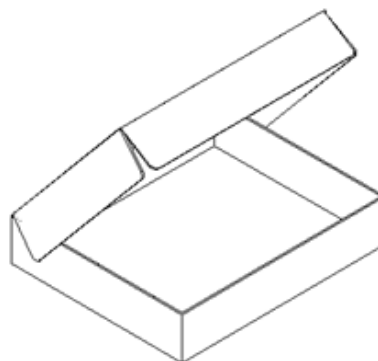
### 4. Reflow Soldering Curve (RoHS)



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



Buffer material



Cardboard  
Max 20pcs. circulator

