

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

# DATASHEET

Standard:     **O22B-Q446-10.00MHz**    

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.06.25			

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## 1. Electrical Parameters

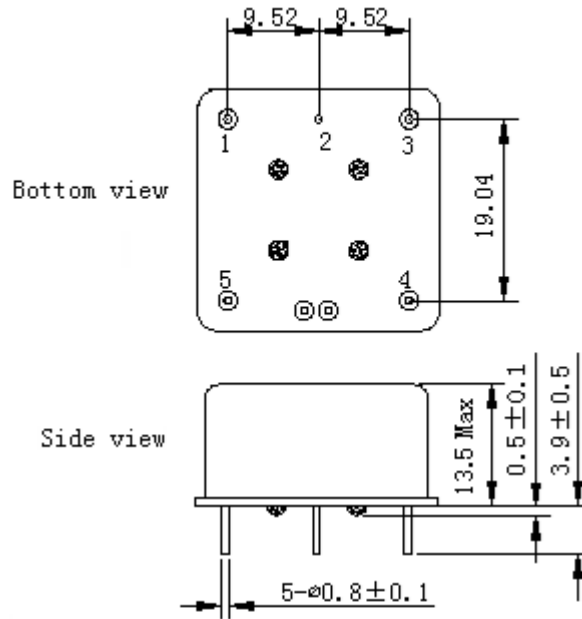
MODEL: O22B-Q446-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Waveform	Sine wave				
	Level	5	7	9	dBm	
	Load	50			$\Omega$	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5		+5	$\times 10^{-9}$	$T_A$ varied from $0^\circ\text{C}$ to $50^\circ\text{C}$ , 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	-0.3		+0.3	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=12\text{V}$ , $V_c=2.5\text{V}$ 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 11.4V to 12.6V, $V_c=2.5\text{V}$ , $O_{\text{load}}=50\Omega$ .
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=12\text{V}$ , $V_c=2.5\text{V}$ , $O_{\text{load}}=50\Omega$ .
	Short Term Stability			0.05	$\times 10^{-9}$	Temperature stability, no EMI/EMC or other interference, test after power for 1 hour ref. to $25^\circ\text{C}$ ; 1s.
	Aging Tolerance per day	-1		+1	$\times 10^{-9}$	$V_{\text{cc}}, V_c, T_A$ constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=12\text{V}$ , $V_c=2.5\text{V}$ , $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Reference Voltage	4.75	5	5.25	V	
	Current Consumption			125	mA	@ $25^\circ\text{C}$
	Current Consumption during warm up			300	mA	@ $25^\circ\text{C}$
	Warm-Up Time			5	minutes	@ $25^\circ\text{C}$ within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 1 hour on.



Voltage Control Characteristics	Frequency Tuning Range		-1	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.5V$ .	
		-0.3	+0.3	$\times 10^{-6}$	$V_c=2.5V$ . measurement referenced to exactly 10.00MHz.	
		+1		$\times 10^{-6}$	$V_c=5V$ . measurement referenced to $V_c=2.5V$ .	
	Linearity		10	%		
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Phase Noise	Phase Noise @25°C		-110		dBc/Hz	10Hz
			-130			100Hz
			-145			1KHz
			-155			10KHz
Environmental Conditions	Operable Temperature	0	+50	°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.					

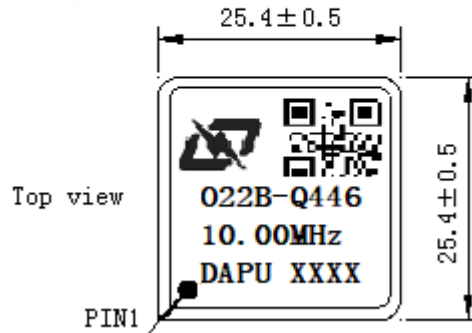


## 2. Mechanical Structure (mm)



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	OUTPUT	RF Output
2	GND	GND
3	VC	Control Voltage
4	VREF	5 V
5	VCC	Supply Voltage



**Note1:** Tolerance  $\pm 0.2$ mm without mark

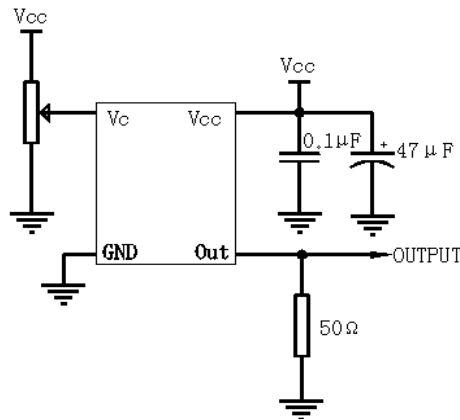
**Note2:** The two XX representative: week

After two XX representative: year

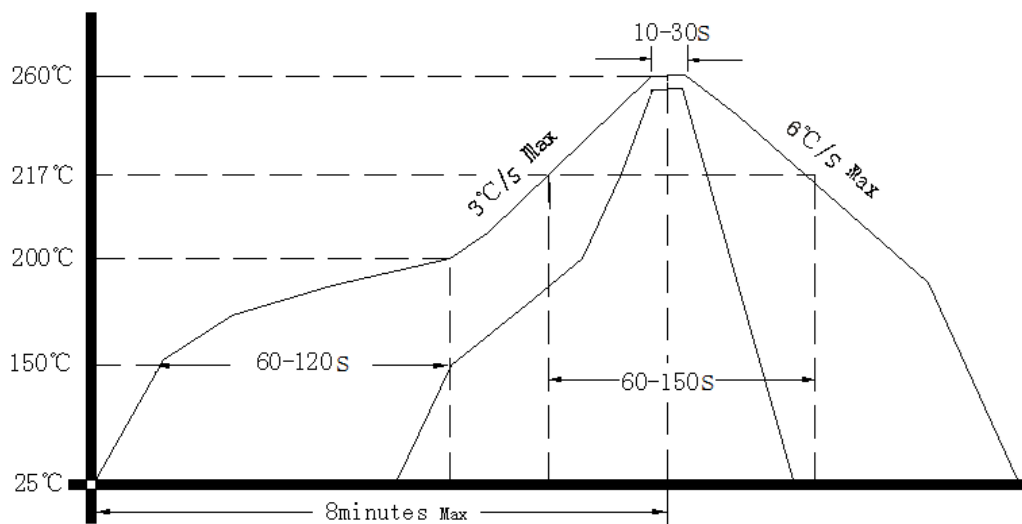
**Note3:** Referential Weight 13.6g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)

