

Customer Code : _____

DATASHEET

DAPU P/N: **O23B-Q448-50.00MHz-ACT**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.07.31			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2024.07.31



1. Electrical Parameters

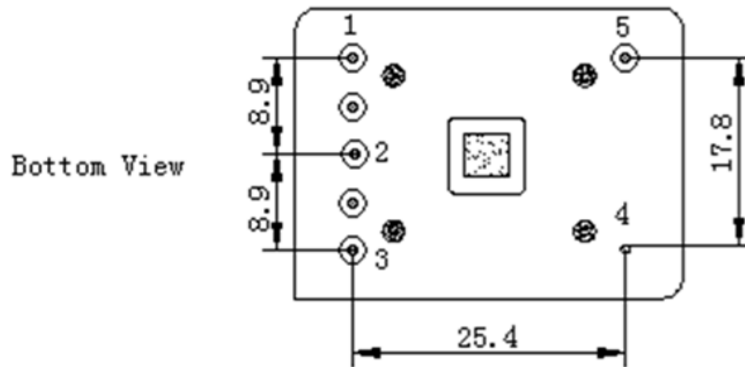
MODEL: O23B-Q448-50.00MHZ-ACT						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	50.00			MHz	
	Output Waveform	Sine wave				
	Level	400			mV	
	Load	50			Ω	
	Harmonics Suppression			-25	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	T_A varied from -20°C to 60°C , measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=12.0\text{V}$, $O_{load}=50\Omega$, temperature rise speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=12.0\text{V}$, $V_c=4\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.1		+0.1	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 11.4V to 12.6V, $V_c=4\text{V}$, $O_{load}=50\Omega$.
	Frequency Tolerance vs. Load	-0.05		+0.05	$\times 10^{-6}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=12.0\text{V}$, $V_c=4\text{V}$, $O_{load}=50\Omega$.
	Aging Tolerance 1Year	-0.2		+0.2	$\times 10^{-6}$	V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{cc}=12.0\text{V}$, $V_c=4\text{V}$, $O_{load}=50\Omega$ and after 30 days of operation.
Power Supply	Supply Voltage	10.8	12.0	13.2	V	
	Reference Voltage		8		V	
	Current Consumption			150	mA	@ 25°C
	Current Consumption during warm up			500	mA	
	Warm Up Time			3	min	@ 25°C within $\pm 1 \times 10^{-6}$ of final frequency with reference after 1 hour on.



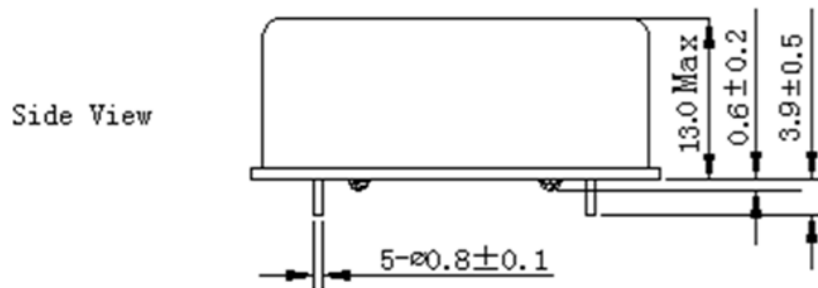
Voltage Control Characteristics	Frequency Tuning Range			-3	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=4V$.
		-0.2		+0.2	$\times 10^{-6}$	$V_c=4V$. measurement referenced to exactly 50.00MHz.
		+3			$\times 10^{-6}$	$V_c=8V$. measurement referenced to $V_c=4V$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise			-95	dBc/Hz	10Hz
				-130		100Hz
				-150		1KHz
				-160		10KHz
				-160		100KHz
Environmental Conditions	Operable Temperature	-20		+60	$^{\circ}C$	
	Storage Temperature	-55		+105	$^{\circ}C$	
	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 ($^{\circ}C$)	-10~35 $^{\circ}C$				



2. Mechanical Structure (mm)

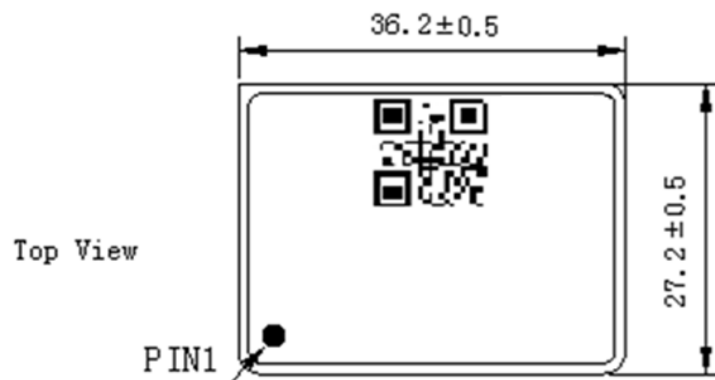


Right View



PIN FUNCTION

PIN	FUNCTION
1	VCC
2	VREF
3	VC
4	GND
5	OUTPUT

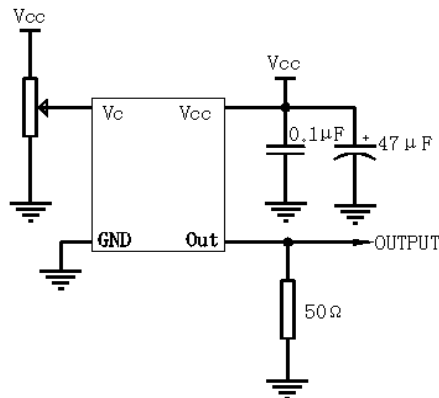


Note1: Tolerance $\pm 0.20\text{mm}$ without mark

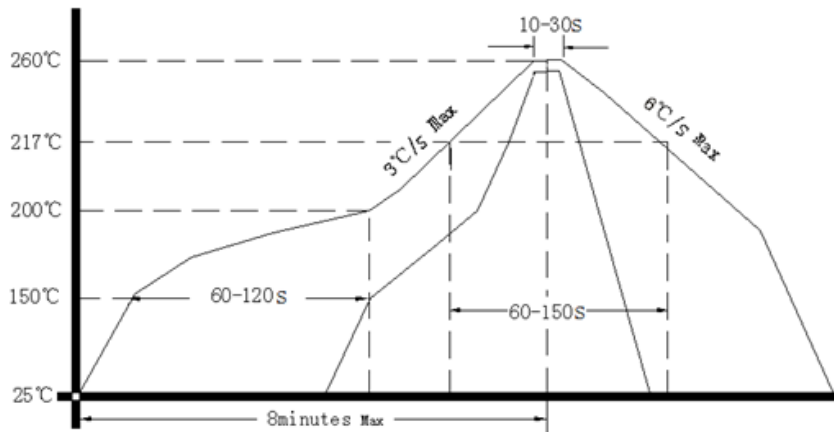
Note2: Referential Weight 21g



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)

