

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

# DATASHEET

DAPU P/N: **O23B-B448-10.00MHz-G015**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2022.08.04			

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## 1. Electrical Parameters

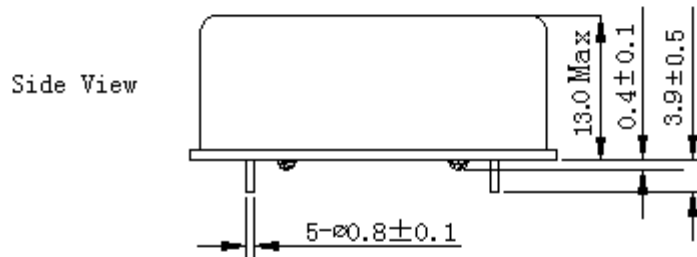
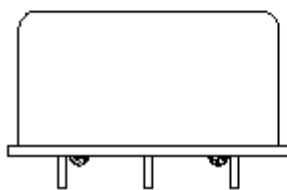
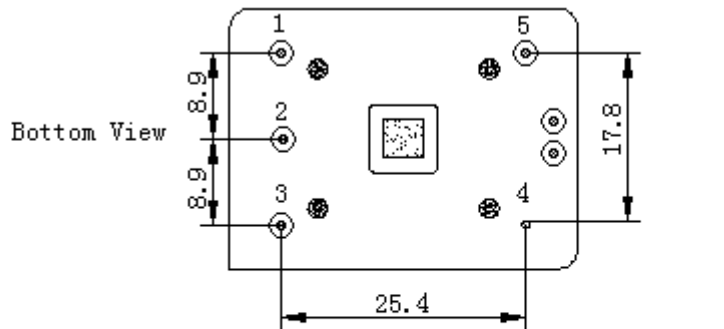
MODEL: O23B-B448-10.00MHz-G015						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	8	10	12	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-70	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1		+1	$\times 10^{-9}$	$T_A$ varied from $-20^\circ\text{C}$ to $80^\circ\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$ , $V_{\text{cc}}=12.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{\text{load}}=50\Omega$ , temperature variable speed less than $2^\circ\text{C}$ per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=12.0\text{V}$ , $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.5		+0.5	$\times 10^{-9}$	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	-0.5		+0.5	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=12.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{\text{load}}=50\Omega$ .
	Short Term Stability			0.005	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^\circ\text{C}$ ; 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 $T_A=25^\circ\text{C}$ ,
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	$V_{\text{cc}}=12.0\text{V}, V_c=2.5\text{V}, O_{\text{load}}=50\Omega$ and after 30 days of operation.



Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Steady Consumption			175	mA	@25°C
	Warm up current			400	mA	
	Start up time			500	ms	
	Warm-Up Time			3	minutes	@25 °C within $\pm 0.02 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range	-1.5		-0.4	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.5V$ .
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.5V$ . measurement referenced to exactly 10.00MHz.
		+0.4		+1.5	$\times 10^{-6}$	$V_c=5.0V$ . measurement referenced to $V_c=2.5V$ .
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	10			K $\Omega$	
Phase Noise	Phase Noise			-100	dBc/Hz	1Hz
				-130		10Hz
				-153		100Hz
				-158		1KHz
				-160		10KHz
				-160		100KHz
				-160		
Environmental Conditions	Operable Temperature	-20		+80	°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				

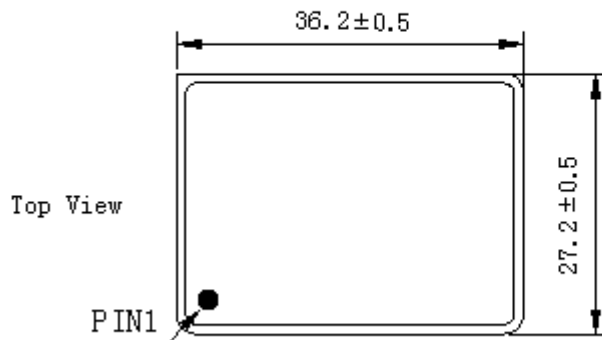


## 2. Mechanical Structure (mm)



### PIN FUNCTION

PIN	NOTATION
1	VCC
2	VREF :5V
3	EFC
4	GND
5	OUTPUT



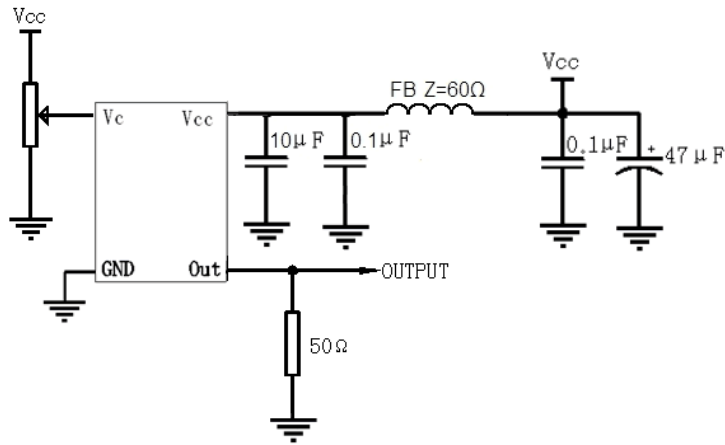
**Note1:** Tolerance ± 0.20mm without mark

**Note2:** Referential weight 20.7g

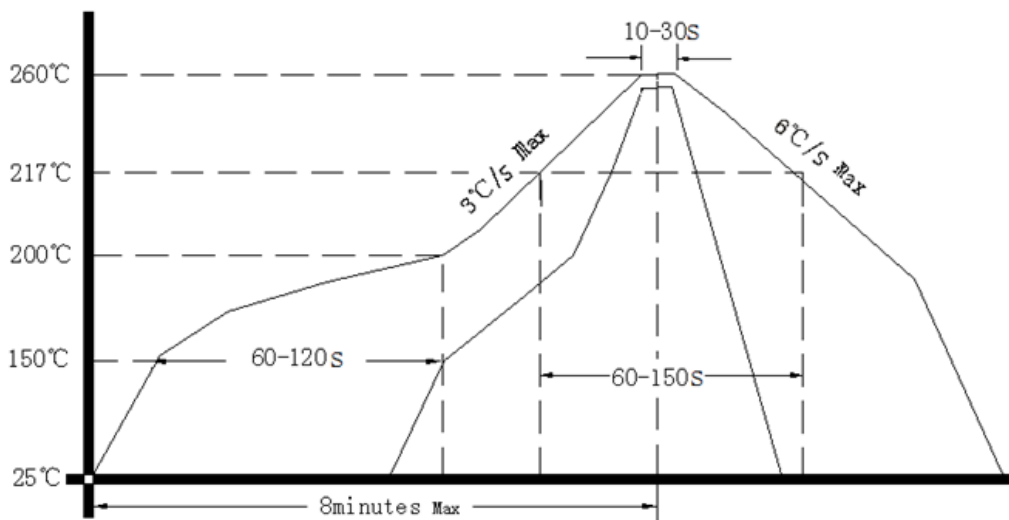
DAPU



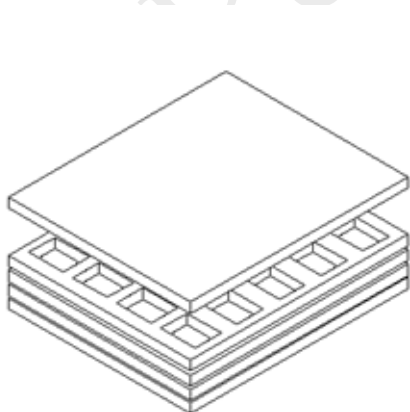
### 3. Test Circuit



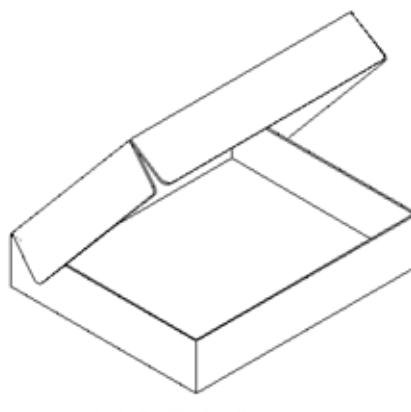
### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)



Buffer material



Cardboard  
Max 20pcs. circulator

