

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

# DATASHEET

DAPU P/N:     **O23B-L446-100.00MHz**    

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

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2022.11.02			

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### Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2012.06.21
1.1	Modified the 1 <sup>st</sup> page “Full Package Storage” added “Initial Frequency Tolerance” and “Frequency Tuning Range” changed	<i>Amway</i>	2016.01.04
1.2	The “Level” “Initial Frequency Tolerance” and “Phase Noise” changed	<i>Amway</i>	2017.12.18
1.3	The “Mechanical Structure” changed	<i>Amway</i>	2019.05.29
1.4	The “Short Term Stability” “Frequency Tuning Range” “ESD Level” changed	<i>Amway</i>	2020.06.04
1.5	The “Mechanical Structure” “Reflow Soldering Curve” changed	<i>Amway</i>	2022.11.02



## 1. Electrical Parameters

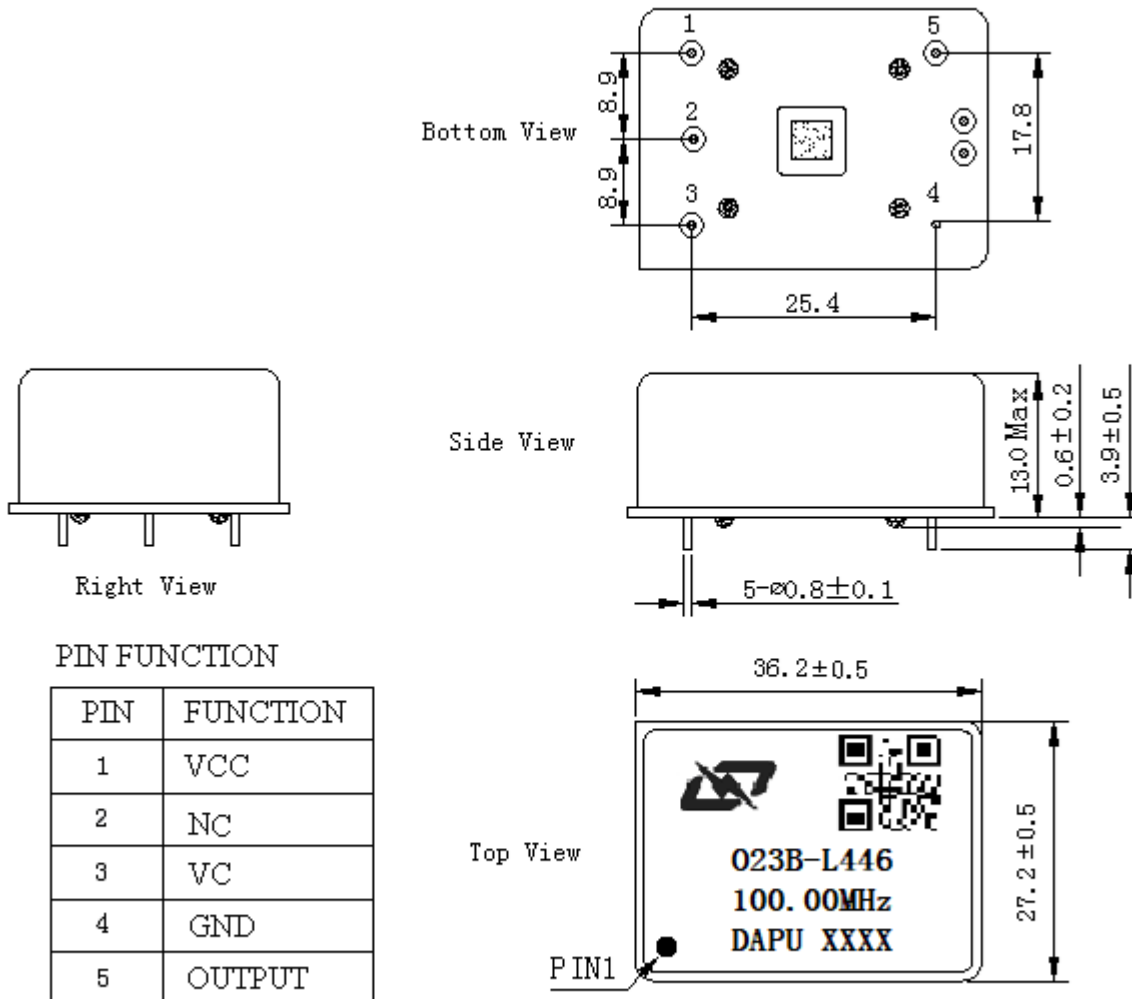
MODEL: O23B-L446-100.00MHZ						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	100.00			MHz	
	Output Waveform	Sine wave				
	Level	6	12	16	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-60	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5		+5	$\times 10^{-9}$	$T_A$ varied from $-20^{\circ}\text{C}$ to $70^{\circ}\text{C}$ , measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=12.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ , temperature rise speed less than $2^{\circ}\text{C}$ per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=12.0\text{V}$ , $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$ , $V_{cc}$ varied from 11.4V to 12.6V, $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ .
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=12.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ .
	Short Term Stability			0.01	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^{\circ}\text{C}$ ; 1s.
	Aging Tolerance per day	-1		+1	$\times 10^{-9}$	$V_{cc}, V_c, T_A$ constant Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=12.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ 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	
	Current Consumption			200	mA	@ $25^{\circ}\text{C}$
	Current Consumption during warm up			400	mA	



Voltage Control Characteristics	Frequency Tuning Range			-1	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.5V$ .
		-0.5		+0.5	$\times 10^{-6}$	$V_c=2.5V$ . measurement referenced to exactly 100.00MHz.
		+1			$\times 10^{-6}$	$V_c=5.0V$ . measurement referenced to $V_c=2.5V$ .
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise			-100	dBc/Hz	10Hz
				-125		100Hz
				-150		1KHz
				-160		10KHz
				-170		100KHz
				-170		1MHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	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 $^{\circ}C$				



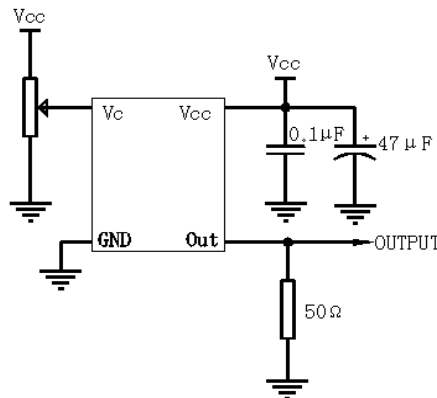
## 2. Mechanical Structure (mm)



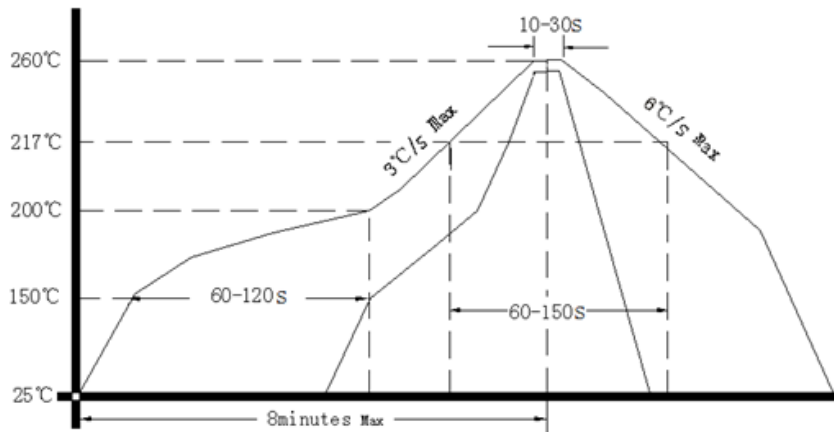
- Note1:** Tolerance ± 0.20mm without mark
- Note2:** The first two xx representative: week  
After two xx representative: year
- Note3:** Referential Weight 21g
- Note4:** NC is not connect



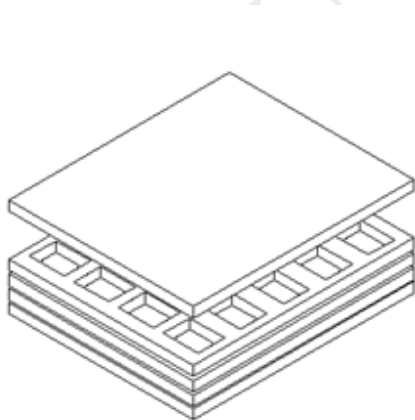
### 3. Test Circuit



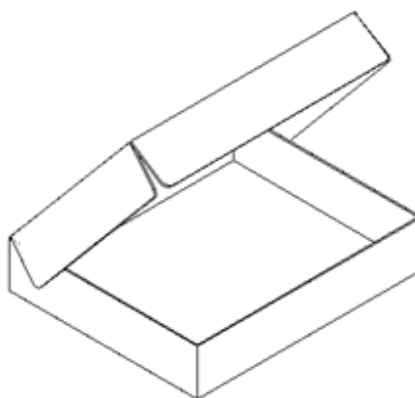
### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)



Buffer material



Cardboard  
Max 20pcs. circulator

