

Travelling Merchant: _____

DATASHEET

Standard: **O23B-W425-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.11.04			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2020.11.03
1.1	The “Harmonics Suppression” changed, Add “Subharmonic Suppression”	<i>Amway</i>	2021.11.04



1. Electrical Parameters

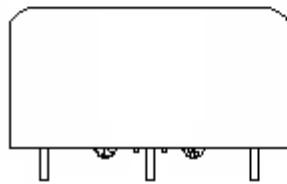
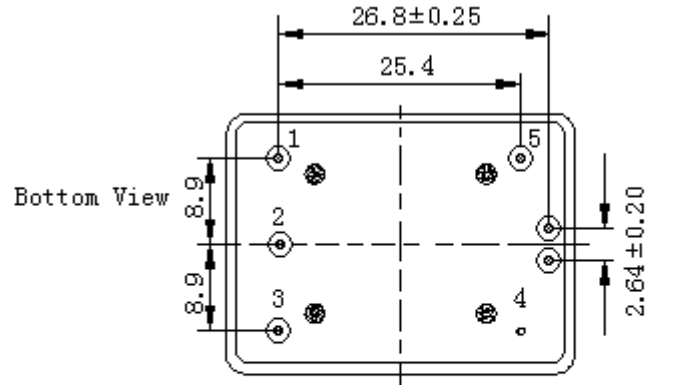
MODEL: O23B-W425-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	5	7	9	dBm	
	Load	50			Ω	
	Harmonics Suppression			-48	dBc	
	Subharmonic Suppression			-52	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.1		+0.1	$\times 10^{-9}$	T_A varied from -40°C to 85°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=5.0\text{V}$, $O_{\text{load}}=50\Omega$, temperature rise speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.05		+0.05	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.5\text{V}$, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 4.75V to 5.25V, $V_c=2.5\text{V}$ and $O_{\text{Load}}=50\Omega$.
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.5\text{V}$, and $O_{\text{Load}}=50\Omega$.
	Short-Term Stability Allan Variance			5	$\times 10^{-12}$	Temperature stability, no EMI/EMC or other interference, test after power for 1 hour ref. to 25°C ; 1s.
	Aging Tolerance Per Day	-0.2		+0.2	$\times 10^{-9}$	V_{cc} , T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $O_{\text{Load}}=50\Omega$, $V_c=2.5\text{V}$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.02		+0.02	$\times 10^{-6}$	



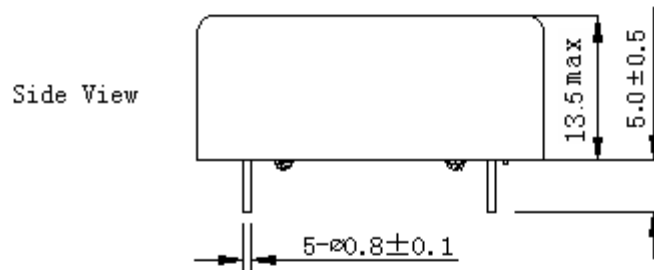
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			600	mA	@25°C
	Warm up current			1600	mA	
	Warm-Up Time			5	min	@25°C within $\pm 0.015 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range	-0.5		-0.3	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$
		-0.05		+0.05	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz
		+0.3		+0.5	$\times 10^{-6}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K Ω	
Phase Noise	Phase Noise		-130	-120	dBc/Hz	10Hz
			-145	-135		100Hz
			-150	-145		1KHz
			-150	-145		10KHz
			-150	-145		100KHz
			-150	-145		1MHz
Environmental Conditions	Operable Temperature	-40		+85	°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)



Right View

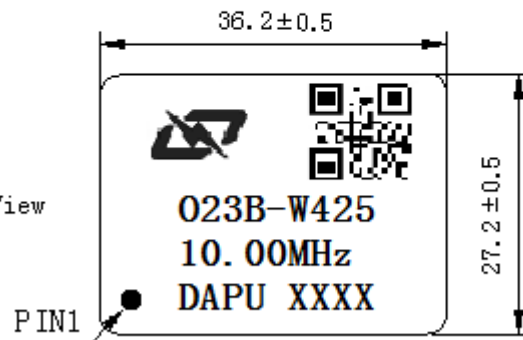


Side View

PIN FUNCTION

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

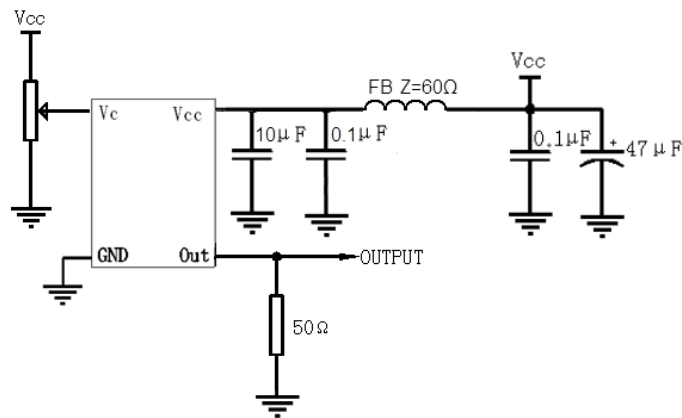
Top View



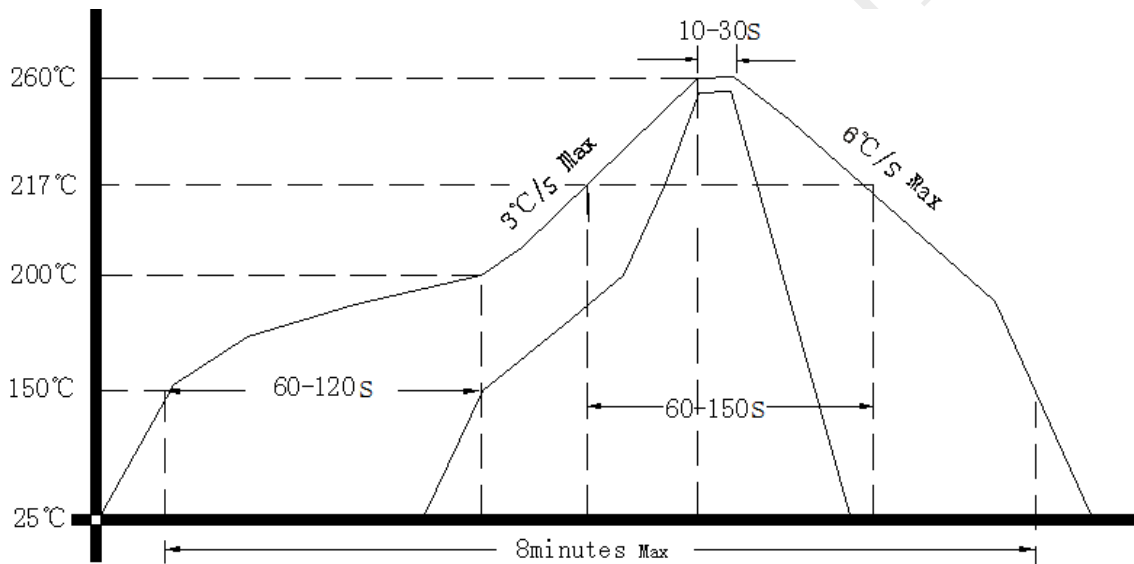
- Note1:** Tolerance ± 0.2 mm without mark
- Note2:** Referential weight 30g
- Note3:** NC is not connect
- Note4:** The first two xx representative: week
After two xx representative: year



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package (mm)

