

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

# DATASHEET

Standard:           **O23B-Q326-10.00MHz**          

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2020.04.10			

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## 1. Electrical Parameters

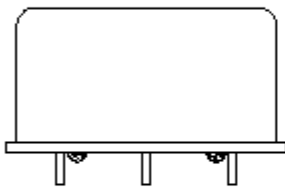
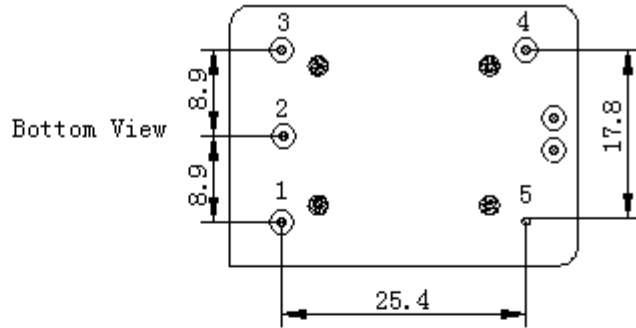
MODEL: O23B-Q326-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=10K\Omega/15pF$
	Output High Voltage	2.4			V	$V_{cc}=5.0V, O_{load}=10K\Omega/15pF$
	Duty Cycle	40	50	60	%	@50%
	Rise / Fall Time (10%~90%)			10	ns	
	Load	10K $\Omega$ //15pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	$T_A$ varied from -40 $^{\circ}C$ to 75 $^{\circ}C$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=5.0V, V_c=2.0V, O_{load}=10K\Omega/15pF$ , temperature variable speed less than 2 $^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$ , 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 $T_A=25^{\circ}C, V_{cc}$ varied from 4.75V to 5.25V, $V_c=2.0V$ and $O_{Load}=10K\Omega/15pF$ .
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	10% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$ , and $O_{Load}=10K\Omega/15pF$ .
	Short-Term Stability: Allan Variance			0.01	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25 $^{\circ}C$ ; 1s.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, V_c, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	



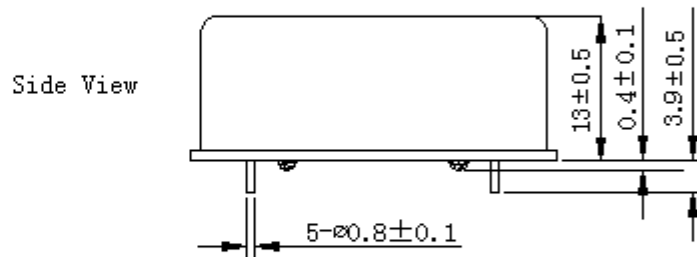
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			300	mA	@25°C
	Warm up current			700	mA	
	Vref out	3.8	4.0	4.2	V	
	Warm-up Time			5	min	@25°C
Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.0V$
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.0V$ . measurement referenced to exactly 10.00MHz
		+0.5			$\times 10^{-6}$	$V_c=4.0V$ . measurement referenced to $V_c=2.0V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Phase Noise	Phase Noise		-95	-85	dBc/Hz	1Hz
			-125	-115		10Hz
			-140	-130		100Hz
			-150	-145		1KHz
			-155	-150		10KHz
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 JESD22-115C.				
	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)



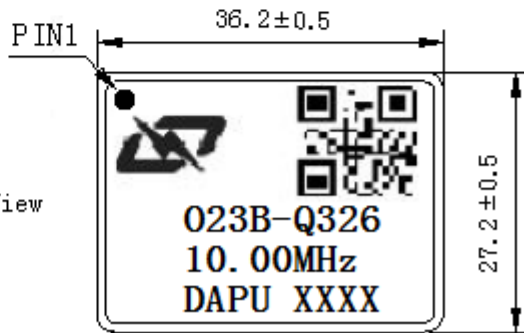
Right View



### PIN FUNCTION

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

Top View



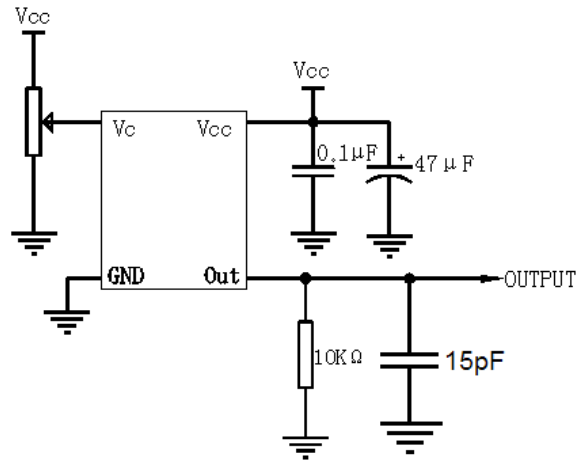
**Note1:** Tolerance  $\pm 0.2$ mm without mark

**Note2:** The YY representative: year  
The WW representative: week

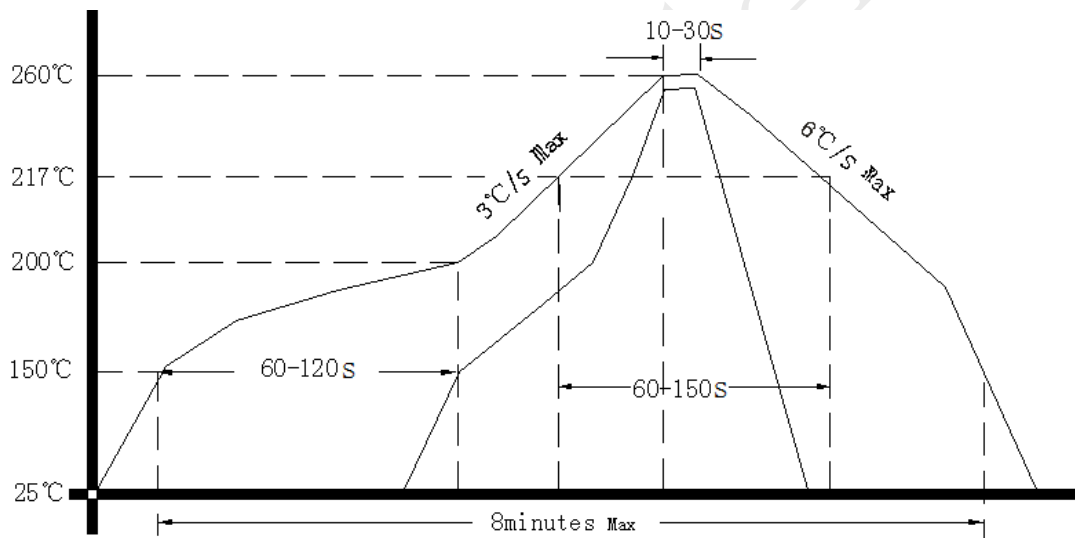
**Note3:** Referential weight 20.7g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package (mm)

