

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

# DATASHEET

Standard: 023B-O126-10.00MHz-B

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2016.10.11			

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## 1. Electrical Parameters

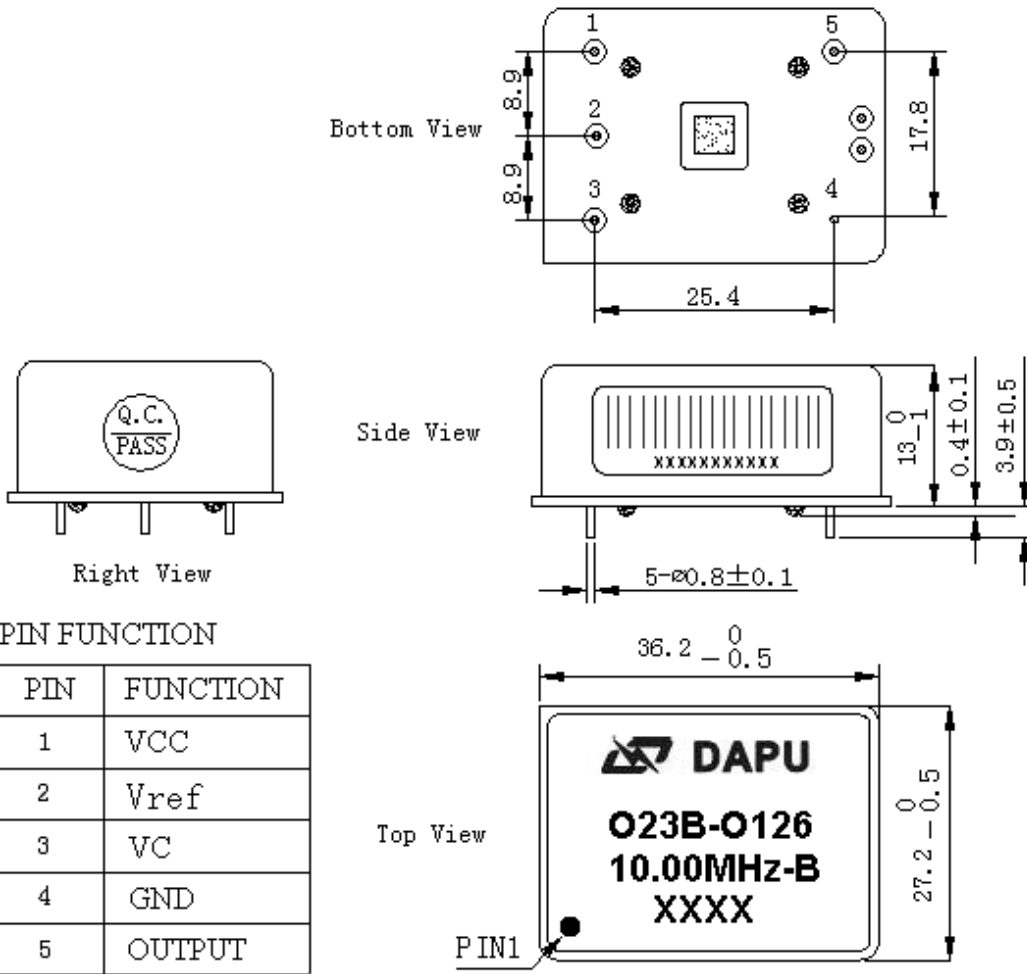
MODEL: O23B-O126-10.00MHZ-B						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	LVTTL				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			3	ns	
	Spurious			-60	dBc	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-3		+3	$\times 10^{-9}$	$T_A$ varied from $-40^{\circ}C$ to $80^{\circ}C$ , measurement referenced to frequency observed with $T_A = 25^{\circ}C, V_{cc}=5.0V, V_c=2.5V, O_{load}=15pF$ , 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 $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 4.75V to 5.25V, $V_c=2.5V$ and $O_{Load}=15pF$ .
	Frequency Tolerance vs. Load	-1		+1	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$ , and $O_{Load}=15pF$ .
	Short-Term Stability: Allan Variance			0.015	$\times 10^{-9}$	Temperature stability, no EMI/EMC or other interference, test after power for 1hour ref. to $25^{\circ}C; 1s$ , using PN9000 equipment.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, V_c, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.03		+0.03	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			400	mA	@ $25^{\circ}C$
	Warm up current			1000	mA	



Voltage Control Characteristics	Frequency Tuning Range	-0.8		-0.4	$\times 10^{-6}$	$V_c = 0 \text{ V}$ . measurement referenced to $V_c = 2.5 \text{ V}$
		-0.1		+0.1	$\times 10^{-6}$	$V_c = 2.5 \text{ V}$ . measurement referenced to exactly 10.00MHz
		+0.4		+0.8	$\times 10^{-6}$	$V_c = 5.0 \text{ V}$ . measurement referenced to $V_c = 2.5 \text{ V}$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise		-115	-110	dBc/Hz	10Hz
			-135	-130		100Hz
			-148	-143		1KHz
			-152	-147		10KHz
			-155	-150		100KHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}\text{C}$	
	Storage Temperature	-55		+105	$^{\circ}\text{C}$	
	ESD Level	Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.				
	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.					



## 2. Mechanical Structure (mm)



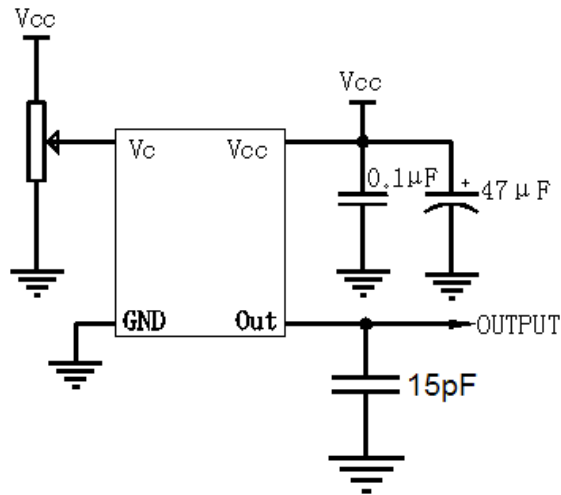
### PIN FUNCTION

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

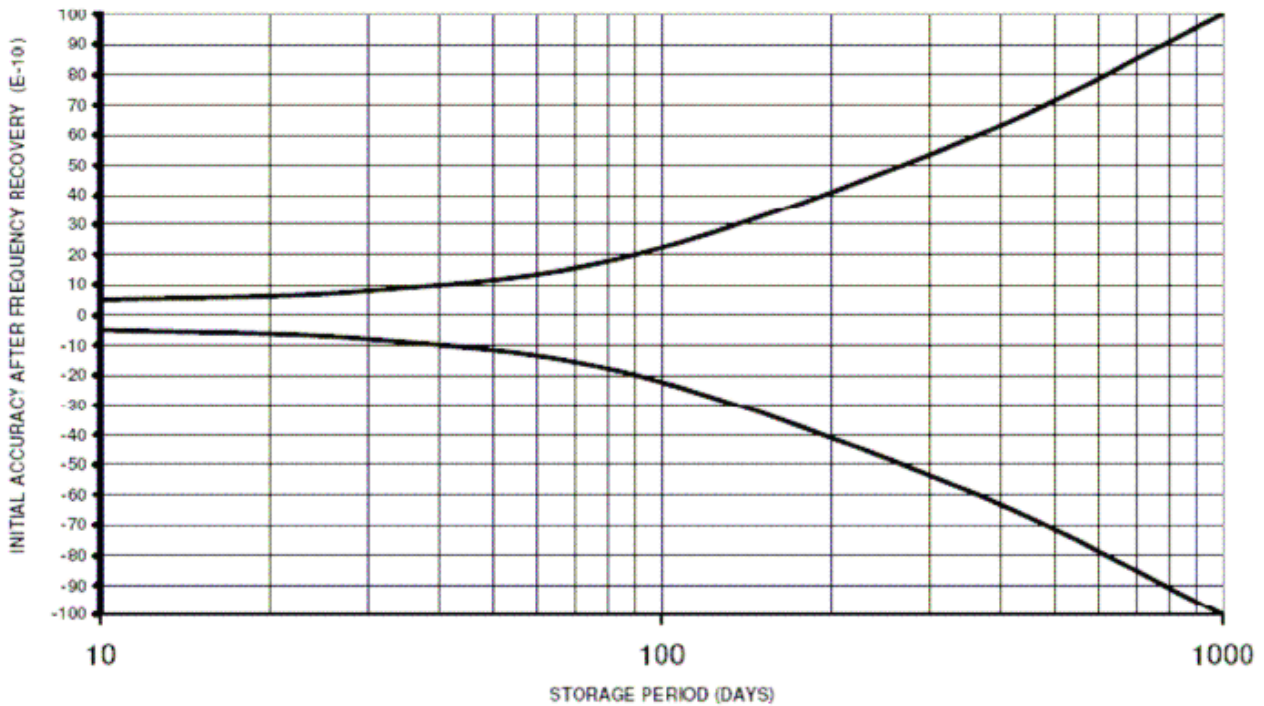
- Note1:** Tolerance ±0.2mm without mark
- Note2:** Referential Weight 21g
- Note3:** The first two xx representative: week  
After two xx representative: year



### 3. Test Circuit



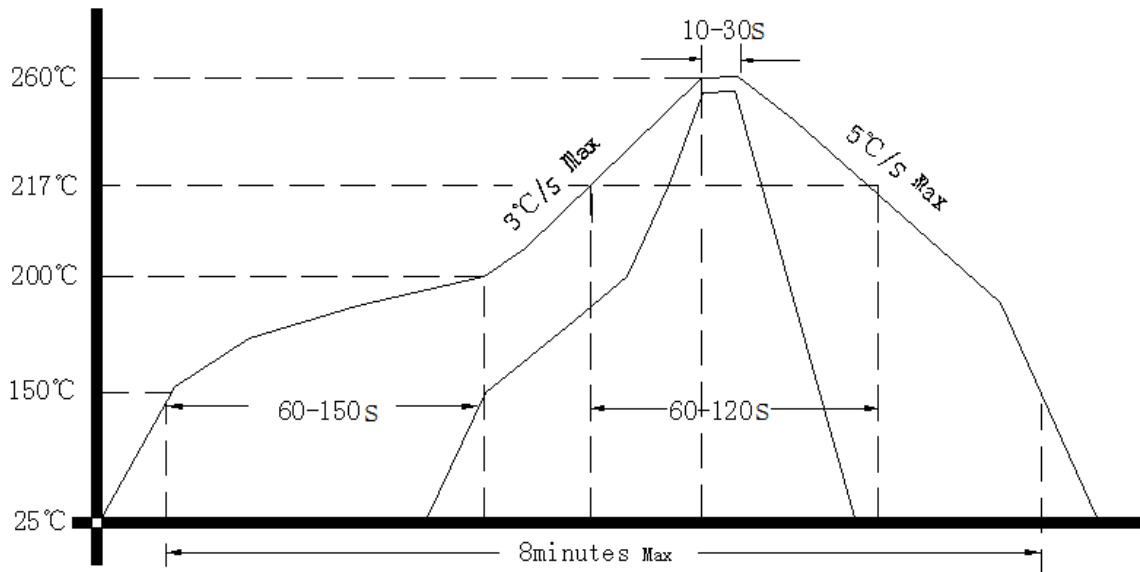
### 4. Initial accuracy at IQC after frequency recovery



Note: Initial accuracy with time of storage and retrace measured at 25 °C after frequency recovery time



### 5. Reflow Soldering Curve (RoHS)



### 5. Package (mm)

