

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

# DATASHEET

Standard:     **O23B-K327-10.00MHz-A**    

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2013.03.22			

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## 1、Electrical Parameters

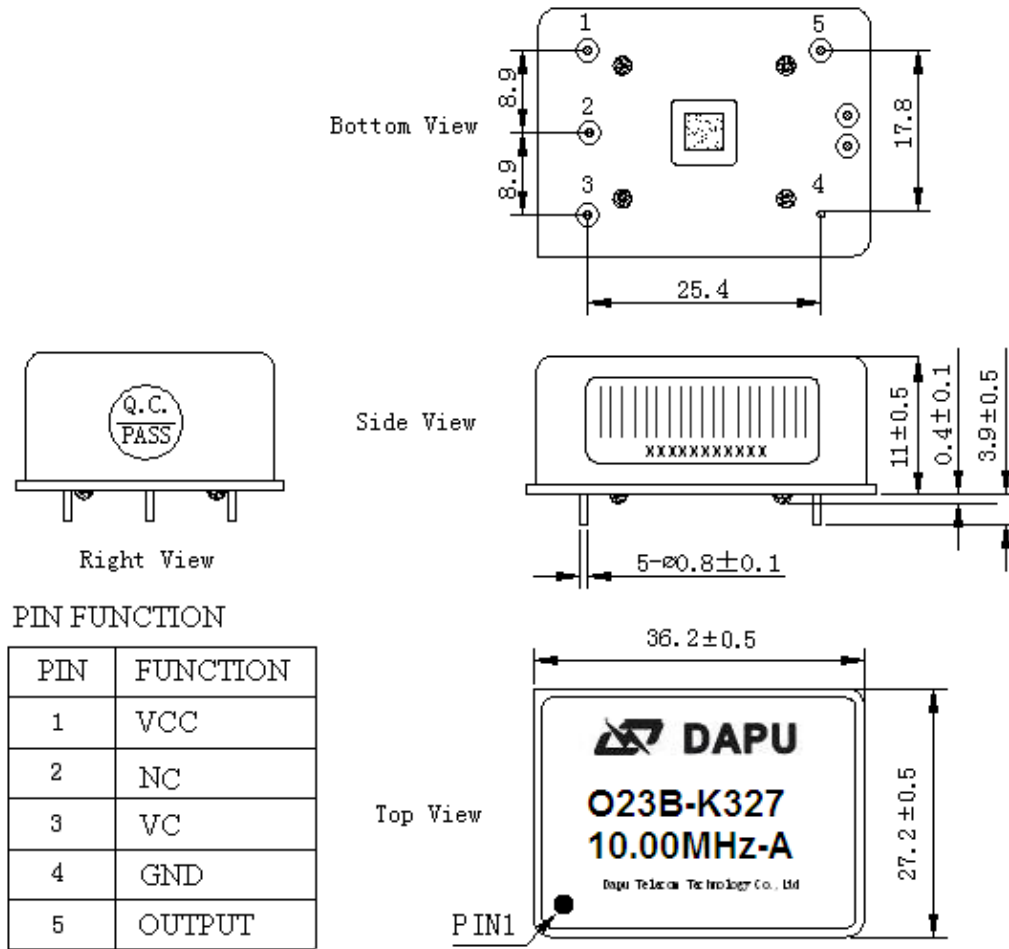
MODEL: O23B-K327-10.00MHz-A							
Item	Description	Parameters			Unit	Test Condition	
		Min.	Typ.	Max.			
Output	Frequency	10.00			MHz		
	Output Waveform	LVCMOS					
	Output Low Voltage			0.3	V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF//10KΩ	
	Output High Voltage	2.9			V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF//10KΩ	
	Duty Cycle	45	50	55	%	@50%	
	Rise / Fall Time			3	ns	10%~90%	
	Load	15pF//10KΩ					
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-3		+3	× 10 <sup>-9</sup>	T <sub>A</sub> varied from -10°C to 75°C, measurement referenced to frequency observed with T <sub>A</sub> = 25°C, V <sub>cc</sub> =5.0V, V <sub>C</sub> =2.5V, O <sub>load</sub> =15pF//10KΩ, temperature rise speed less than 2°C per minute.	
	Initial Frequency Tolerance	-0.1		+0.1	× 10 <sup>-6</sup>	Measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =5.0V, V <sub>C</sub> =2.5V, and after 15 minutes of operation, within 30 days after ex-works.	
	Frequency Tolerance vs. Supply Voltage	-1.5		+1.5	× 10 <sup>-9</sup>	measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>cc</sub> varied from 4.75V to 5.25V, V <sub>C</sub> =2.5V and O <sub>Load</sub> =15pF//10KΩ.	
	Frequency Tolerance vs. Load	-1.5		+1.5	× 10 <sup>-9</sup>	10% load change measurement referenced to frequency observed with T <sub>A</sub> = 25°C, V <sub>cc</sub> =5.0V, V <sub>C</sub> =2.5V.	
	Short-Term Stability: Allan Variance				0.01	× 10 <sup>-9</sup>	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C; 1s, using PN9000 equipment.
					0.05	× 10 <sup>-9</sup>	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C; 100s, using PN9000 equipment.
	Power-on frequency accuracy	-0.02		+0.02	× 10 <sup>-6</sup>	V <sub>C</sub> =2.5V, @25°C, power-on for 8 minutes.	
	Aging Tolerance Per Day	-0.3		+0.3	× 10 <sup>-9</sup>	V <sub>cc</sub> , V <sub>C</sub> , T <sub>A</sub> constant measurement referenced to frequency observed with T <sub>A</sub> = 25°C, V <sub>cc</sub> = 5.0V, V <sub>C</sub> =2.5V, and after 30 days of operation.	



	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-0.3		+0.3	$\times 10^{-6}$	
	Aging Tolerance 15 Years	-0.4		+0.4	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Current Consumption			350	mA	@25°C
	Current Consumption during warm up			700	mA	
Voltage Control Characteristics	Frequency Tuning Range	-1		-0.8	$\times 10^{-6}$	$V_C=0$ V. measurement referenced to $V_C=2.5$ V
		-0.1		+0.1	$\times 10^{-6}$	$V_C=2.5$ V. measurement referenced to exactly 10.00MHz
		+0.8		+1	$\times 10^{-6}$	$V_C=5.0$ V. measurement referenced to $V_C=2.5$ V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
	Modulation Band Width	10			KHz	
Phase Noise	Phase Noise		-90	-80	dBc/Hz	1Hz
			-120	-110		10Hz
			-140	-135		100Hz
			-145	-140		1KHz
			-150	-145		10KHz
			-150	-145		100KHz
Environmental Conditions	Operable Temperature	-40		+85	°C	
	Storage Temperature	-55		+105	°C	
	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)

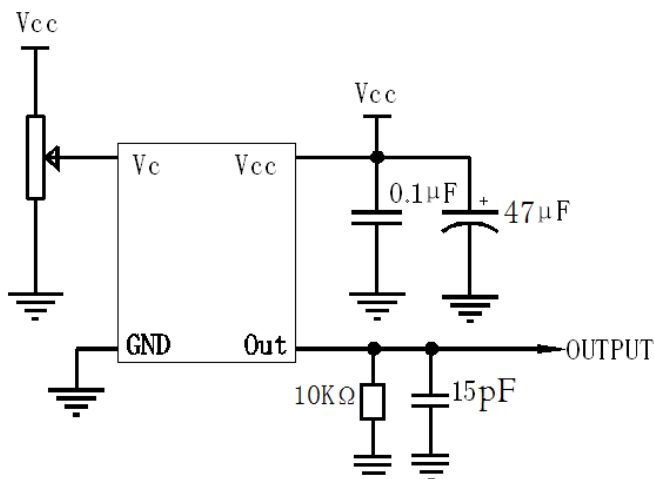


**Note1:** Tolerance ±0.2mm without mark

**Note2:** Referential Weight 20.7g

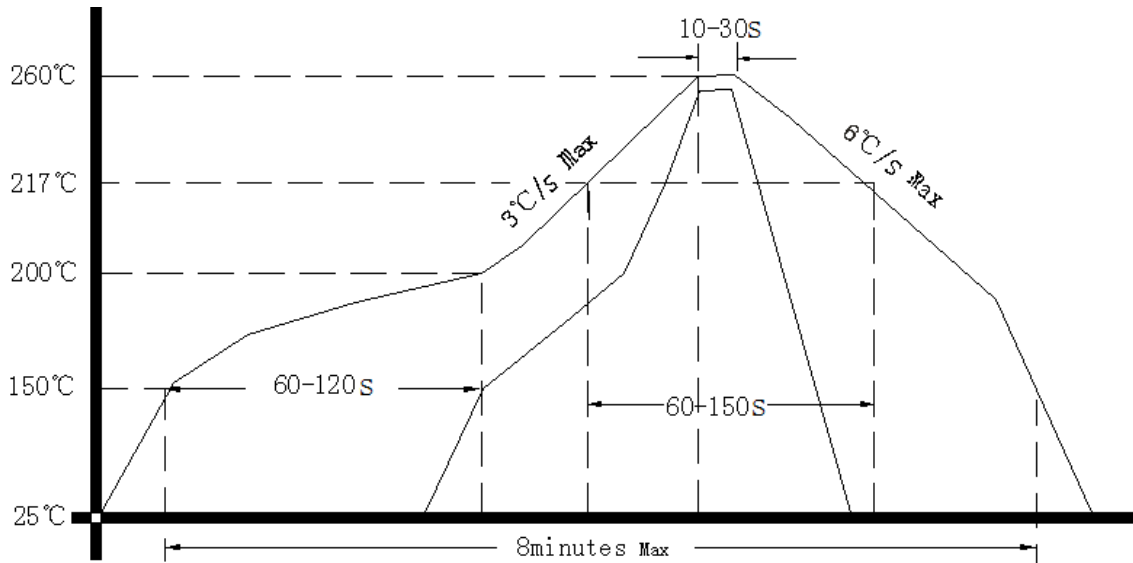
**Note3:** NC is not connect

## 3、 Test Circuit





#### 4. Reflow Soldering Curve (RoHS)



#### 5. Package (mm)

