

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

# DATASHEET

Standard:     **O23A-F326-20.00MHz**    

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.04.07			

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## 1、Electrical Parameters

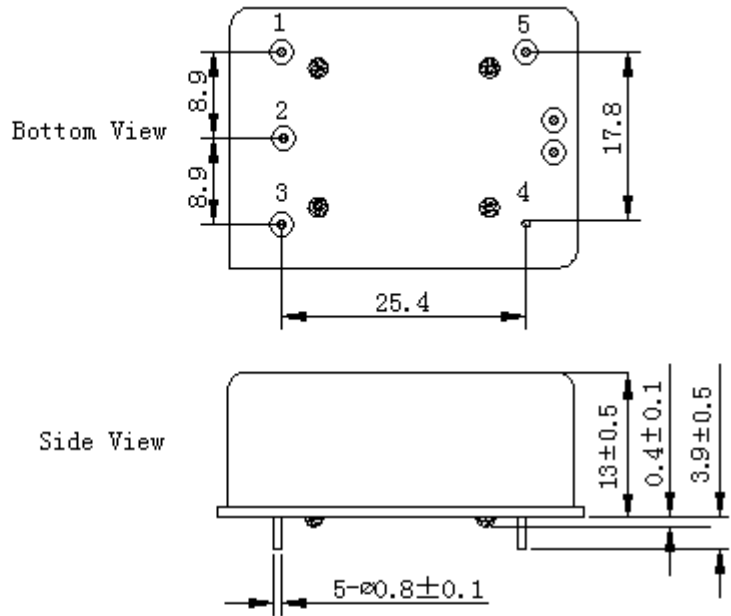
MODEL: O23A-F326-20.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	20.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF
	Output High Voltage	3.2			V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	@25°C
	Spurious Suppression			-60	dBc	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1.0		+1.0	× 10 <sup>-9</sup>	T <sub>A</sub> varied from -20°C to 70°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, temperature rise speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.05		+0.05	× 10 <sup>-6</sup>	After warm up 15 minute, 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 1 hour of operation.
	Frequency Tolerance vs. Supply Voltage	-1.0		+1.0	× 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.
	Frequency Tolerance vs. Load	-1.0		+1.0	× 10 <sup>-9</sup>	5% 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			0.02	× 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.
	Aging Tolerance Per Day	-0.5		+0.5	× 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	× 10 <sup>-6</sup>	
Power Supply	Supply Voltage	4.75	5	5.25	V	
	Current Consumption			400	mA	@25°C
	Current Consumption during warm up			1100	mA	



Voltage Control Characteristics	Frequency Tuning Range		-0.4		$\times 10^{-6}$	$V_C = 0\text{ V. measurement referenced to } V_C = 2.5\text{V}$
		-0.05		+0.05	$\times 10^{-6}$	$V_C = 2.5\text{V. measurement referenced to Exactly } 20.00\text{MHz}$
		+0.4			$\times 10^{-6}$	$V_C = 5.0\text{V. measurement referenced to } V_C = 2.5\text{V}$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise		-140		dBc/Hz	1KHz
Environmental Conditions	Operable Temperature	-20		+70	$^{\circ}\text{C}$	
	Storage Temperature	-40		+85	$^{\circ}\text{C}$	
	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.					
Full Package Storage	Relative humidity (%)	20% ~70%				
	Temperature ( $^{\circ}\text{C}$ )	-10~35 $^{\circ}\text{C}$				



## 2、 Mechanical Structure(mm)



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



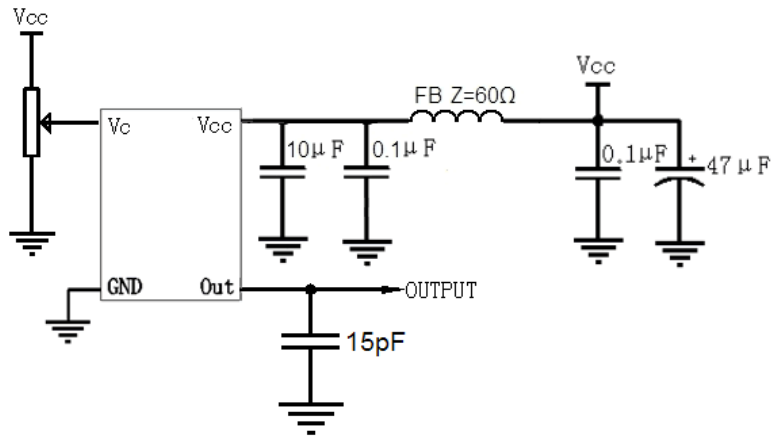
**Note1:** Tolerance ±0.2mm without mark

**Note2:** Referential weight 22.8g

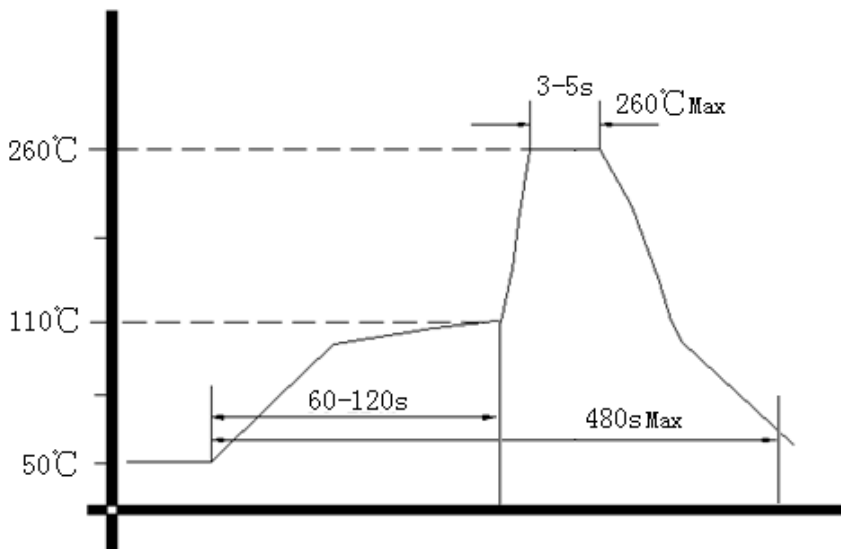
**Note3:** The first two xx representative: week  
After two xx representative: year



### 3、 Test Circuit



### 4、 Wave Soldering Curve (RoHS)



### 5、 Package (mm)

