

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

# DATASHEET

Standard:     **O23A-R326-10.00MHz**    

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.02.19			

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**Table of amendment**

Version	Revision contents	Prepared by	Revised date
1.1	The first issued	<i>Amway</i>	2010.07.13
1.2	“Current Consumption” changed	<i>Amway</i>	2014.12.23
1.3	“Initial Frequency Tolerance” changed and “Mechanical Structure” changed	<i>Amway</i>	2016.07.28
1.4	The “Mechanical Structure” changed	<i>Amway</i>	2017.04.24
1.5	The “Short-Term Stability: Allan Variance” “Mechanical Structure” changed	<i>Amway</i>	2020.06.16
1.6	The “Current Consumption during warm up” changed	<i>Amway</i>	2021.12.30
1.7	The “Mechanical Structure” changed	<i>Amway</i>	2022.02.19



## 1、Electrical Parameters

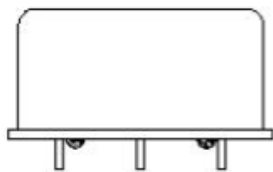
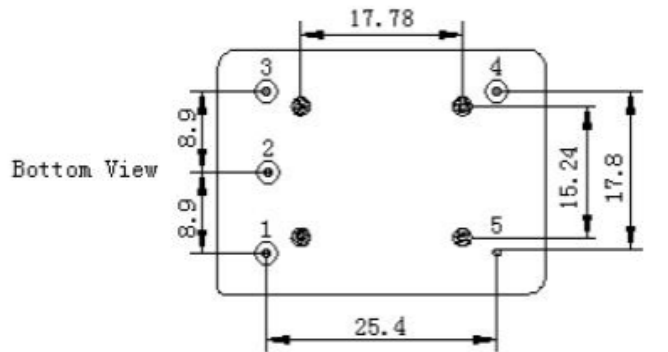
MODEL: O23A-R326-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			+0.4	V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF
	Output High Voltage	+3.5			V	V <sub>cc</sub> =5.0V, O <sub>load</sub> =15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	@25°C
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.03		+0.03	ppm	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	ppm	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	-5		+5	ppb	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	-5		+5	ppb	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			0.01	ppb	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C; 1s.
	Aging Tolerance Per Day	-0.5		+0.5	ppb	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> =
	Aging Tolerance 1 Year	-0.05		+0.05	ppm	5.0V, V <sub>C</sub> =2.5V, and after 30 days of operation.
Power Supply	Supply Voltage	4.75	5	5.25	V	
	Current Consumption			300	mA	@25°C
	Current Consumption during warm up			750	mA	



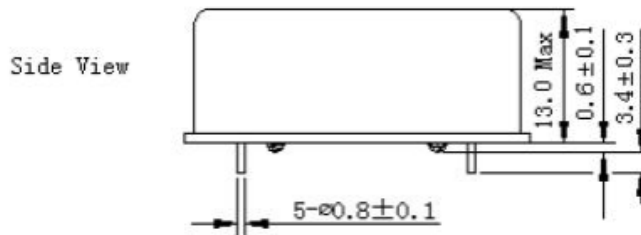
Voltage Control Characteristics	Frequency Tuning Range			-0.4	ppm	V <sub>C</sub> = 0 V. measurement referenced to V <sub>C</sub> =2.5V
		-0.05		+0.05	ppm	V <sub>C</sub> = 2.5V. measurement referenced to Exactly 10.00MHz
		+0.4			ppm	V <sub>C</sub> = 5.0V. measurement referenced to V <sub>C</sub> =2.5V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K Ohm
Phase Noise	Phase Noise		-130		dBc/Hz	100Hz
			-145			1KHz
			-150			10KHz
Environmental Conditions	Operable Temperature	-20		+70	°C	
	Storage Temperature	-40		+85	°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)



Right View



Side View

PIN FUNCTION

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



Top View

**Note1:** Referential weight 20.7g

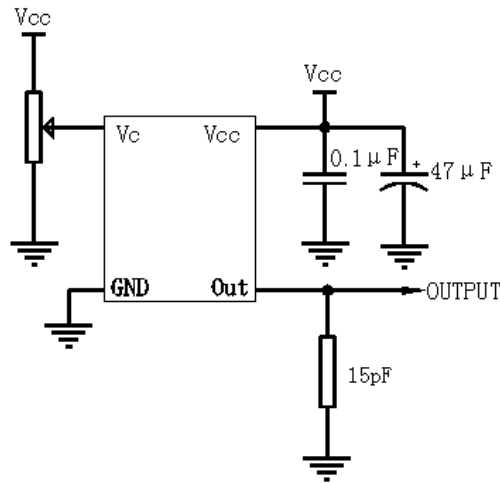
**Note2:** The first two xx representative: week

After two xx representative: year

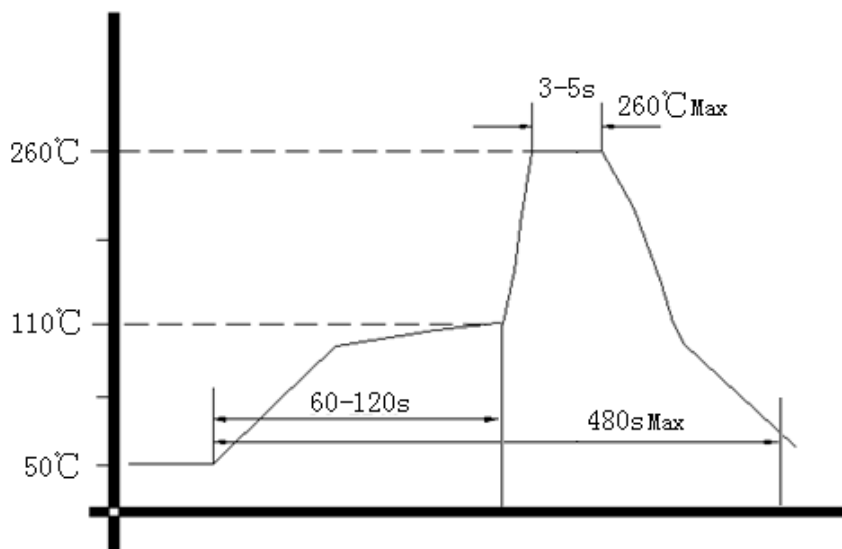
**Note3:** Tolerance  $\pm 0.2$ mm without mark



### 3、 Test Circuit



### 4、 Wave Soldering Curve (RoHS)



### 5、 Package (mm)

