Travelling Merchant:_____

DATASHEET

Standard: **O23B-R146-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Tony · Wang	James.Liu	
Date: 2014.07.12			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.1	The first issued	Amway	2009.11.21
1.2	"Temperature stability" , "Short-time frequency stability- Test Condition" , "Retrace after 24 hour off- Test Condition" change	Amway	2009.12.29
1.3	Version upgrade	Amway	2010.03.13
1.4	"Spurious Suppression", "Retrace after stabilization" and "Daily fluctuation" add "Frequency Tolerance vs. Operating Temperature Range- Test Condition" ,"Initial Frequency Tolerance- Test Condition ", " Current Consumption during warm up" ,"Phase Noise" and "Mechanical Structure" change	Amway	2010.11.20
1.5	"Phase Noise (Max)" add "Mechanical Structure" and "Package" change	Amway	2014.07.12

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1、Electrical Parameters

MODEL： O23B-R146-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		10.00		MHz	
	Output Waveform		LV-TTL			
	Output Low Voltage			+0.4	V	Vcc=12.0V, O_{load} =15pF
	Output High Voltage	+2.4			V	Vcc=12.0V, O_{load} =15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time			6	ns	10%~90%
	Load		15		pF	
	Spurious Suppression			-60	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	ppb	T_A varied from 0℃ to50℃, measurement referenced to frequency observed with T_A = 25℃, V_{cc}=12.0V, V_C=2.5V, $O_{load=}$15pF, temperature rise speed less than 2℃per minute.
		-0.1		+0.1	ppb	T_A varied from -10℃ to70℃, measurement referenced to frequency observed with T_A = 25℃, V_{cc}=12.0V, V_C=2.5V,V $O_{load=}$15pF, temperature rise speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.08		+0.08	ppm	after power on 30 minutes, 25℃, at control voltage ,at 2.5V(after retrace).
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	ppb	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from11.4V to 12.6V, V_C =2.5V.
	Frequency Tolerance vs. Load	-0.1		+0.1	ppb	10% load change measurement referenced to frequency observed with T_A= 25℃, V_{cc}=12V, V_C=2.5V. O_{Load}=15pF.
	Retrace after stabilization	-0.01		+0.01	ppm	after 15 minutes power on at ±25℃,reference to the frequency after 48 hours power on, prior to 24 hours turn off.
	Daily fluctuation	-0.5		+0.5	ppb	
	Short-Term Stability: Allan Variance			0.01	ppb	Temperature stability, no EMI\EMC or other interference，test after power for 1hour ref. to 25℃; 1s , using PN9000 equipment.
				0.05	ppb	Temperature stability, no EMI\EMC or other interference，test after power for 1hour ref. to 25℃; 100s , using PN9000 equipment.

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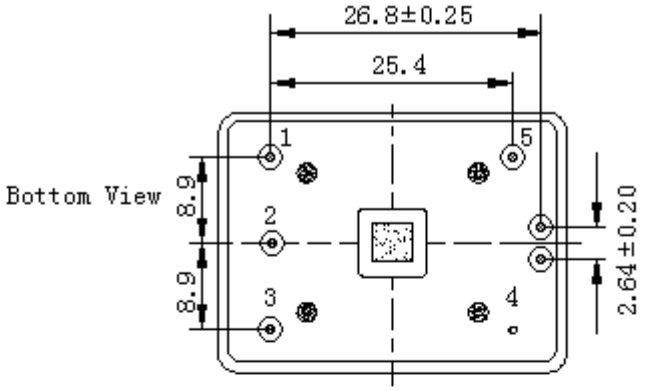
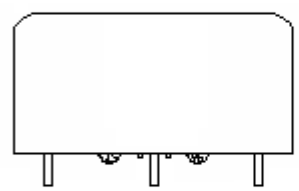
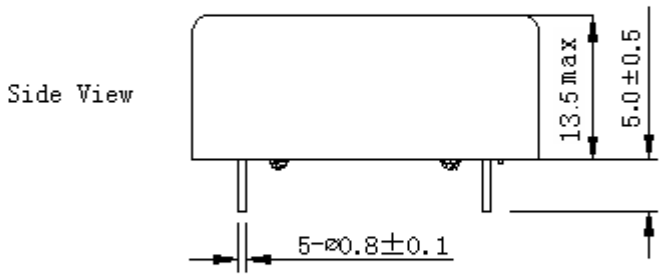
	Aging Tolerance Per Day	-0.2		+0.2	ppb	V_{cc}, V_C, T_A constant measurement referenced to frequency observed with T_A= 25℃, V_{cc}= 12.0V, V_C =2.5V,and after 30 days of operation.
	Aging Tolerance 1 Year	-0.03		+0.03	ppm	
	Aging Tolerance 10 Years	-0.3		+0.3	ppm	
	Aging Tolerance 15 Years	-0.4		+0.4	ppm	
Power Supply	Supply Voltage	11.4	12	12.6	V	
	Current Consumption			200	mA	@25℃
	Current Consumption during warm up			600	mA	
Voltage Control Characteristics	Frequency Tuning Range	-0.8		-0.4	ppm	V_C= 0 V. measurement referenced to V_C=2.5V
		-0.08		+0.08	ppm	V_C=2.5V. measurement referenced to exactly 10.00MHz
		+0.4		+0.8	ppm	V_C=5.0V. measurement referenced to V_C=2.5V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K Ohm	
Phase Noise	Phase Noise		-95	-85	dBc/Hz	1Hz
			-120	-110		10Hz
			-140	-130		100Hz
			-145	-140		1KHz
			-150	-145		10KHz
			-150	-145		100KHz
Environmental Conditions	Operable Temperature	-10		+70	℃	
	Storage Temperature	-40		+85	℃	
	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)

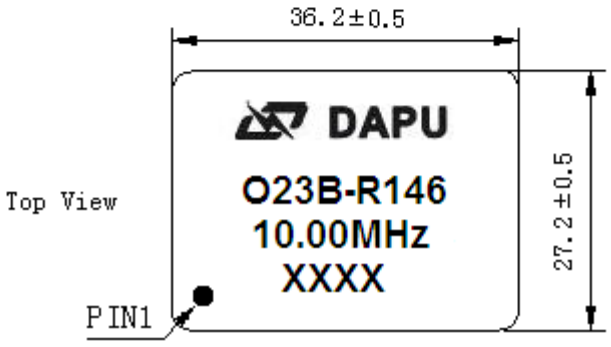






PIN FUNCTION

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



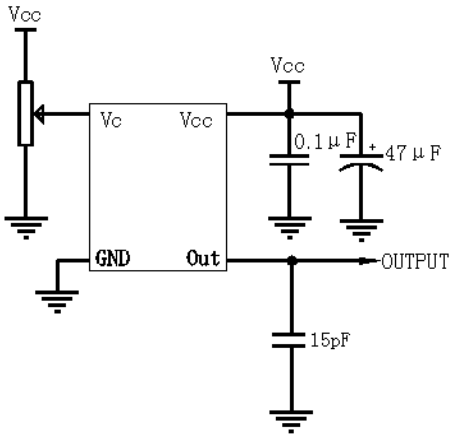
Note1: Tolerance ±0.2mm without mark

Note2: The first two xx representative: week
After two xx representative: year

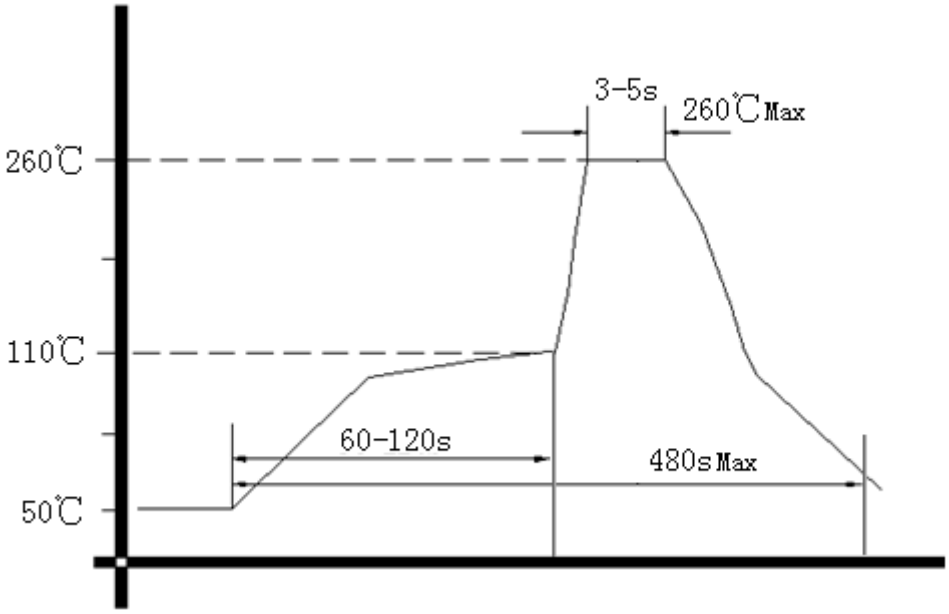
Note3: Referential Weight 20.7g

Note4: NC is not connect

3、Test Circuit



4、Wave Soldering Curve (RoHS)



5、Package（mm）