

Travelling Merchant: _____

DATASHEET

Standard: **O23B-J146-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2014.07.07			

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1. Electrical Parameters

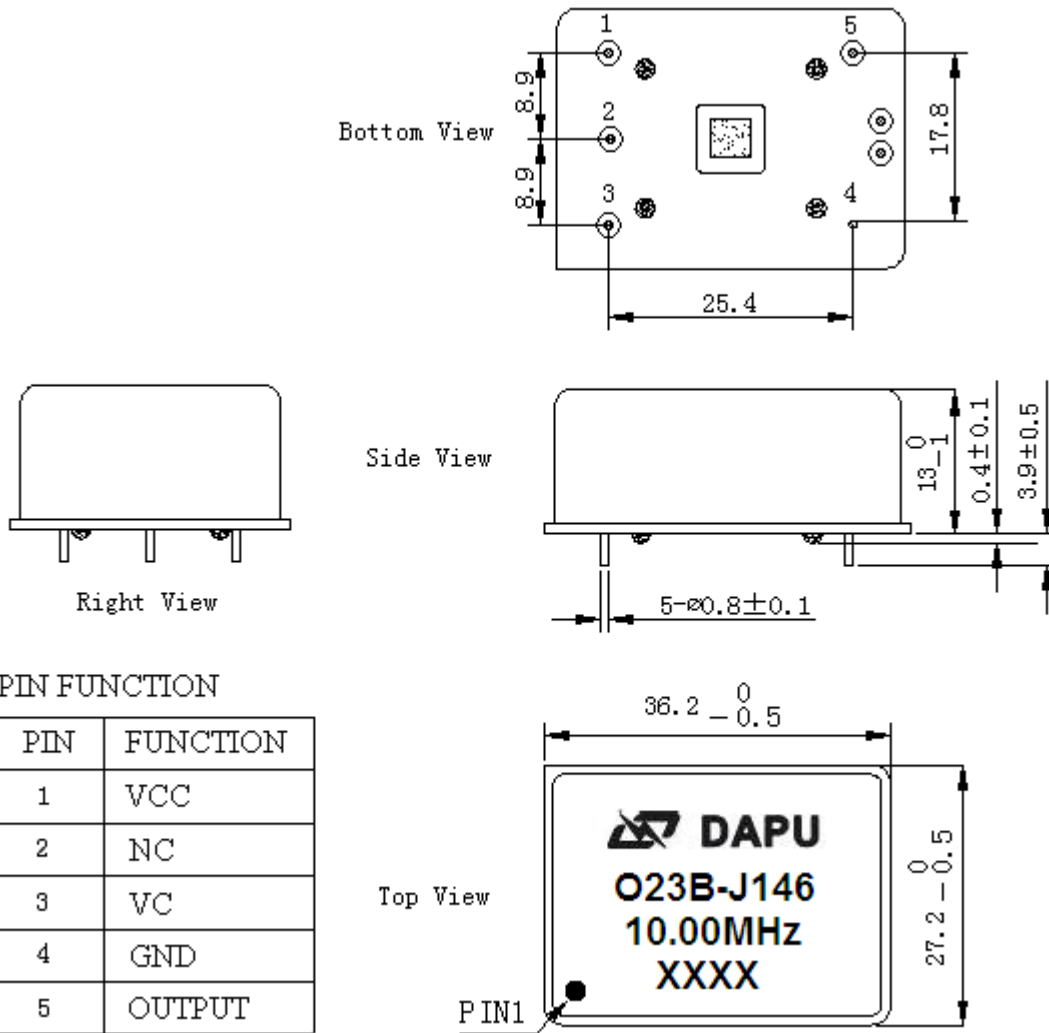
MODEL: O23B-J146-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	LV-TTL				
	Output Low Voltage			+0.4	V	$V_{cc}=12.0V, O_{load}=15pF$
	Output High Voltage	+2.4			V	$V_{cc}=12.0V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall time (10%~90%)			6	ns	
	Load	15			pF	
	Spurious Suppression			-70	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1		+1	$\times 10^{-9}$	T_A varied from $-10^{\circ}C$ to $75^{\circ}C$, measurement referenced to frequency observed with $T_A = 25^{\circ}C$, $V_{cc}=12.0V, V_c=2.5, O_{load}=15pF$ temperature rise speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=12.0V, V_c=2.5V$, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.3		+0.3	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 11.4V to 12.6V, $V_c=2.5V$ and $O_{Load}=15pF$.
	Frequency Tolerance vs. Load	-0.3		+0.3	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=12.0V, V_c=2.5V$, and $O_{Load}=15pF$.
	Retrace after stabilization	-5		+5	$\times 10^{-9}$	24h off & 1 h operation.
	Warm-up time			8	min	$25^{\circ}C$ still air to within $\pm 5.0 \times 10^{-8}$ of final frequency after 1h.
	Short-Term Stability: Allan Variance			0.01	$\times 10^{-9}$	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	-0.3		+0.3	$\times 10^{-9}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{cc}=12.0\text{V}$, $V_c=2.5\text{V}$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-0.4		+0.4	$\times 10^{-6}$	
Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			450	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 Ω	
Phase Noise	Phase Noise		-95	-90	dBc/Hz	1Hz
			-125	-120		10Hz
			-145	-140		100Hz
			-150	-147		1KHz
			-155	-152		10KHz
Environmental Conditions	Operable Temperature	-10		+75	°C	
	Storage Temperature	-55		+85	°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)



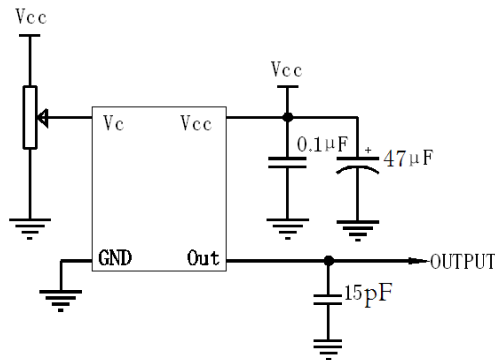
PIN FUNCTION

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

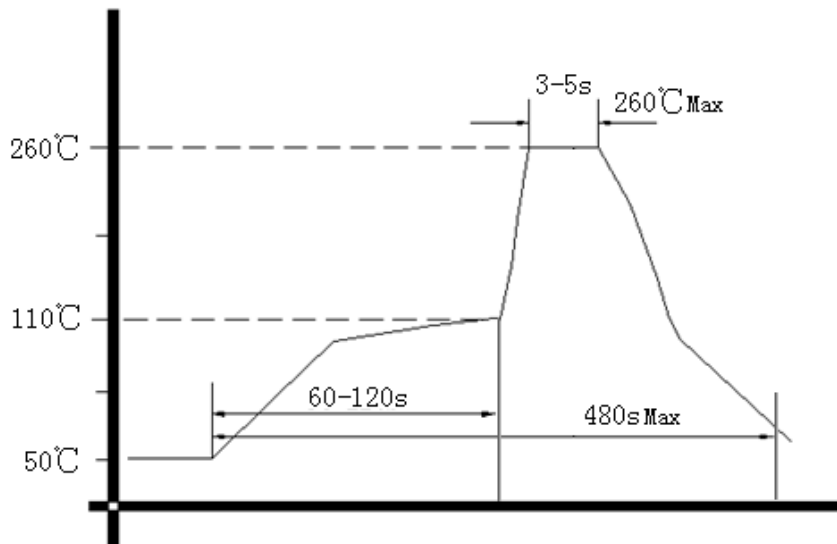
- Note1:** Tolerance ±0.2mm without mark
- Note2:** The first two xx representative: week
After two xx representative: year
- Note3:** Referential Weight 21g
- Note4:** NC is not connect



3. Test Circuit



4. Wave Soldering Curve (RoHS)



5. Package (mm)

