



1. Electrical Parameters

MODEL: O23B-0807-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	LVTTTL				
	Output Low Voltage			0.4	V	$V_{cc}=12V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=12V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Output Overshoot Amplitude			10	%	
	Spurious			-60	dBc	
	Load	15 ± 10%			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-10		+10	$\times 10^{-9}$	T_A varied from -10°C to 70°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=12V, V_c=2.5V, O_{load}=15pF$, temperature variable speed less than 2°C per minute.
	Initial Frequency Accuracy	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=12.0V, V_c=2.5V$, and after 30 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-2.0		+2.0	$\times 10^{-9}$	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	-2.0		+2.0	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=12V, V_c=2.5V$, and $O_{Load}=15pF$.
	Short-Term Stability Allan Variance			0.05	$\times 10^{-9}$	After power on one hour and after stabilization after power on 30mins, Alan Variance.
	Daily Fluctuation	-5.0		+5.0	$\times 10^{-9}$	Temperature fluctuate 15°C
	Retrace	-10		+10	$\times 10^{-9}$	After 24 hour off at 25°C, 15min power on



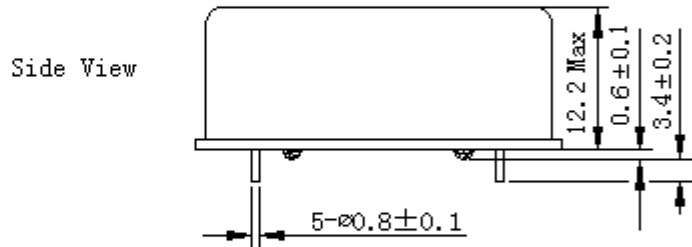
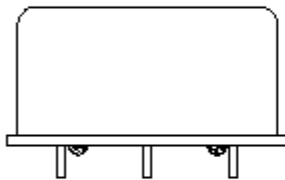
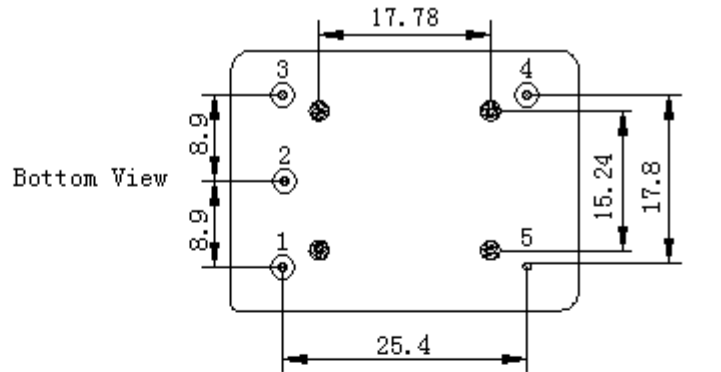
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with $T_A=25^\circ C$, $V_{cc}=12V, V_c=2.5V$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-0.3		+0.3	$\times 10^{-6}$	
	Aging Tolerance 15Year	-1.0		+1.0	$\times 10^{-6}$	
Power Supply	Supply Voltage	11.4	12	12.6	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			600	mA	
	Warm up time			5	min	
			15	min		@25 °C within $\pm 0.01 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range	-2.4		-0.8	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$.
		-0.2		+0.2	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz.
		+0.8		+2.4	$\times 10^{-6}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K Ω	
Jitter			1	ps	RMS(12K~10M)	
Phase Noise	Phase Noise		-90	-80	dBc/Hz	1Hz
			-130	-120		10Hz
			-145	-140		100Hz
			-150	-145		1KHz
			-155	-150		10KHz



Environmental Conditions	Operating Temperature	-10		+70			
	Operable Temperature	-40		+85	°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.						
Full Package Storage	Relative humidity (%)	20%~70%					
	Temperature (°C)	-10~35°C					

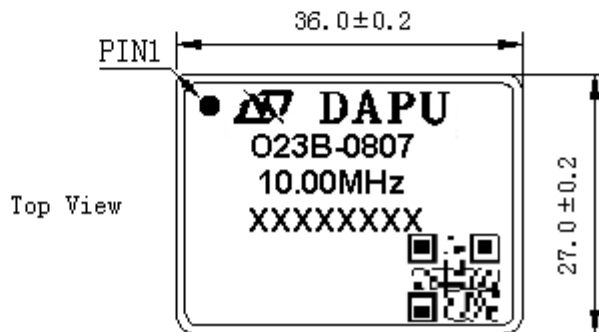


2. Mechanical Structure (mm)



PIN FUNCTION

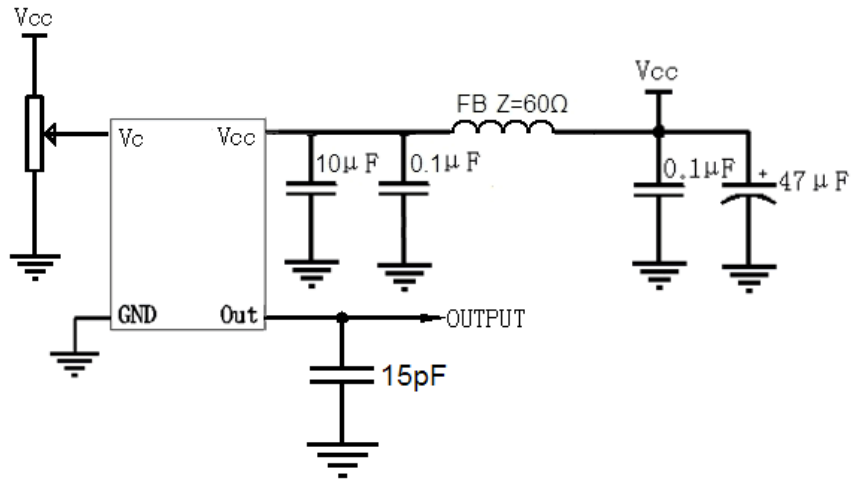
PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	NC	Not Connect
3	VCC	Supply Voltage
4	OUTPUT	RF Output
5	GND	GND



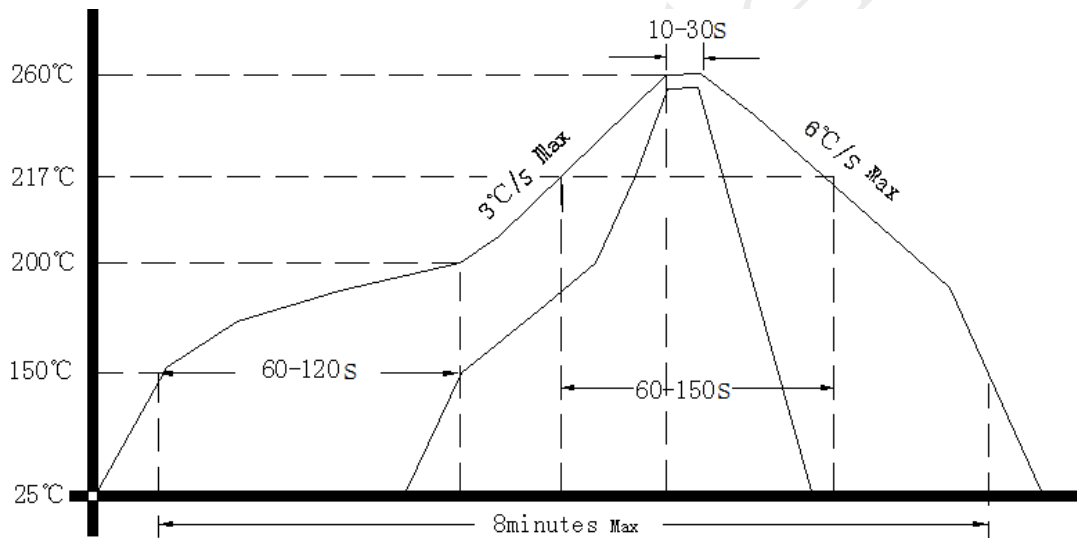
- Note1:** Tolerance $\pm 0.2\text{mm}$ without mark
- Note2:** The first two xx representative: week
After two xx representative: year
At last four xxxx representative: serial number
- Note3:** Referential weight 20.7g
- Note4:** NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package (mm)

