



1. Electrical Parameters

MODEL: O11F-1807-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	LVCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load	13.5		16.5	pF	
	Start-up Time			1	s	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5		+5	$\times 10^{-9}$	T_A varied from $-10^{\circ}C$ to $70^{\circ}C$, measurement referenced to frequency observed with $T_A = 25^{\circ}C, V_{cc}=3.3V, O_{load}=15pF$, temperature variable speed less than $1^{\circ}C$ per minute.
		-10		+10	$\times 10^{-9}$	T_A varied from $-40^{\circ}C$ to $85^{\circ}C$, measurement referenced to frequency observed with $T_A = 25^{\circ}C, V_{cc}=3.3V, O_{load}=15pF$, temperature variable speed less than $1^{\circ}C$ per minute.
	Slope	-3		+3	$\times 10^{-9}/^{\circ}C$	$-40^{\circ}C$ to $85^{\circ}C$, temperature ramp $1^{\circ}C/ min$
	Frequency Accuracy	-0.4		+0.4	$\times 10^{-6}$	Within 90 days after shipment and 15 minutes warm up time (after reflow), Measurement referenced to nominal frequency
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	$T_A = 25^{\circ}C, V_{cc}$ varied from 3.135 to 3.465 V, and $O_{Load} = 15 pF$. Measurement referenced to frequency observed with $T_A = 25^{\circ}C, V_{cc} = 3.3 V$.
Frequency Tolerance vs. Load	-1		+1	$\times 10^{-9}$	10% Load Change. Measurement referenced to frequency observed with $T_A = 25^{\circ}C, V_{cc} = 3.3V$.	

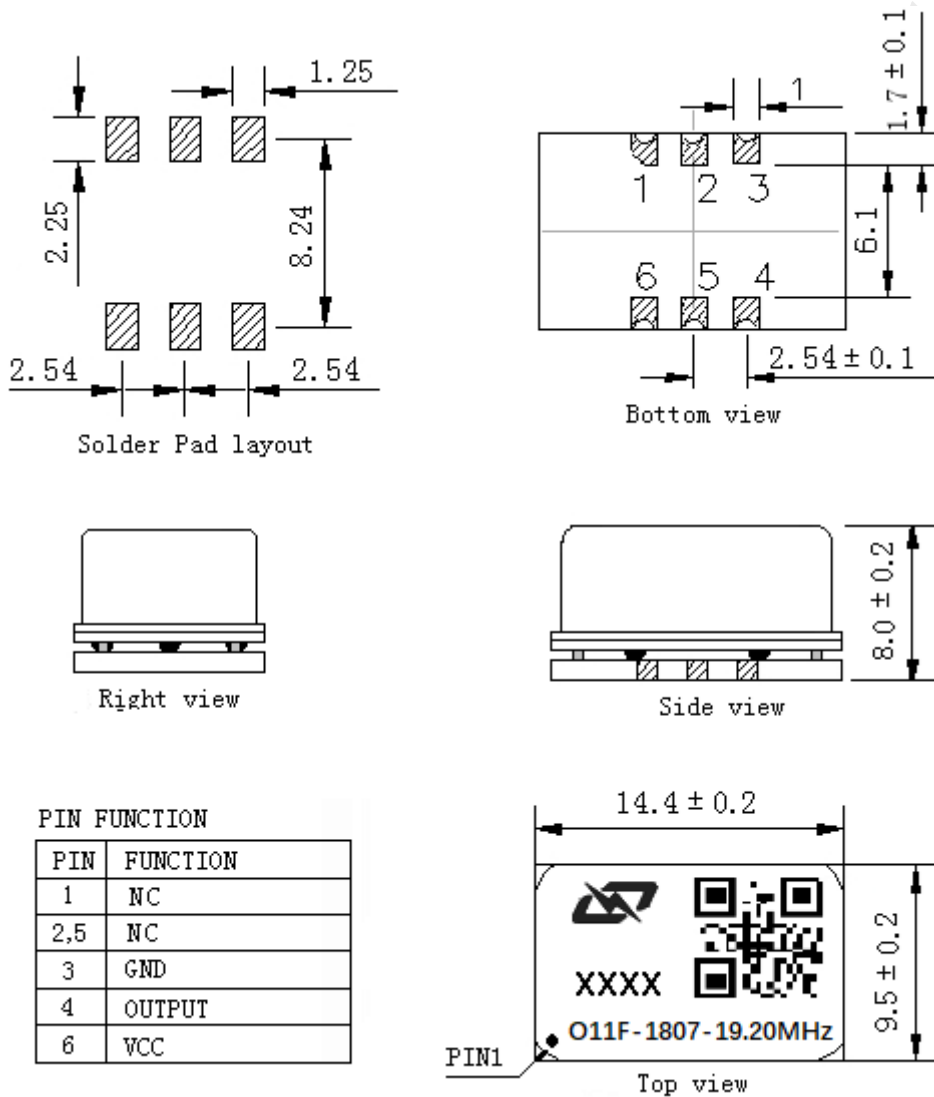


	Short-Term Stability: Allan Variance			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1 hour ref. to 25°C; 1s.
				0.2	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1 hour ref. to 25°C; 100s.
	Aging Tolerance Per Day	-1		+1	$\times 10^{-9}$	Vcc, TA constant. Measurement referenced to frequency observed with TA= 25°C, Vcc= 3.3 V. and after 30 days of operation
	Aging Tolerance 1 Year	-0.3		+0.3	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-1		+1	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.135	3.3	3.465	V	
	Steady Consumption			300	mA	@25°C
	Warm up current			750	mA	
	Warm up Time			5	min	
	Warm Up	-0.1		+0.1	$\times 10^{-6}$	After warm up 5minutes. Measurement referenced to frequency observed with TA=25°C, Vcc=3.3V. and after 1 hour of operation.
Jitter	Jitter			0.45	ps-rms	RMS(12KHz to 9.6MHz)
Phase Noise	Phase Noise			-65	dBc/Hz	1Hz
				-95		10Hz
				-120		100Hz
				-135		1KHz
				-145		10KHz
				-152		100KHz
				-152		1MHz
				-152		10MHz
Environmental Conditions	Operating Temperature	-40		+85	°C	
	Storage Temperature	-55		+105	°C	
	Air-tightness			1×10^{-5}	Pa·m3/s	
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.				
	Moisture Sensitivity Level	Level 2.				
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

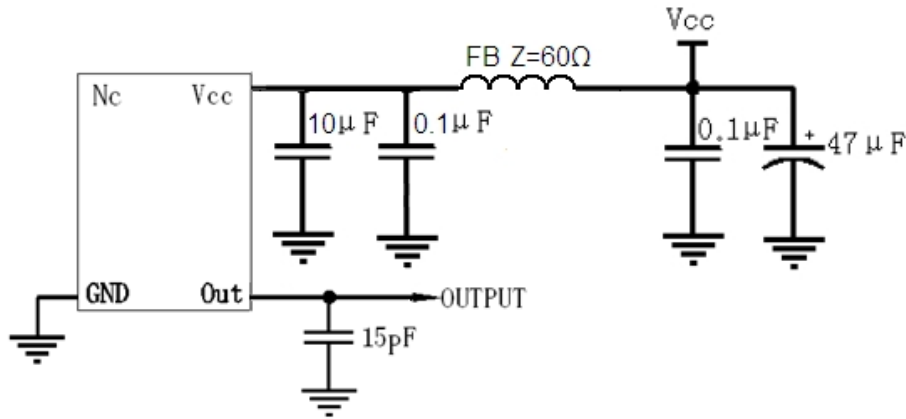
2. Mechanical Structure (mm)



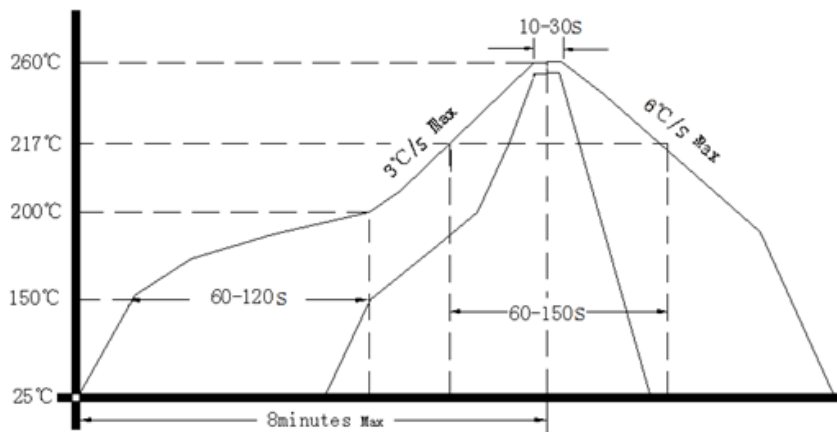
- Note1:** Tolerance ± 0.20 mm without mark
- Note2:** The first two xx representative: year
After two xx representative: week
- Note3:** Referential weight 2.4g
- Note4:** NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



Note: Passing through reflow upside down is not supported

5. Package: Tape & Reel (mm)

