

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

# DATASHEET

Standard:     **O11E-P319-10.00MHz-Luo**    

P/N: \_\_\_\_\_

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.07.25			

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## 1. Electrical Parameters

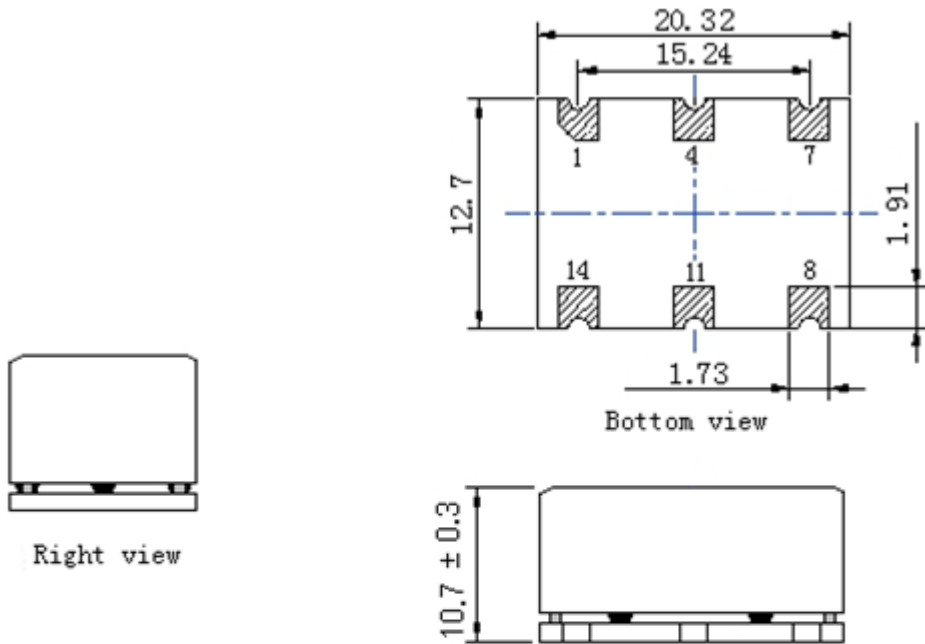
MODEL: O11E-P319-10.00MHz-Luo						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5		+5	$\times 10^{-9}$	$T_A$ varied from $-40^{\circ}C$ to $85^{\circ}C$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15pF$ , temperature variable speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Accuracy after Reflow	-0.4		+0.4	$\times 10^{-6}$	Place for 48 Hours after reflow, then test the frequency after 15mins power on ref to nominal frequency @ $25^{\circ}C$ .
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 3.135V to 3.465V, and $O_{Load}=15pF$ .
	Frequency Tolerance vs. Load	-1		+1	$\times 10^{-9}$	10% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V$ , and $O_{Load}=15pF$ .
	Short-Term Stability Allan Variance (in still air)			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	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.03		+0.03	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-0.3		+0.3	$\times 10^{-6}$	
	Stratum Compliance Level	Stratum 3E per GR1244				



	Overall Stability	-0.5		+0.5	$\times 10^{-6}$	Include all over 10 years
	Holdover Drift	-1		+1	$\times 10^{-9}$	24 hours, temperature variation $\leq \pm 1^{\circ}\text{C}$ . After 30 days of continuous operation
	Frequency Retrace Characteristics	-0.02		+0.02	$\times 10^{-6}$	after stabilization / 24 h Off & 1 h On @ $25^{\circ}\text{C}$
Power Supply	Supply Voltage	3.135	3.3	3.465	V	
	Steady Consumption			500	mA	@ $25^{\circ}\text{C}$
	Warm up current			1000	mA	
	Warm up time			5	min	@ $25^{\circ}\text{C}$ within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Phase Noise	Phase Noise		-85	-75	dBc/Hz	1Hz
			-115	-105		10Hz
			-140	-130		100Hz
			-145	-140		1KHz
			-150	-145		10KHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}\text{C}$	
	Storage Temperature	-55		+105	$^{\circ}\text{C}$	
	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	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 ( $^{\circ}\text{C}$ )	-10~35 $^{\circ}\text{C}$				

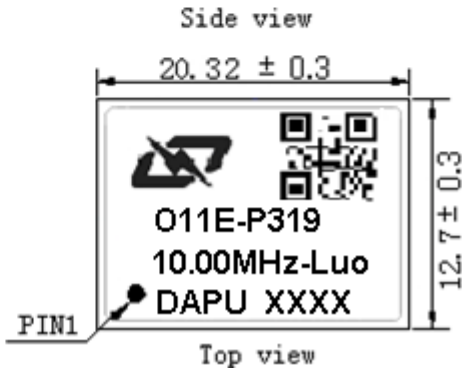


## 2. Mechanical Structure (mm)



### PIN FUNCTION

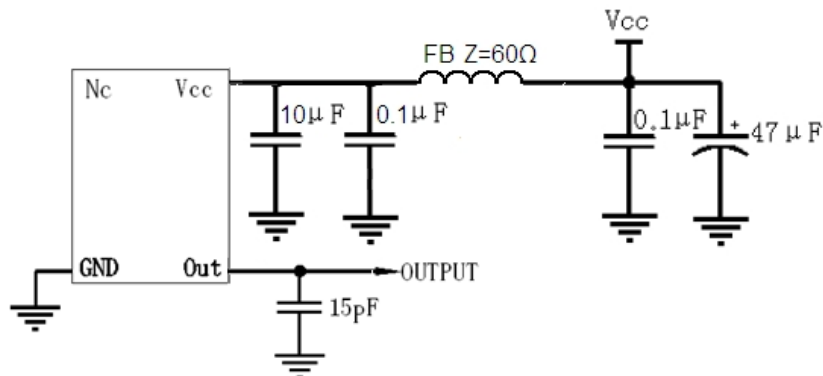
PIN	NOTATION	FUNCTION
1	NC	Not Connect
4	NC	Not Connect
7	GND	GND
8	OUTPUT	RF Output
11	NC	Not Connect
14	VCC	Supply Voltage



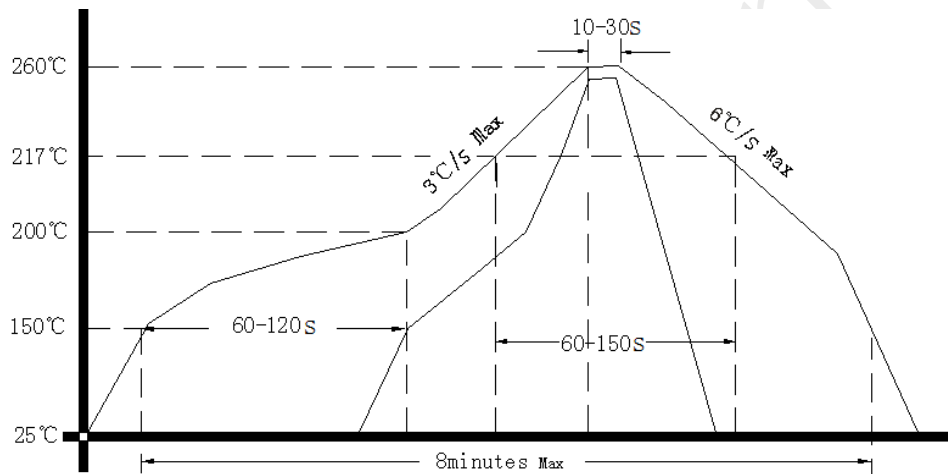
- Note1:** Tolerance  $\pm 0.2$ mm without mark
- Note2:** The first two xx representative: week  
After two xx representative: year
- Note3:** Referential weight 6.0g
- Note4:** NC is not connect



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: Tape & Reel (mm)

