



Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2016.12.19
1.1	The “Marking” changed	<i>Amway</i>	2017.04.17



1. Electrical Parameters

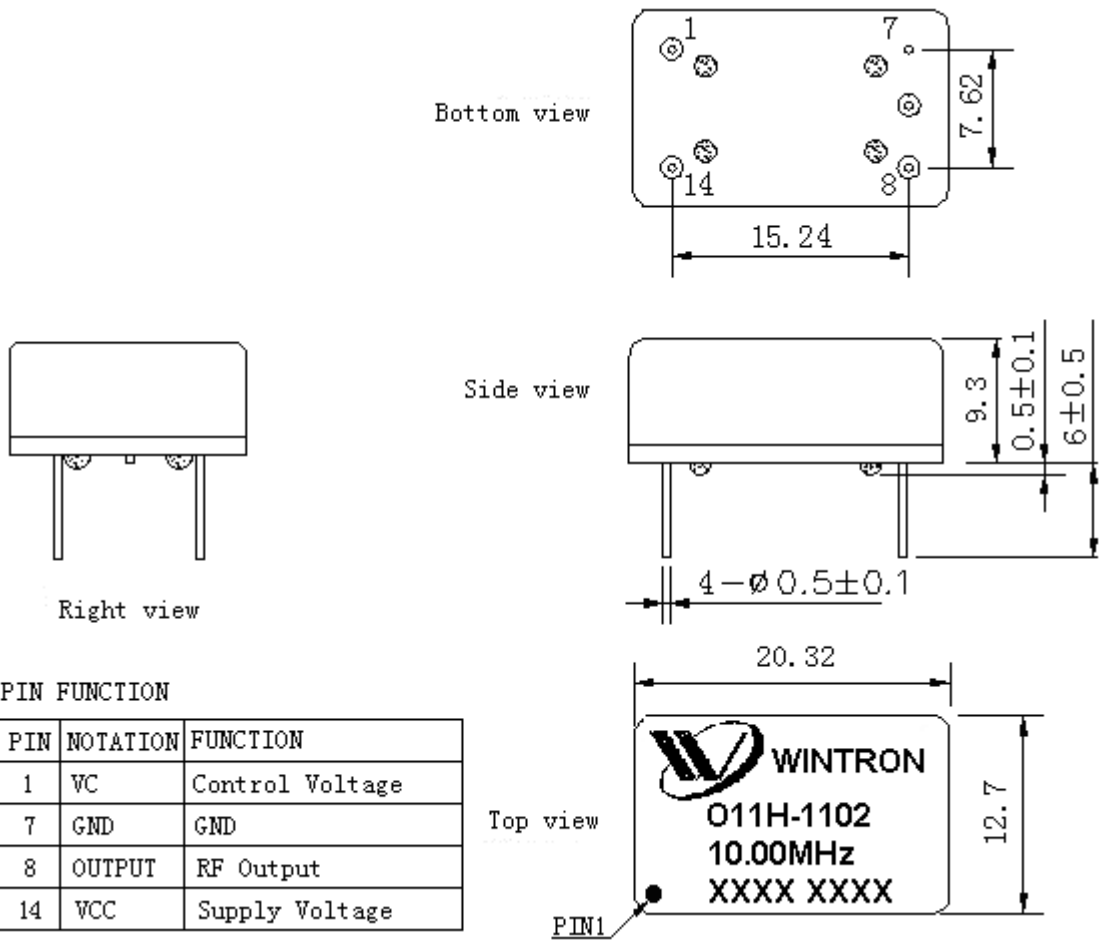
MODEL: O11H-1102-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	LVCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load	15			pF	
	Warm up Time			5	min	
	Start-up Time			500	ms	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-2		+2	$\times 10^{-9}$	T_A varied from $-40^{\circ}C$ to $85^{\circ}C$, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, V_c=1.65V, O_{load}=15pF$, temperature variable speed less than $2^{\circ}C$ per minute. without airflow
	Frequency Accuracy	-0.1		+0.1	$\times 10^{-6}$	Within 90 days after shipment and 15 minutes warm up time, Measurement referenced to exactly 10.00MHz.
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	Measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 3.13V to 3.47V, $V_c=1.65V$ and $O_{Load}=15pF$.
	Frequency Tolerance vs. Load	-1		+1	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$, and $O_{Load}=15pF$.
	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	-0.5		+0.5	$\times 10^{-9}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=3.3V, V_c=1.65V$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	



Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			505	mA	without airflow
Voltage Control Characteristics	Frequency Tuning Range	-1.0		-0.5	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=1.65V$
		-0.1		+0.1	$\times 10^{-6}$	$V_c=1.65V$. measurement referenced to exactly 10.00MHz
		+0.5		+1.0	$\times 10^{-6}$	$V_c=3.3V$. measurement referenced to $V_c=1.65V$
	Linearity			5	%	
	Slope	Positive				
	Input Impedance	100			K Ω	
Phase Noise	Phase Noise			-110	dBc/Hz	10Hz
				-135		100Hz
				-150		1KHz
				-150		10KHz
				-150		100KHz
				-150		1MHz
				-150		5MHz
Environmental Conditions	Operable Temperature	-40		+85	°C	
	Storage Temperature	-55		+105	°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 (°C)	-10~35°C				



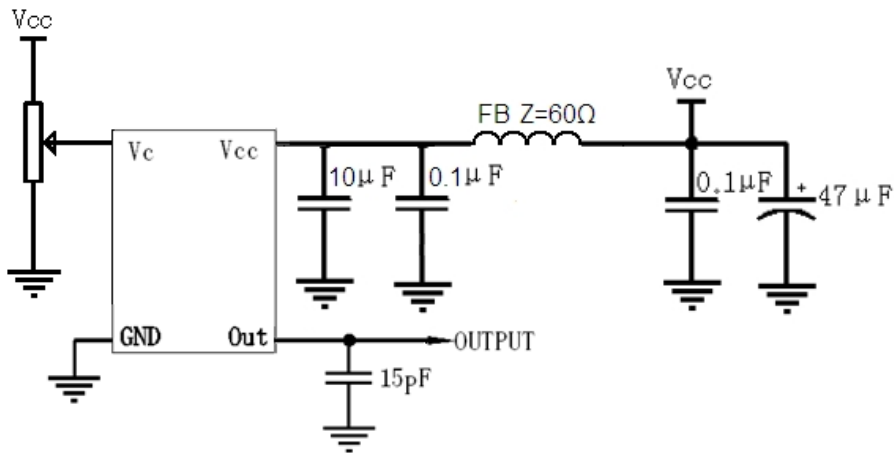
2. Mechanical Structure (mm)



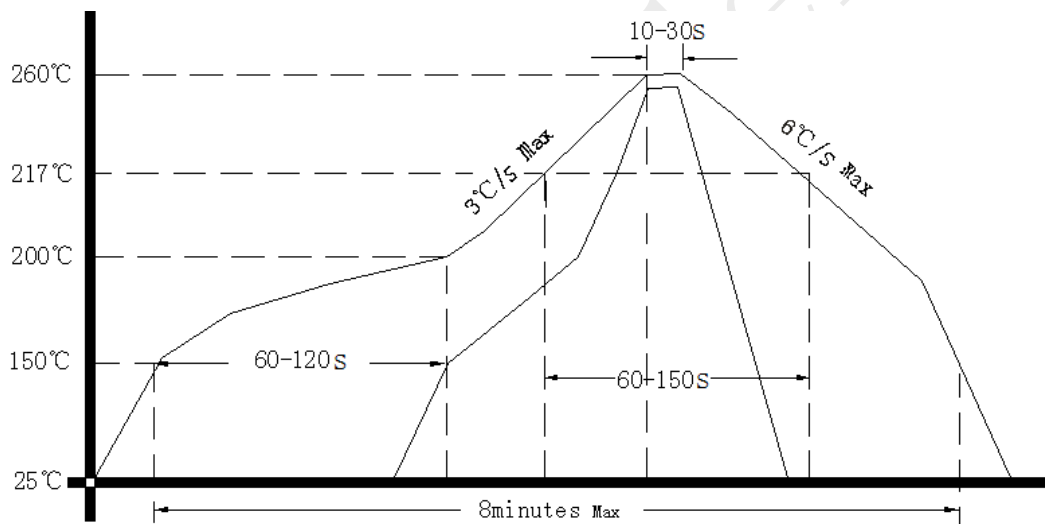
- Note1:** Tolerance ±0.20mm without mark
- Note2:** The first two xx representative: week
After two xx representative: year
At last four xxxx representative: serial number
- Note3:** Referential weight 4.2g
- Note4:** NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

