

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N: **O11D-Z411-100.00MHz**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
<i>Amway.wei</i>	<i>Tony · Wang</i>	<i>James.Liu</i>	
Date: 2015.04.03			

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## 1. Electrical Parameters

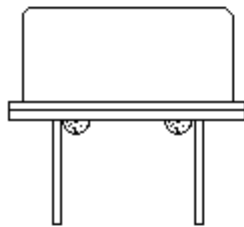
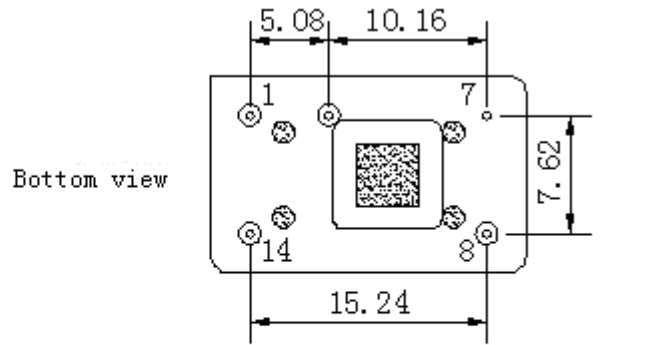
MODEL: O11D-Z411-100.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	100.00			MHz	
	Output Waveform	Sine wave				
	Level	6		10	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-60	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from $-10^\circ\text{C}$ to $70^\circ\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$ , $V_{\text{cc}}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{\text{load}}=50\Omega$ , temperature variable speed less than $2^\circ\text{C}$ per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=3.3\text{V}$ , $V_c=1.65\text{V}$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.02		+0.02	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$ , $V_{\text{cc}}$ varied from 3.13V to 3.47V, $V_c=1.65\text{V}$ and $O_{\text{load}}=50\Omega$ .
	Frequency Tolerance vs. Load	-0.02		+0.02	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=3.3\text{V}$ , $V_c=1.65\text{V}$ , and $O_{\text{load}}=50\Omega$ .
	Short-Term Stability: Allan Variance			0.1	$\times 10^{-9}$	Temperature stability, no EMI/EMC or other interference, test after power for 1hour ref. to $25^\circ\text{C}$ ; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-5		+5	$\times 10^{-9}$	$V_{\text{cc}}$ , $V_c$ , $T_A$ constant measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=3.3\text{V}$ , $V_c=1.65\text{V}$ and after 30 days of operation.
	Aging Tolerance 1 Year	-0.5		+0.5	$\times 10^{-6}$	



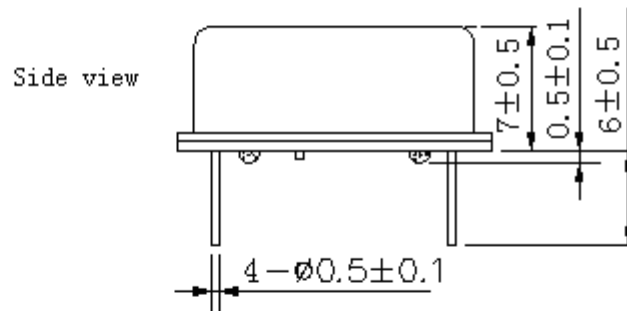
Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Steady Consumption			250	mA	@25°C
	Warm up current			550	mA	
	Warm-up time			5	minute	@25°C within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 24 hours on.
Voltage Control Characteristics	Frequency Tuning Range	-8		-3	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-0.5		+0.5	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to exactly 100.00MHz
		+3		+8	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K $\Omega$	
Phase Noise	Phase Noise @25°C		-85	-75	dBc/Hz	10Hz
			-115	-105		100Hz
			-140	-135		1KHz
			-145	-140		10KHz
			-145	-140		100KHz
			-150	-145		
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	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)

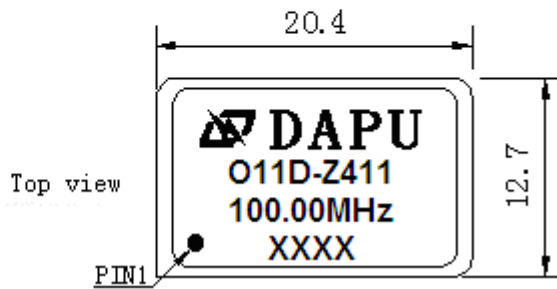


Right view



### PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
7	GND	GND
8	OUTPUT	RF Output
14	VCC	Supply Voltage



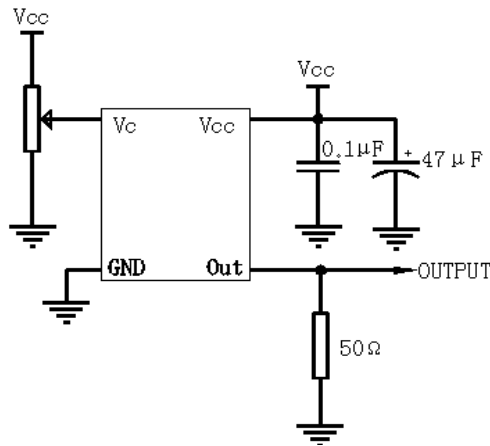
**Note1:** Tolerance  $\pm 0.2$ mm without mark

**Note2:** The first two xx representative: week  
After two xx representative: year

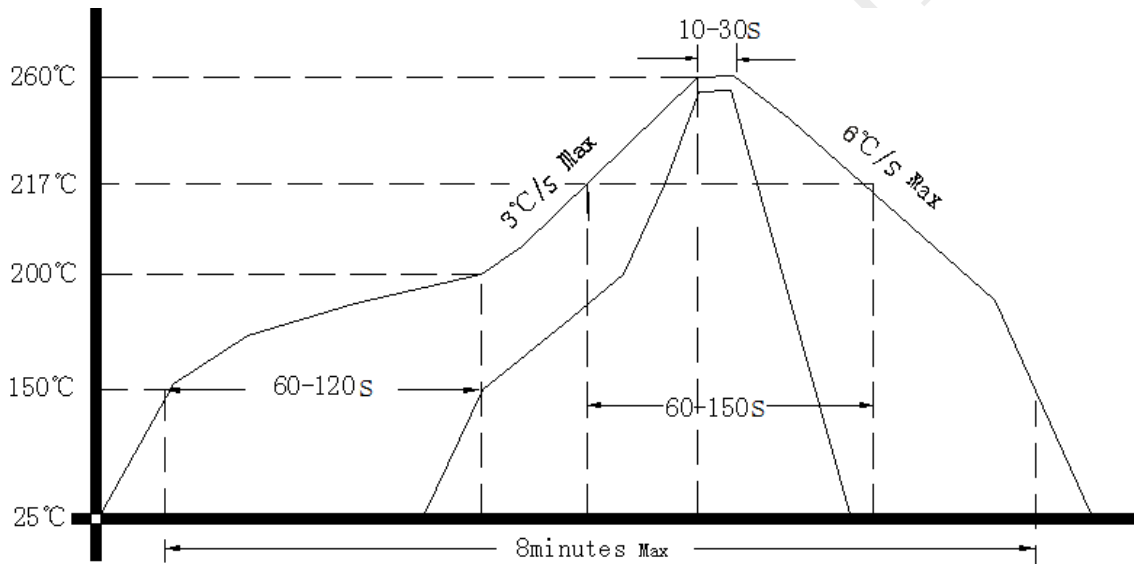
**Note3:** Referential Weight 4.2g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



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

