

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

# DATASHEET

Standard:           **O22A-H412-10.00MHz**          

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.03.06			

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## 1. Electrical Parameters

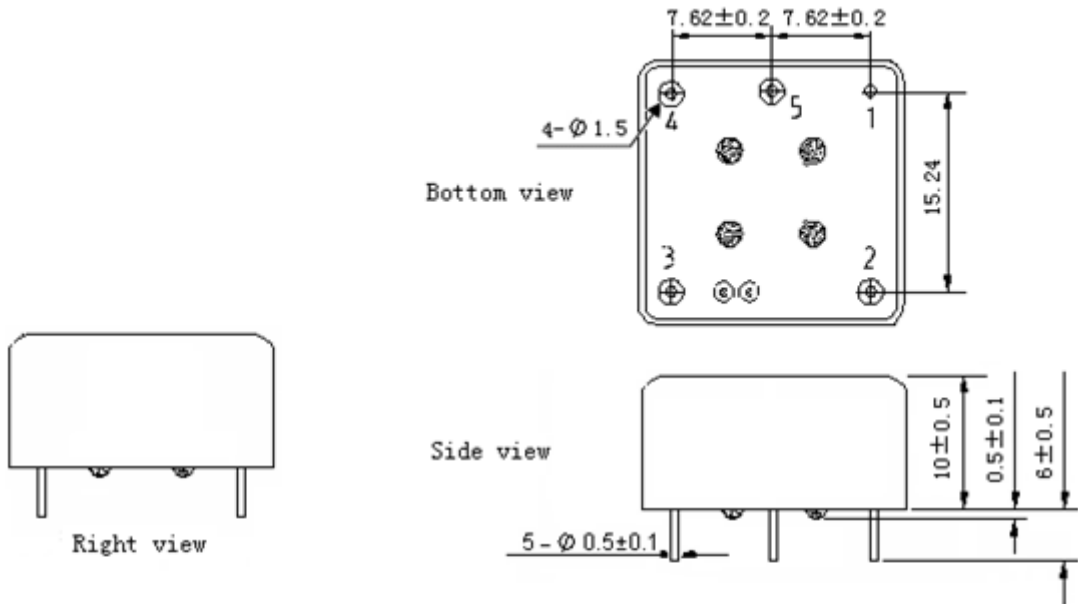
MODEL: O22A-H412-10.00MHZ						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	8			dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-70	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-3		+3	$\times 10^{-9}$	$T_A$ varied from $-40^\circ\text{C}$ to $85^\circ\text{C}$ , measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ , temperature rise speed less than $2^\circ\text{C}$ per minute.
	Initial Frequency Tolerance	-0.05		+0.05	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
		-0.1		+0.1	$\times 10^{-6}$	within 1 years after ex-works.
	Frequency Tolerance vs. supply voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$ , $V_{cc}$ varied from 3.13V to 3.47V, $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ .
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ .
	Short Term Stability			0.01	$\times 10^{-9}$	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	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, V_c, T_A$ constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ and after 30 days of operation.
Aging Tolerance 1Year	-0.05		+0.05	$\times 10^{-6}$		
Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Current Consumption			300	mA	@ $25^\circ\text{C}$
	Current Consumption during warm up			1000	mA	



Voltage Control Characteristics	Frequency Tuning Range	-0.8		-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$ .
		-0.05		+0.05	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to exactly 10.00MHz.
		+0.5		+0.8	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$ .
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise		-120	-110	dBc/Hz	10Hz
			-140	-130		100Hz
			-150	-145		1KHz
			-155	-150		10KHz
			-155	-150		100KHz
			-155	-150		1MHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	Storage Temperature	-55		+105	$^{\circ}C$	
	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 ( $^{\circ}C$ )	-10~35 $^{\circ}C$				

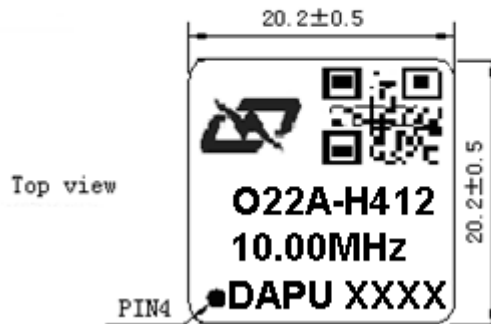


## 2. Mechanical Structure (mm)



### PIN FUNCTION

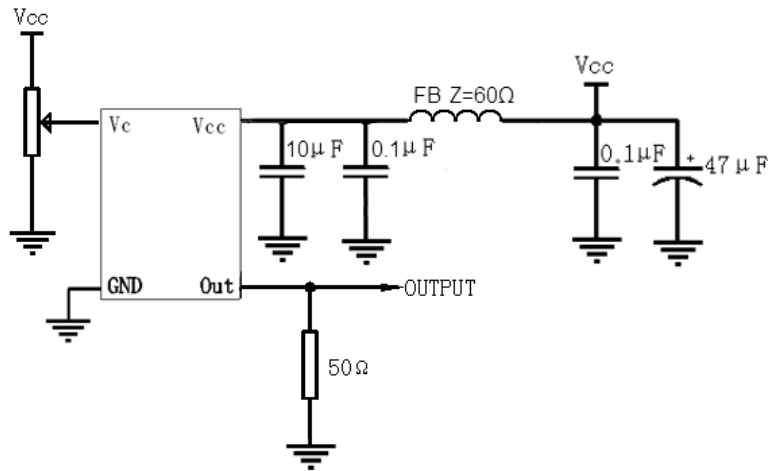
PIN	NOTATION	FUNCTION
1	GND	GND
2	OUTPUT	RF Output
3	VCC	Supply Voltage
4	VC	Control Voltage
5	NC	Not Connect



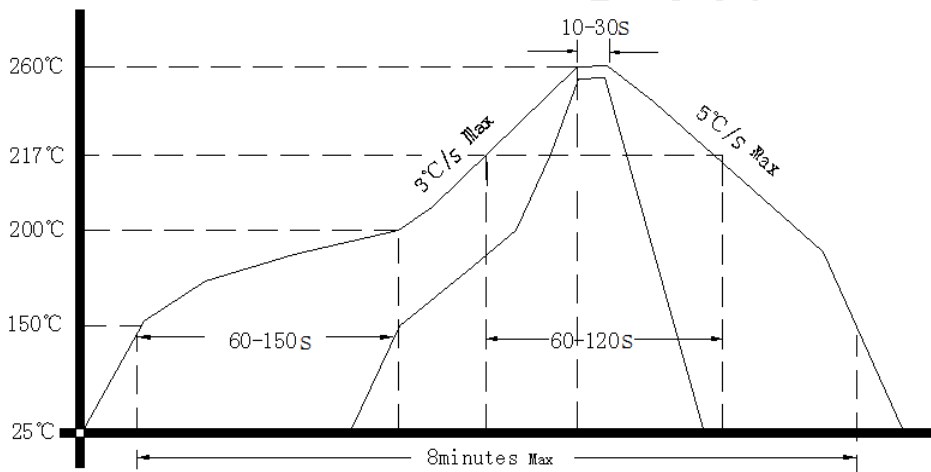
- Note1:** Tolerance  $\pm 0.20$ mm without mark
- Note2:** The first two xx representative: week  
After two xx representative: year
- Note3:** Referential weight 8.0g
- Note4:** NC is not connect



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)

