

Travelling Merchant: _____

DATASHEET

Standard: **O22S-X328-10.00MHz-A**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2013.04.12			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2013.04.12



1. Electrical Parameters

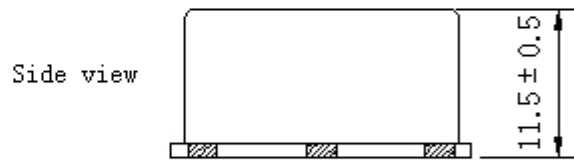
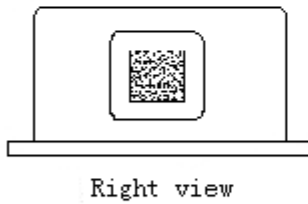
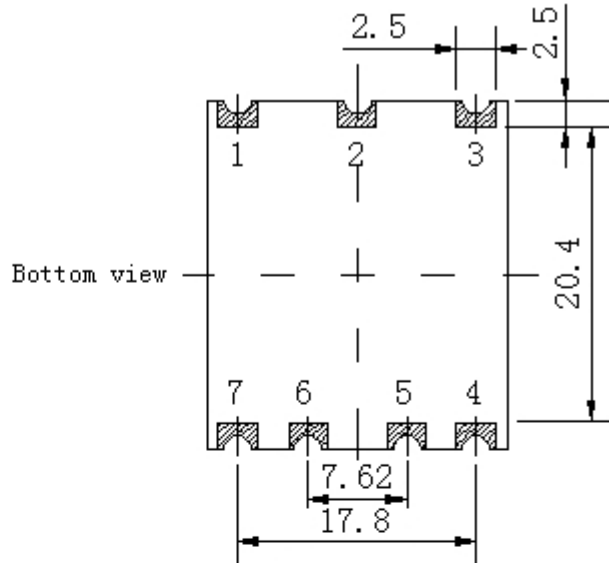
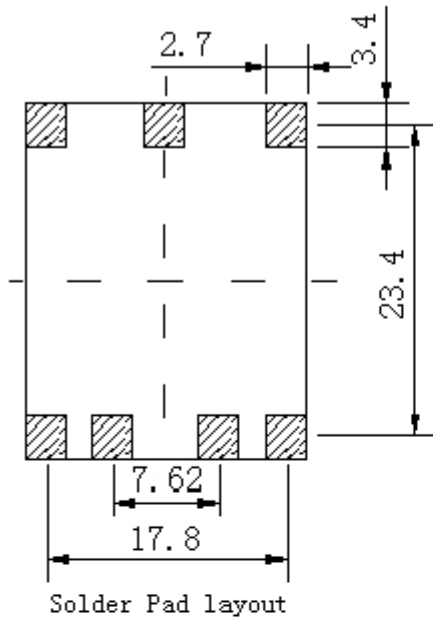
MODEL: O22S-X328-10.00MHZ-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	3.7			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range			0.01	$\times 10^{-6}$	T_A varied from $-20^{\circ}C$ to $70^{\circ}C$, measurement referenced to frequency observed with $f_{ref}=(f_{max}-f_{min})/2f_0$, $V_{cc}=5.0V, V_c=2.0V, O_{load}=15pF$, 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 $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}C, V_{cc}$ varied from 4.75V to 5.25V, $V_c=2.0V$ and $O_{Load}=15pF$.
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$, 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 $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.0V$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
	Retrace	-0.01		+0.01	$\times 10^{-6}$	$T_A=25^{\circ}C$, after 5 minutes of operation, with reference to frequency reached after 24 hours of continuous operation.



Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			600	mA	
Voltage Control Characteristics	Frequency Tuning Range			-1	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.0V$
		-0.2		+0.2	$\times 10^{-6}$	$V_c=2.0V$. measurement referenced to exactly 10.00MHz
		+1			$\times 10^{-6}$	$V_c=4.0V$. measurement referenced to $V_c=2.0V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			K Ω	
Phase Noise	Phase Noise		-120	-110	dBc/Hz	10Hz
			-140	-130		100Hz
			-150	-145		1KHz
			-155	-150		10KHz
			-155	-150		100KHz
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.					

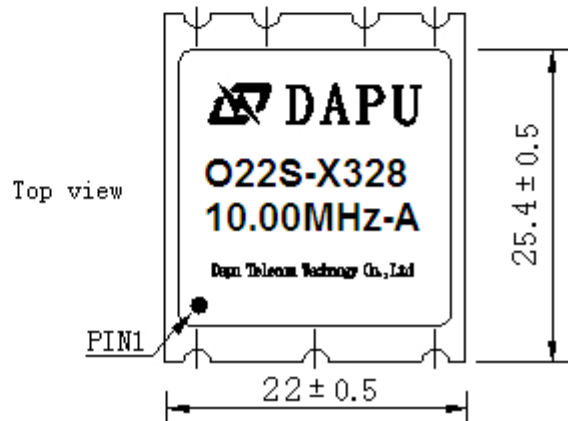


2. Mechanical Structure (mm)



PIN FUNCTTON

PIN	FUNCTTON
1	VC
2	NC
3	VCC
4	OUTPUT
5,6	NC
7	GND



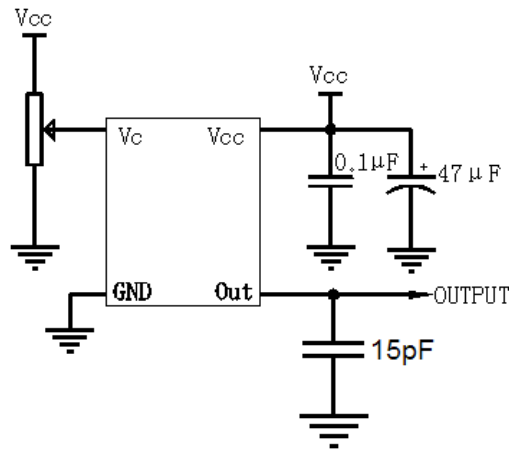
Note1: Tolerance $\pm 0.2\text{mm}$ without mark

Note2: Referential Weight 7.8g

Note3: NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

