Travelling Merchant:_____

DATASHEET

Standard: **O22S-ICE02-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Tony·Wang	James.Liu	
Date: 2012.12.14			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2012.12.14
1.1	"Mechanical Structure"change	Amway	2012.12.17

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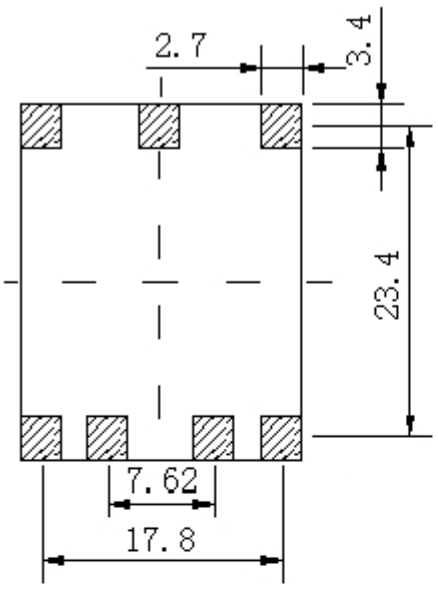
1. Electrical Parameters

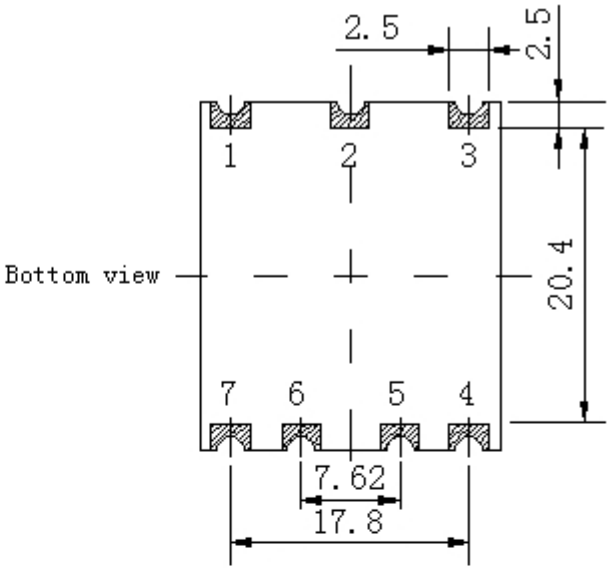
MODEL： O22S-ICE02-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		10.00		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.4	V	V_{cc}=5.0V, O_{load}=15pF
	Output High Voltage	3.6			V	V_{cc}=5.0V, O_{load}=15pF
	Duty Cycle	45	50	60	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range			0.02	$\times 10^{-6}$	T_A varied from 0℃ to 70℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}-f_{min})/f_0$, V_{cc}=5.0V, V_c=2.0V, O_{load}=15pF, temperature variable speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, 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℃, 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℃, 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℃; 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℃, V_{cc}= 5.0V, V_c=2.0V, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			200	mA	@25℃

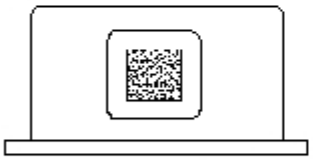
	Warm-Up Time			5	minutes	@25℃within $\pm 0.01 \times 10^{-6}$ of final frequency with reference after 24 hours on.
	Warm up current			600	mA	
Voltage Control Characteristics	Frequency Tuning Range			-0.7	$\times 10^{-6}$	V_c=0V. measurement referenced to V_c=2.0V
		-0.1		+0.1	$\times 10^{-6}$	V_c=2.0V. measurement referenced to exactly 10.00MHz
		+0.7			$\times 10^{-6}$	V_c=4.0V. measurement referenced to V_c=2.0V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise		-115	-105	dBc/Hz	10Hz
			-135	-125		100Hz
			-145	-140		1KHz
			-150	-145		10KHz
			-155	-150		100KHz
			-155	-150		1MHz
Environmental Conditions	Operable Temperature	-40		+85	℃	
	Storage Temperature	-55		+105	℃	
	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)

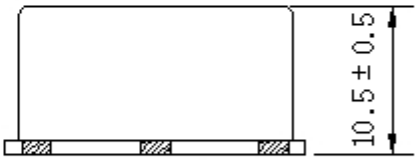


Solder Pad layout



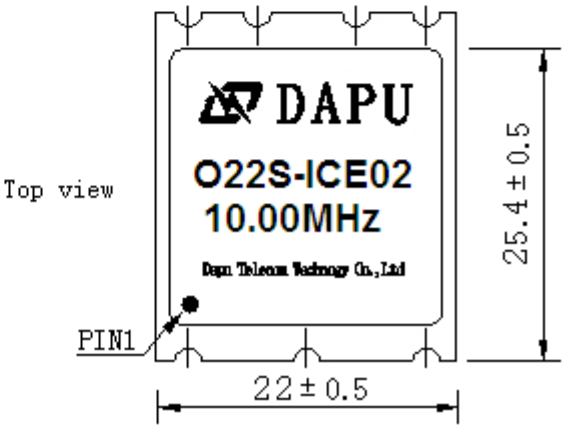


Right view



PIN FUNCTTON

PIN	FUNCTTON
1	VC
2	VREF+4.0V
3	Vcc
4	OUTPUT
5,6	NC
7	GND

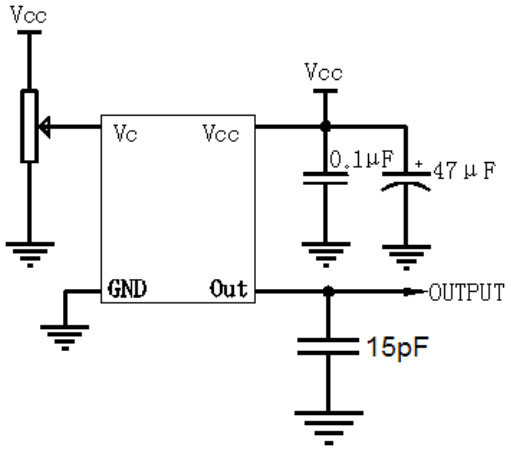


Note1: Tolerance ±0.2mm without mark

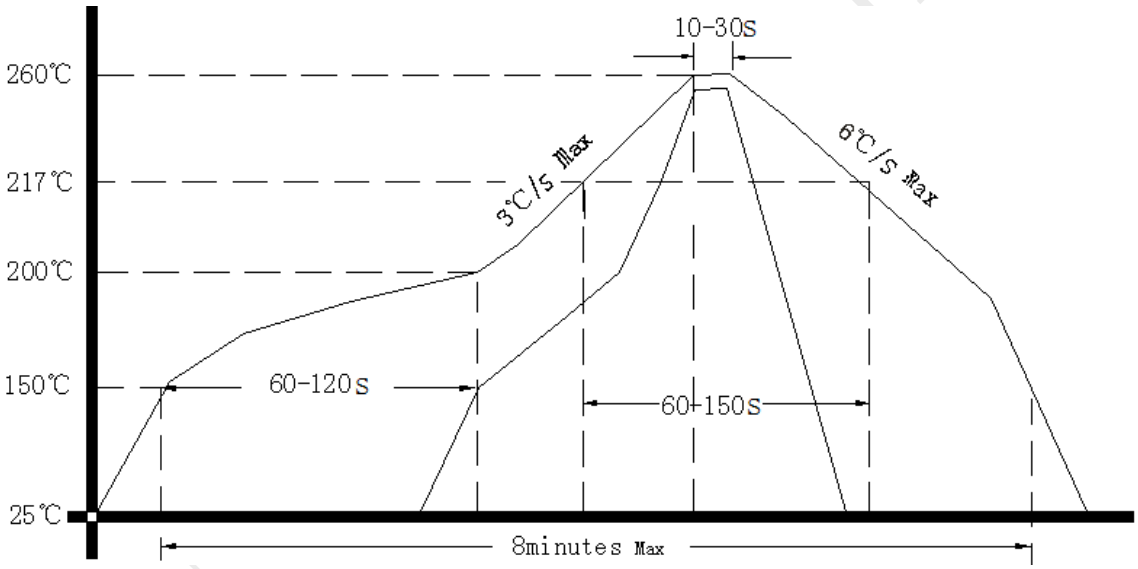
Note2: Referential Weight 7.8g

Note3: NC is not connect

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)