Travelling Merchant: A021

DATASHEET

Standard: **O22S-2105-10.00MHz**

P/N:

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Carry.Wang	James.Liu	
Date: 2016.11.01			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2016.11.01

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1、Electrical Parameters

MODEL：O22S-2105-10.00MHz

Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		10.00		MHz	
	Output Waveform		LVTTL			
	Output Low Voltage			0.4	V	V_{cc}=5.0V, O_{load}=15pF
	Output High Voltage	2.4			V	V_{cc}=5.0V, O_{load}=15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)		2	3	ns	@25℃
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5.0		+5.0	$\times 10^{-9}$	T_A varied from -5℃ to 85℃, measurement referenced to frequency observed with T_A= 25℃, V_{cc}=5.0V, $O_{load=}$ 15pF,temperature variable speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃,V_{cc}=5.0V, and after 15minutes of operation,Within 24 hours after ex-works.
	Frequency Tolerance vs. Supply Voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 4.75V to 5.25V, and O_{Load}= 15pF.
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with T_A= 25℃, V_{cc}=5.0V, 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 24hours, 25℃; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-0.75		+0.75	$\times 10^{-9}$	V_{cc}, T_A constant measurement referenced to frequency observed with T_A=25℃, V_{cc}= 5.0V, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	

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	Overall Stability	-0.5		+0.5	$\times 10^{-6}$	Inclusive of the following: operating temperature -5℃ to 85℃ 5.0V±5% 15pF load ±5% 10 years aging reference to nominal frequency
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			300	mA	@25℃
	Warm-Up Time			10	minutes	@25 ℃ within ±0.015 × 10^{-6} of final frequency with reference after 1 hour on.
	Warm up current			800	mA	
Phase Noise	Phase Noise			-80	dBc/Hz	1Hz
				-100		10Hz
				-120		100Hz
				-130		1KHz
				-130		10KHz
				-130		100KHz
Environmental Conditions	Operable Temperature	-5		+85	℃	
	Storage Temperature	-40		+85	℃	
	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 (℃)	-10~35℃				

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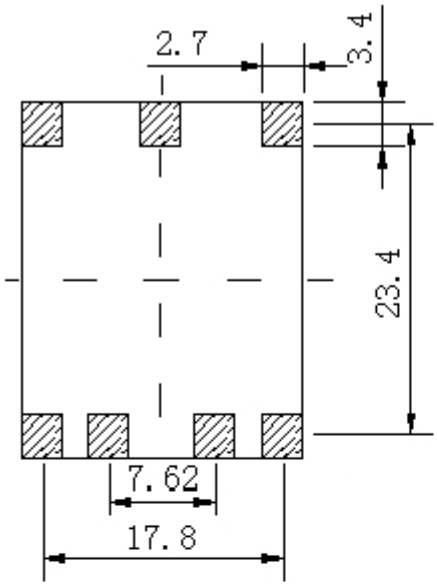
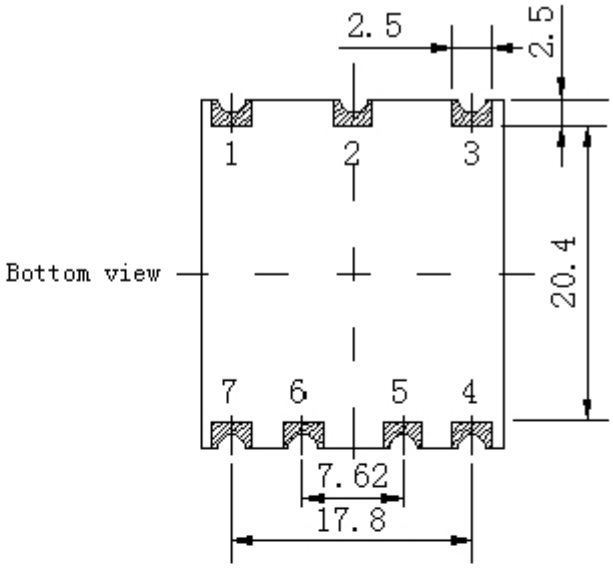
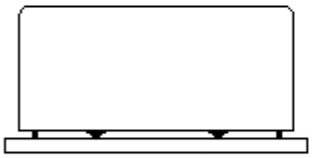
2、Mechanical Structure(mm)

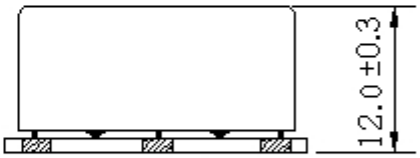


Solder Pad layout



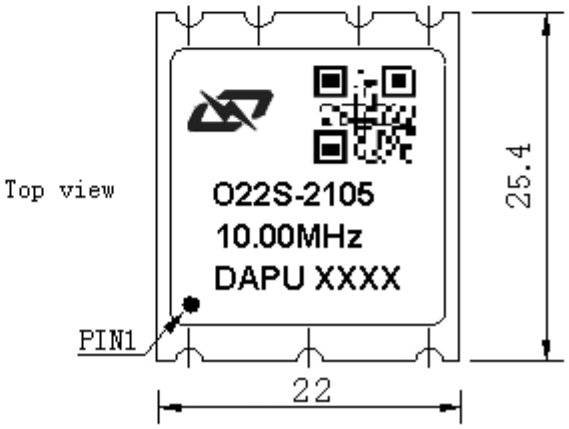


Right view



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	NC	Not Connect
2	NC	Not Connect
3	VCC	Supply Voltage
4	OUTPUT	RF Output
5,6	NC	Not Connect
7	GND	GND



Note1: Tolerance ±0.2mm without mark

Note2: Referential weight 7.8g

Note3: NC is not connect

Note4: The first two xx representative: week
After two xx representative: year

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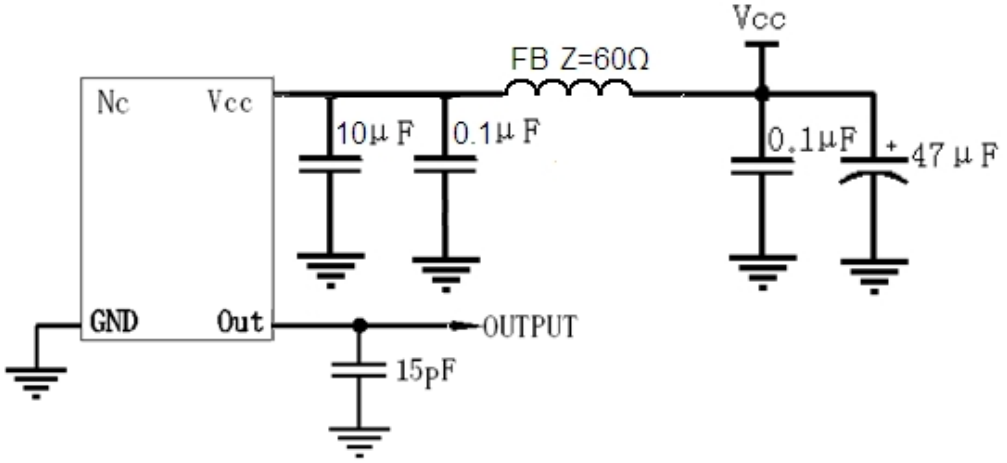
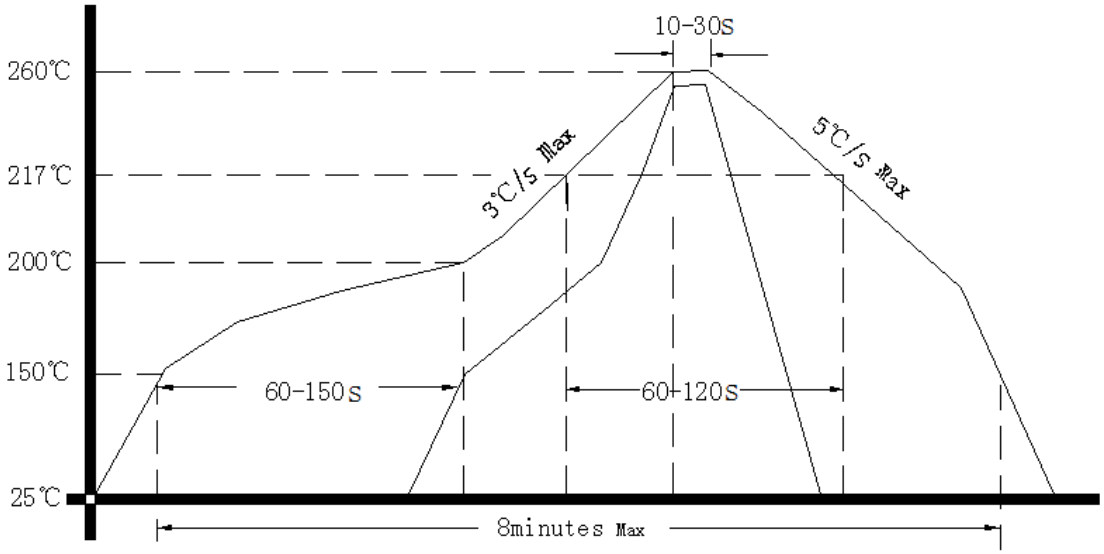
3、Test Circuit



4、Reflow Soldering Curve (RoHS)



5、Package（mm）