Travelling Merchant: A021

DATASHEET

Standard: **O11H-2101-20.00MHz**

P/N:

Plot			The Label
Drew	Audited	Approved	
Amway. wei	Tony · Wang	James Lee	
Date: 2015.08.03			Stamp, please! Thanks!

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2013.11.29
1.1	1. “Initial Frequency Tolerance” changed 2. “Frequency Tolerance vs. Operating Temperature Range” changed 3. “ADEV” changed 4. “The hight of the mechanical structure” changed	Amway	2015.08.03

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1. Electrical Parameters

MODEL： O11H-2101-20.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		20.00		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.33	V	V_{cc}=3.3V, O_{load}=15pF
	Output High Voltage	2.4			V	V_{cc}=3.3V, O_{load}=15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			10	ns	
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.03		+0.03	$\times 10^{-6}$	T_A varied from-40℃to 85℃, measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, 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}=3.3V, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.01		+0.01	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V, and O_{Load}=15pF.
	Frequency Tolerance vs. Load	-0.01		+0.01	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, and O_{Load}=15pF.
	ADEV			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 24hours, 25℃; 1s.
				0.1	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 24hours, 25℃; 10s.
				0.1	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 24hours, 25℃; 100s.
				0.3	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 48hours, 25℃; 1000s.
				0.6	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference，test after power for 7 days, 25℃; 10000s.

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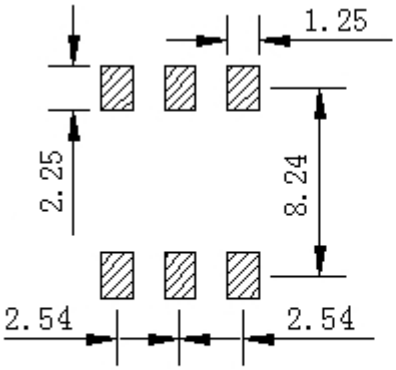
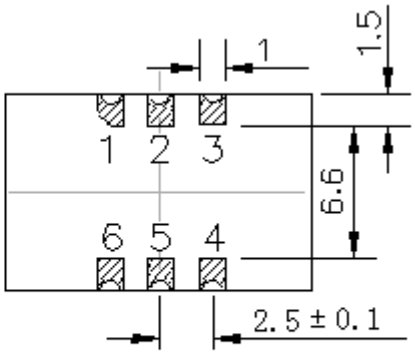
	Aging Tolerance Per Day	-1		+1	$\times 10^{-9}$	V_{cc},T_A constant measurement referenced to frequency observed with T_A=25℃,V_{cc}=3.3V, and after 30 days of operation.
	Aging Tolerance Per Month	-0.025		+0.025	$\times 10^{-6}$	
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-1.5		+1.5	$\times 10^{-6}$	
	Overall stability	-2		+2	$\times 10^{-6}$	Inclusive of the following: - operating temperature -40℃ to 85℃ - 3.3V±5% - 15pF load ±5% - 2 times reflow soldering - 10 years aging reference to nominal frequency
Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Steady Consumption			330	mA	@25℃
	Warm up current			750	mA	
	Warm-Up Time			3	minutes	@25℃ to final frequency
Phase Noise	Phase Noise @25℃		-70	-60	dBc/Hz	1Hz
			-100	-90		10Hz
			-130	-120		100Hz
			-145	-135		1KHz
			-150	-145		10KHz
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.				

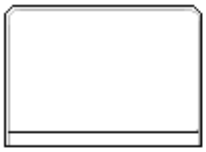
2. Mechanical Structure (mm)



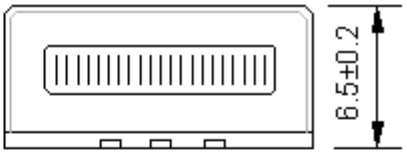
Solder Pad layout



Bottom view



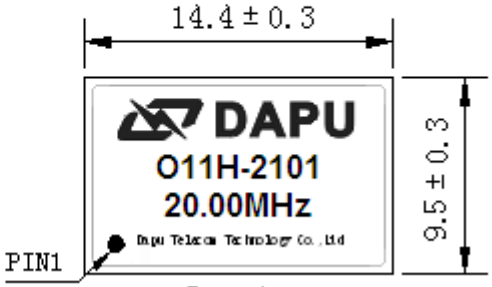
Right view



Side view

PIN FUNCTION

PIN	FUNCTION
1	NC
2,5	NC
3	GND
4	OUTPUT
6	VCC



Top view

Note1: Tolerance **±** 0.2mm without mark

Note2: Referential Weight 1.3g

Note3: NC is not connect

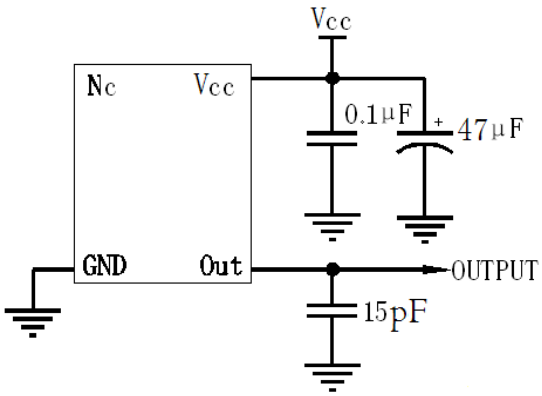
Note4: Material compositon :

Pad/terminals：Cu （Surface plating: Ni 3-6um，Au 0.1～0.5um）

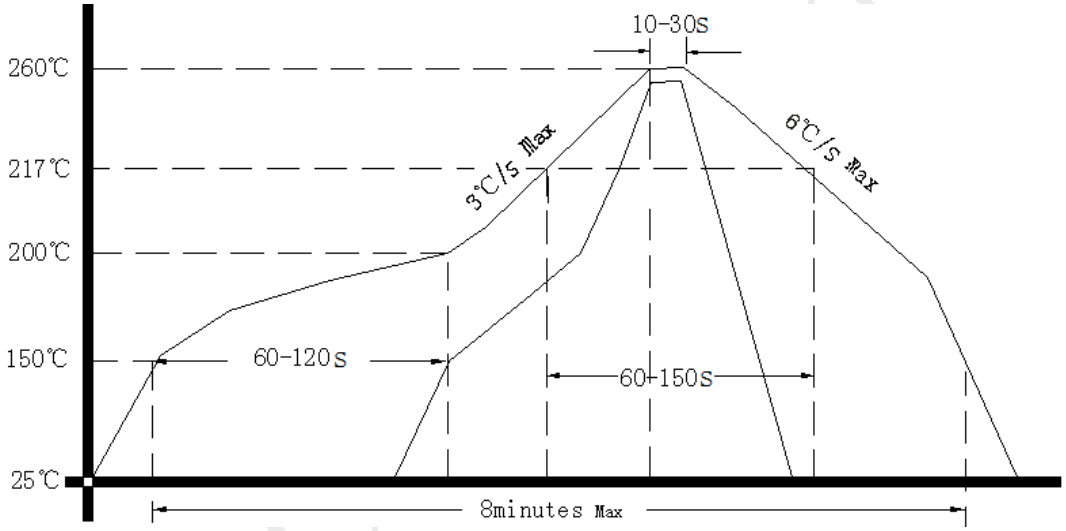
Base: High-TG FR4

Cover：Stainless steel

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)