Travelling Merchant: A008

DATASHEET

Standard: **O11H-0801-19.20MHz**

P/N:

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Tony · Wang	James.Liu	
Date: 2018.08.03			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2018.08.03

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1. Electrical Parameters

MODEL： O11H-0801-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		19.20		MHz	
	Output Waveform		LVCMOS			
	Output Low Voltage			0.4	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	%	
	Rise / Fall Time (10%~90%)			5	ns	
	Spurious Suppression			-65	dBc	
	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 $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, V_c=1.65V,O_{load}=15pF, temperature variable speed less than 2℃per minute.
		-0.1		+0.1	$\times 10^{-6}$	T_A varied from 85℃ to 90℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, V_c=1.65V,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, V_c=1.65V,and after 15 minutes of operation, within 30 days after ex-works.
		-0.3		+0.3	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.65V,and after 15 minutes of operation, within 90 days after ex-works.
	Frequency Accuracy after Reflow	-0.2		+0.2	$\times 10^{-6}$	Pre-reflow frequency f1,Frequency after reflow f2,△f=f2-f1
	Frequency Tolerance vs. Supply Voltage	-5		+ 5	$\times 10^{-9}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V, V_c=1.65V,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}=3.3V, V_c=1.65V,and O_{Load}=15pF.

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	Short-Term Stability Allan Variance			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25℃; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-2		+2	$\times 10^{-9}$	V_{cc}, $V_{c,}$ T_A constant measurement referenced to frequency observed with T_A=25℃,V_{cc}=3.3V, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.3		+ 0.3	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-1.5		+1.5	$\times 10^{-6}$	
	Frequency Retrace	-0.05		+0.05	$\times 10^{-6}$	V_c=1.65V @25℃, Frequency power on 48 hour：f1，power off 24 hour, power on 1 hour:f2, f2-f1
Power Supply	Supply Voltage	3.13	3.3	3.47	V	±5%
	Steady Consumption			300	mA	@25℃
	Warm up current			750	mA	
	Warm-Up Time			5	minutes	@25℃within $\pm 0.06 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range	-4.0		-2.0	$\times 10^{-6}$	Vc=0V. measurement referenced to Vc=1.65V.
		-0.3		+0.3	$\times 10^{-6}$	Vc=1.65V. measurement referenced to exactly 19.20MHz.
		+2.0		+4.0	$\times 10^{-6}$	Vc=3.3V. measurement referenced to Vc=1.65V.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise		-75	-65	dBc/Hz	1Hz
			-105	-95		10Hz
			-130	-120		100Hz
			-140	-135		1KHz
			-145	-140		10KHz
			-150	-145		100KHz

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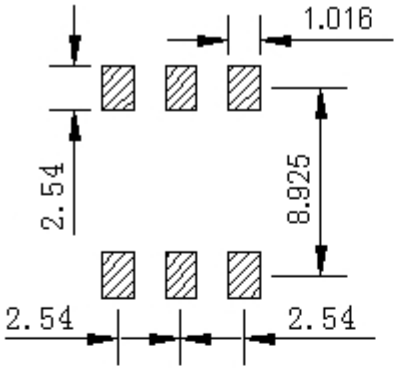
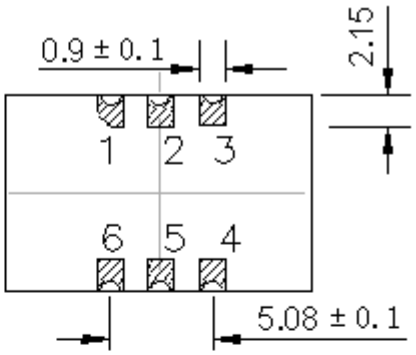
Environmental Conditions	Operating Temperature Range	-40		+90	℃	
	Storage Temperature	-55		+105	℃	
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.				
	Moisture Sensitivity Level	Not humidity sensitive.				
	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 (℃)	-10~35℃				

2. Mechanical Structure (mm)

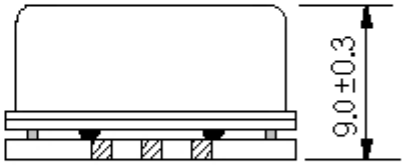


Solder Pad layout



Bottom view


Right view



Side view

PIN FUNCTION

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

Top view

Note1: Tolerance ± 0.2mm without mark

Note2: Referential weight 2.6g

Note3: The first two xx representative: week
After two xx representative: year
At last four xxxx representative: serial number

Note4: NC is not connect

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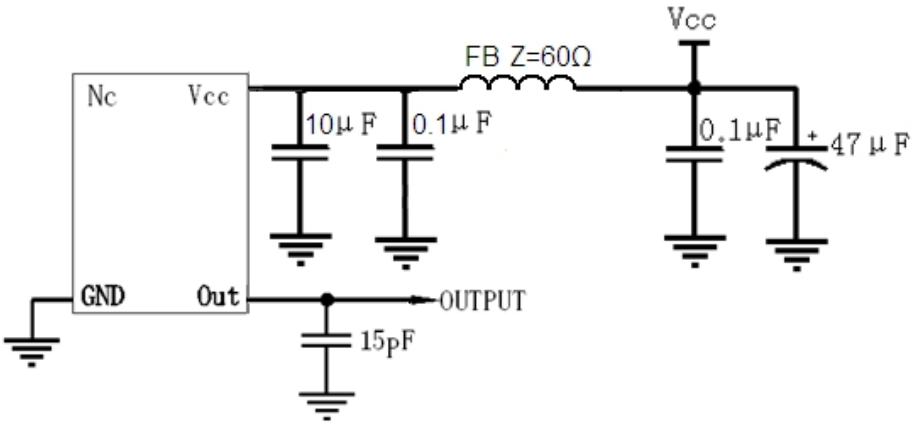
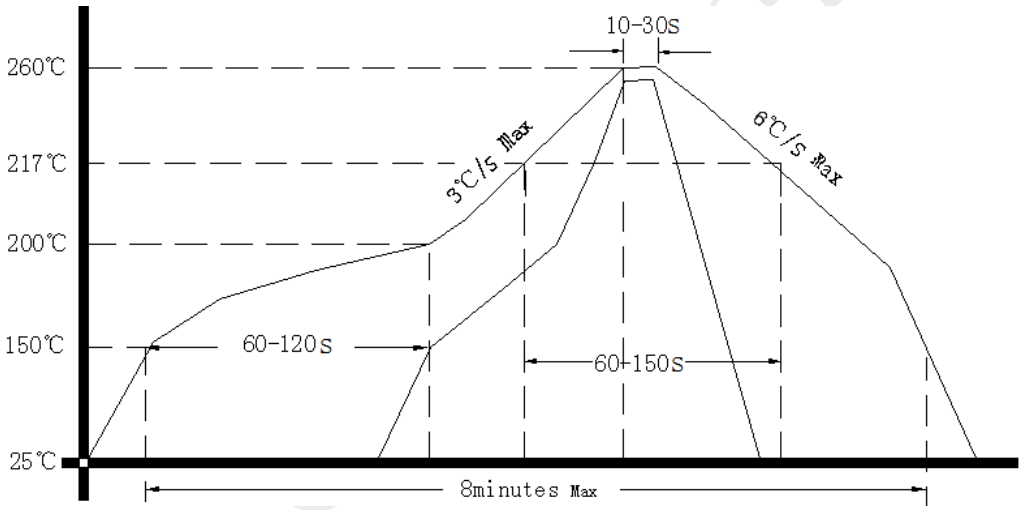
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)