Travelling Merchant:_____

DATASHEET

Standard: **O22B-Y112-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Tony · Wang	James.Liu	
Date: 2018.05.22			

Guangdong Dapu Telecom Technology Co.,Ltd

Bldg13-16,.N.Ind.Zone,SSL Industry Park, Dongguan City, Guangdong Province, China

TEL：0086-0769-88010888 FAX：0086-0769-81800098

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2018.05.18
1.1	The “Operating Temperature” changed	Amway	2018.05.22

Bldg13-16,.N.Ind.Zone,SSL Industry Park, Dongguan City, Guangdong Province, PR China
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1. Electrical Parameters

MODEL： O22B-Y112-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		10.00		MHz	
	Output Waveform		LVTTL			
	Output Low Voltage			0.3	V	V_{cc}=3.3V, O_{load}=15pF
	Output High Voltage	2.6			V	V_{cc}=3.3V, O_{load}=15pF
	Duty Cycle	45	50	55	%	
	Rise / Fall Time			5	ns	10%~90%
	Load		15		pF	
	Spurious			-60	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	T_A varied from -20℃ to 75℃, measurement referenced to frequency observed with T_A= 25℃, V_{cc}=3.3V, V_c=1.65V, O_{load}=15 pF, temperature rise speed less than 2℃per minute.
		-4.0		+4.0	$\times 10^{-9}$	T_A varied from -40℃ to -20℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, V_c=1.65V, O_{load}=15 pF ,temperature rise 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.
	Frequency Tolerance vs. Supply Voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.10V to 3.50V, V_c =1.65V and O_{Load}=15pF.
	Frequency Tolerance vs. Load	-2		+2	$\times 10^{-9}$	10% 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:			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.
	Retrace	-0.01		+0.01	$\times 10^{-6}$	After 60 minute(s) from turn on, following 48 hours minimum on time, and 24 hours maximum off time .At constant temperature and voltage. Referenced to frequency at off time.
	Aging Tolerance Per Day	-1.0		+1.0	$\times 10^{-9}$	
	Aging Tolerance Per Daily	-1.0		+1.0	$\times 10^{-9}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with T_A=25℃, V_{cc}= 3.3V, V_c=1.65V, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
	Aging Tolerance 10Year	-0.4		+0.4	$\times 10^{-6}$	
	Aging Tolerance 15Year	-0.5		+0.5	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.1	3.3	3.5	V	
	Steady Consumption			400	mA	@25℃
	Warm up current			1000	mA	
	Warm-Up Time			10	minutes	@25℃within $\pm 0.01\times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range	-2.4		-0.8	$\times 10^{-6}$	V_c=0V. measurement referenced to V_c=1.65V
		-0.2		+0.2	$\times 10^{-6}$	V_c=1.65V. measurement referenced to exactly 10.00MHz
		+0.8		+2.4	$\times 10^{-6}$	V_c=3.3V. measurement referenced to V_c=3.3V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Jitter	Jitter			1	ps	RMS (12KHz ~10MHz)
Phase Noise	Phase Noise			-80	dBc/Hz	1Hz
				-120		10Hz
				-140		100Hz
				-145		1KHz
				150		10KHz
				-155		1MHz
				-160		10MHz

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Environmental Conditions	Operating Temperature	-40		+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	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℃				

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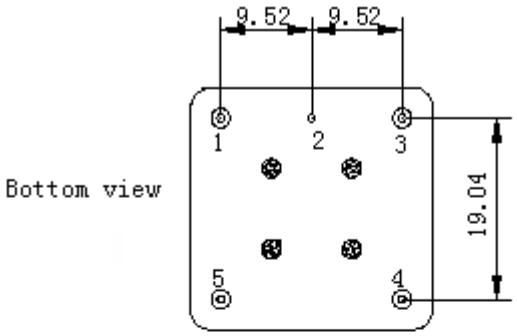
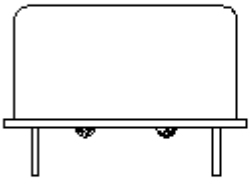
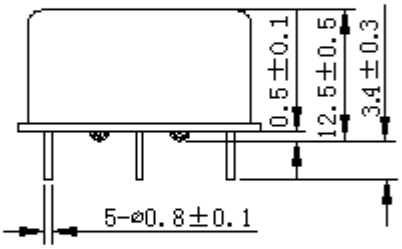
2. Mechanical Structure (mm)

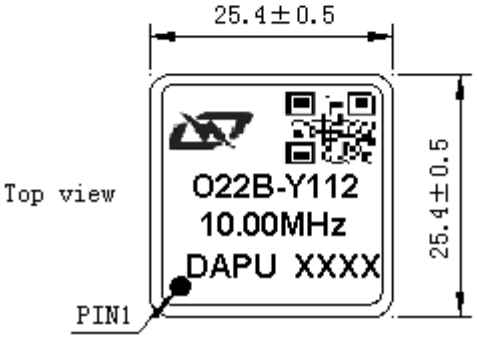






PIN FUNCTION

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



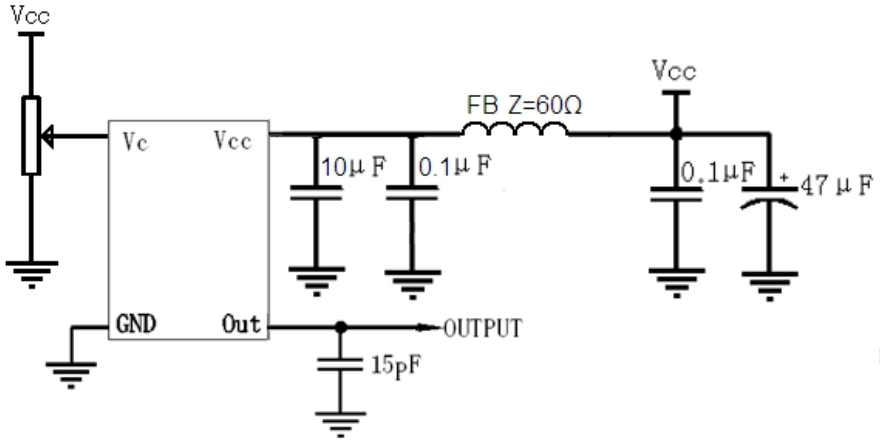
Note1: Tolerance ±0.2mm without mark

Note2: Referential weight 13.6g

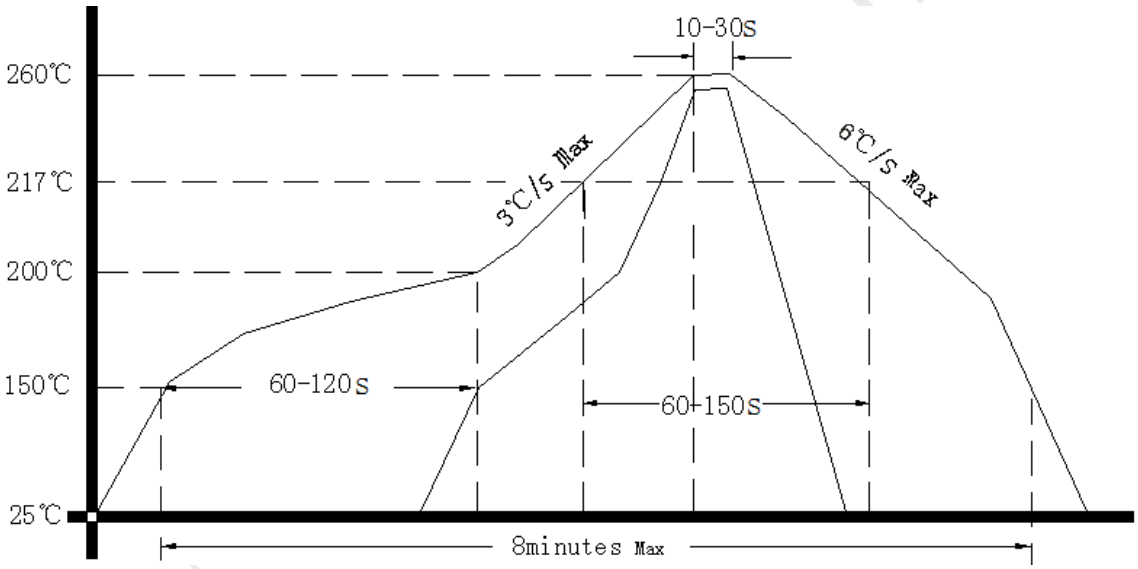
Note3: NC is not connect

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

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package（mm）