Travelling Merchant: A008

DATASHEET

Standard: **O22B-0804-10.00MHz**

P/N:

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

Guangdong Dapu Telecom Technology Co.,Ltd

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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： O22B-0804-10.00MHz						
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}=3.3V, O_{load}=15pF
	Output High Voltage	2.8		3.1	V	V_{cc}=3.3V, O_{load}=15pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load		15 ±10%		pF	
	Spurious			-60	dBc	
	Output overshoot			10	%	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	T_A varied from -10℃ to 70℃, 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.
		-0.01		+0.01	$\times 10^{-6}$	T_A varied from -10℃ to -40℃, measurement referenced to frequency observed with $f_{ref}=f_{max}+f_{min}$, 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 30 minutes of operation, within 180days 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 3.13V to 3.47V, 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.
	Short-Term Stability: Alan Variance			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 48 hour ref. to 25℃; 1s, using PN9000 equipment.
	Daily Fluctuation	-5		+5	$\times 10^{-9}$	25±5℃

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	Retrace	-0.01		+0.01	$\times 10^{-6}$	24 hour continuous power on ,power off 24 hour, power on 1 hour.
	Aging Tolerance Per Day	-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	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.13	3.3	3.47	V	Tolerate input voltage (no damage) -0.3VDC～4.0VDC
	Steady Consumption			400	mA	@25℃
	Warm up current			1000	mA	
	Warm-Up Time			15	minutes	@25 ℃ within ±0.01 × 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=1.65V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Jitter				1	ps	RMS (12kHz ~10MHz), power ripple＜50mV
Phase Noise	Phase Noise		-80	-70	dBc/Hz	1Hz
			-120	-110		10Hz
			-140	-130		100Hz
			-145	-140		1KHz
			-150	-145		10KHz
			-155	-150		100KHz

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Environmental Conditions	Operating Temperature	-10		70		
	Operable 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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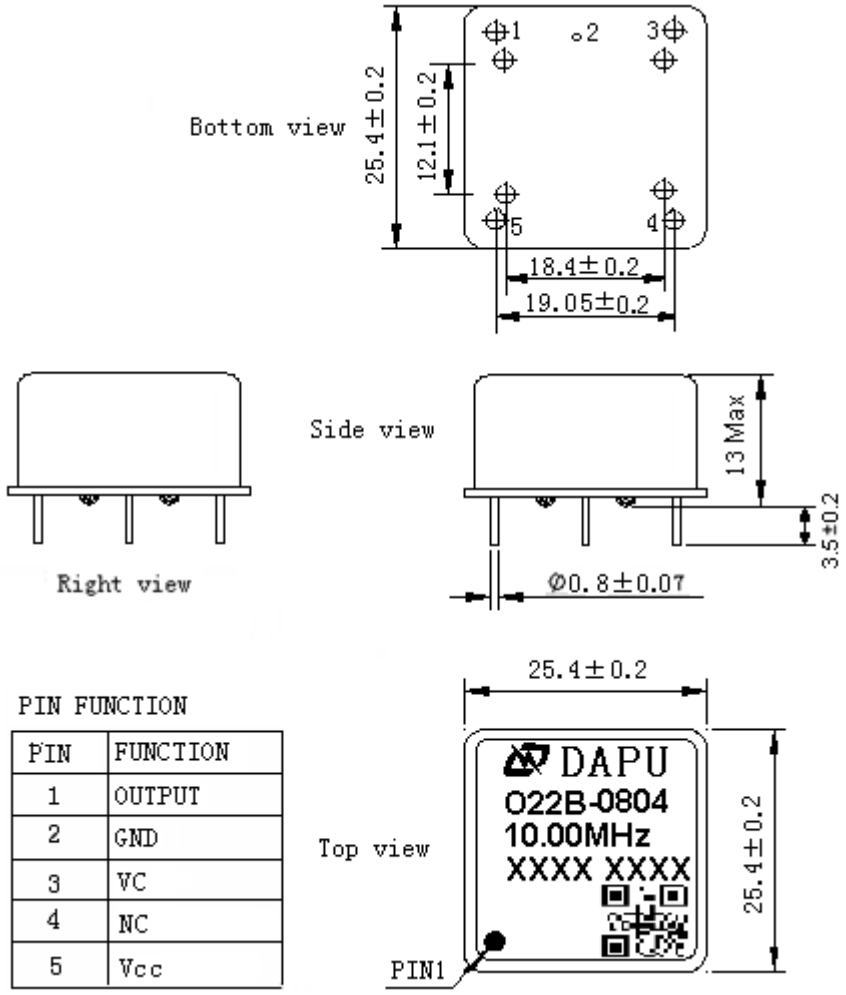
2. Mechanical Structure (mm)



PIN FUNCTION

PIN	FUNCTION
1	OUTPUT
2	GND
3	VC
4	NC
5	Vcc

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
At last four xxxx representative: serial number

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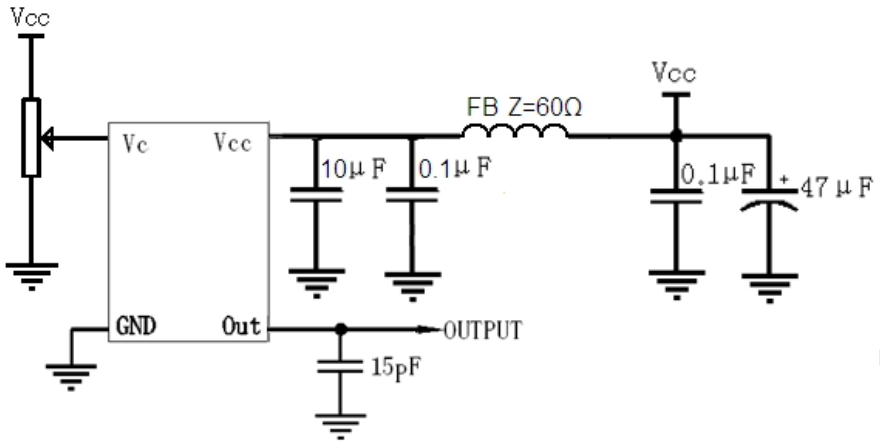
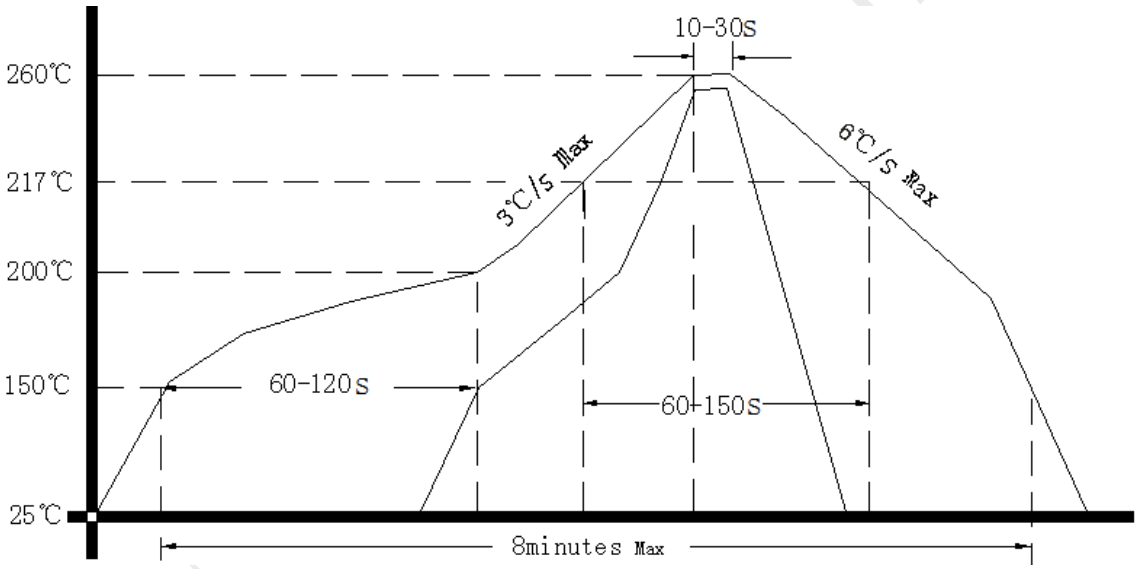
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package（mm）