Travelling Merchant:_____

DATASHEET

Standard: **O21B-E412-19.20MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Carry.Wang	Tony·Wang	
Date: 2019.06.05			Stamp, please! Thanks!

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2019.06.05

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1. Electrical Parameters

MODEL：O21B-E412-19.20MHz

Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		19.20		MHz	
	Output Waveform		Sine wave			
	Level	6			dBm	
	Load	45	50	55	Ω	
	Harmonics Suppression			-25	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	T_A varied from -40℃ to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=5.0V, V_c=2.1V, O_{load}=50Ω,temperature rise speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=5.0V, V_c=2.1V 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 4.75V to 5.25V, V_c= 2.1V , O_{load}=50Ω.
	Short-Term Stability Allan variance			0.01	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25℃; 1s , using PN9000 equipment.
	Aging Tolerance per day	-0.5		+0.5	$\times 10^{-9}$	V_{cc},V_c, T_A constant Measurement referenced to frequency observed with T_A=25℃,V_{cc}=5.0V,V_c=2.1V, O_{load}=50Ω and after 30 days of operation.
	Aging Tolerance 1Year	-0.05		+0.05	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Current Consumption			350	mA	@25℃ V_{cc}=5V
	Current Consumption during warm up			700	mA	V_{cc}=5V
	Warm-up time			3	min	@25℃within $\pm 0.05\times 10^{-6}$ of final frequency with reference after 1 hour on.

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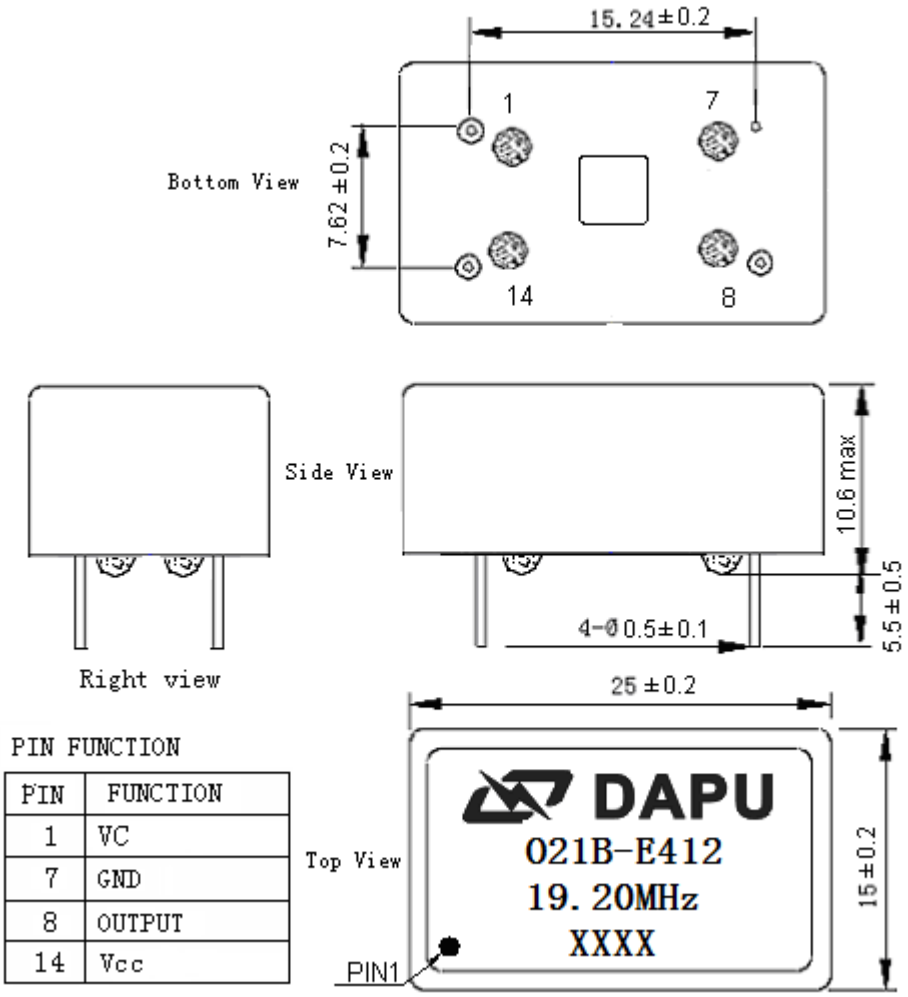
Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	V_c=0V. measurement referenced to V_c=2.1V.
		-0.1		+0.1	$\times 10^{-6}$	V_c=2.1V. measurement referenced to exactly 19.20MHz.
		+0.5			$\times 10^{-6}$	V_c=4.2V. measurement referenced to V_c=2.1V.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise		-115	-105	dBc/Hz	10Hz
			-130	-120		100Hz
			-140	-135		1KHz
			-150	-145		10KHz
			-150	-145		100KHz
Environmental Conditions	Operable Temperature	-40		+85	℃	
	Storage Temperature	-60		+90	℃	
	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)



PIN FUNCTION

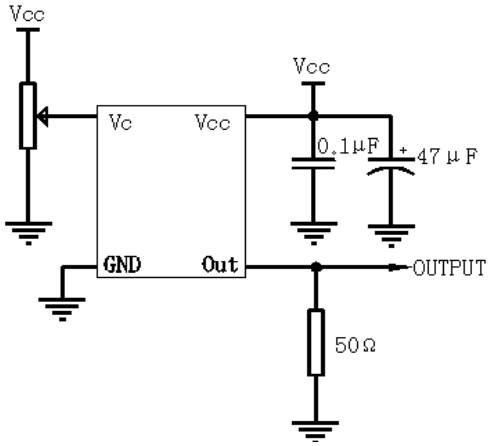
PIN	FUNCTION
1	VC
7	GND
8	OUTPUT
14	Vcc

Note1: Tolerance ±0.2mm without mark

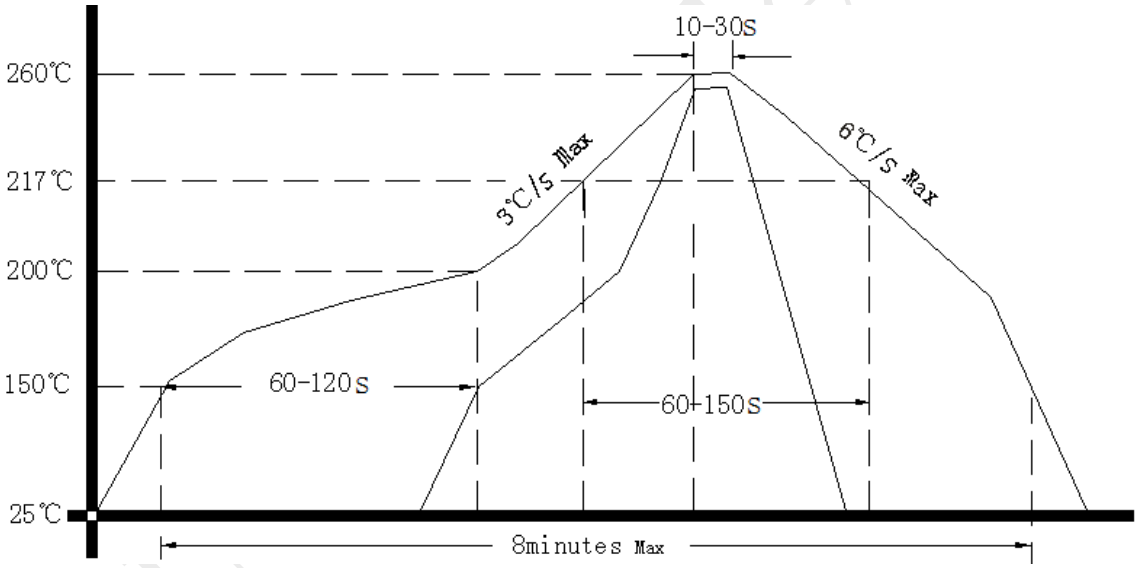
Note2: The first two xx representative: week
After two xx representative: year

Note3: Referential Weight 6.6g

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)