

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard:     **T32-A513-19.20MHz-A**    

P/N: \_\_\_\_\_

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.04.27			

**Guangdong Dapu Telecom Technology Co.,Ltd**

Building 5, No.24, Industrial East Road, Songshanhu Park, Dongguan, Guangdong, P.R. China

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



**Table of amendment**

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2020.11.12
1.1	The “Initial Frequency Tolerance” “Aging” “Frequency tuning range” changed	<i>Amway</i>	2021.04.27



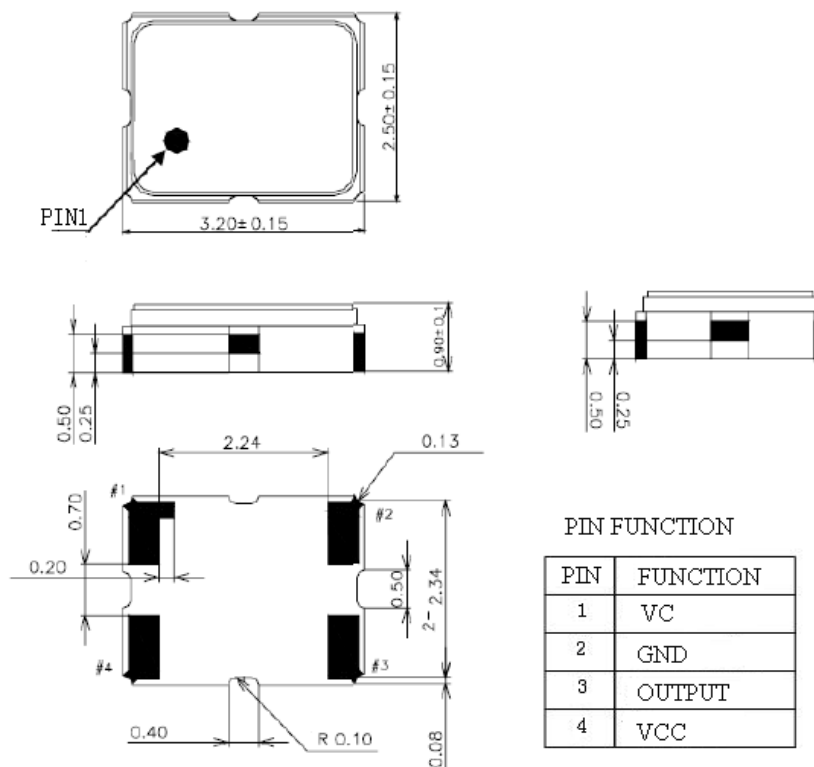
## 1、Electrical Parameters

MODEL: T32-A513-19.20MHZ-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8		1.2	V	
	Duty Cycle	40		60	%	GND level (DC-cut)
	Harmonics			-8	dBc	2nd and 3rd harmonic
				-15	dBc	Other harmonics
	Start up			2	ms	@90% of Final Vout level
				2	ms	Within $\pm 1.5$ ppm of final frequency
Load	10K $\Omega$ //10pF					
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	-30 $^{\circ}$ C to 85 $^{\circ}$ C, Ref. to Frequency, T <sub>A</sub> =25 $^{\circ}$ C.
		-1.0		+1.0	$\times 10^{-6}$	-40 $^{\circ}$ C to 85 $^{\circ}$ C, Ref. to Frequency, T <sub>A</sub> =25 $^{\circ}$ C.
	Initial Frequency Tolerance	-1.0		+1.0	$\times 10^{-6}$	At Shipping, Ref. to Nominal Frequency
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	$\times 10^{-6}$	measurement referenced to frequency observed T <sub>A</sub> =25 $^{\circ}$ C, V <sub>cc</sub> $\pm$ 5%, V <sub>c</sub> =1.5V and O <sub>Load</sub> =10K $\Omega$ //10pF.
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with T <sub>A</sub> =25 $^{\circ}$ C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V and O <sub>Load</sub> =10K $\Omega$ //10pF.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	T <sub>A</sub> =Room ambient.
Power Supply	Operating Current			1.5	mA	@25 $^{\circ}$ C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, O <sub>Load</sub> =10K $\Omega$ //10pF.
	Supply Voltage	2.66	3.3	3.43	V	
Voltage Control	Frequency tuning range	-15		-9	$\times 10^{-6}$	V <sub>c</sub> = 0.5V. measurement referenced to V <sub>c</sub> =1.5V.
		-1.0		+1.0	$\times 10^{-6}$	V <sub>c</sub> =1.5V. measurement referenced to Exactly 19.20MHz.
		+9		+15	$\times 10^{-6}$	V <sub>c</sub> =2.5V. measurement referenced to V <sub>c</sub> =1.5V.
	Slope	Positive				
	Input Impedance	500			K $\Omega$	



Phase Noise	Phase Noise			-110	dBc/Hz	100Hz
				-130		1KHz
				-140		10KHz
				-145		100KHz
Environmental Conditions	Operable Temperature	-40		+85	°C	
	Storage Temperature	-40		+85	°C	
	ESD Level	Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.				
	Moisture Sensitivity Level	Level 2.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z) .IEC 68-2-06 Test Fc.				
Shock	100g; 6ms; half sine wave (3 times for each 3 directions X , Y , Z ),IEC 68-2-27 Test Ea/Severity 50A.					

## 2、Mechanical Structure(mm)

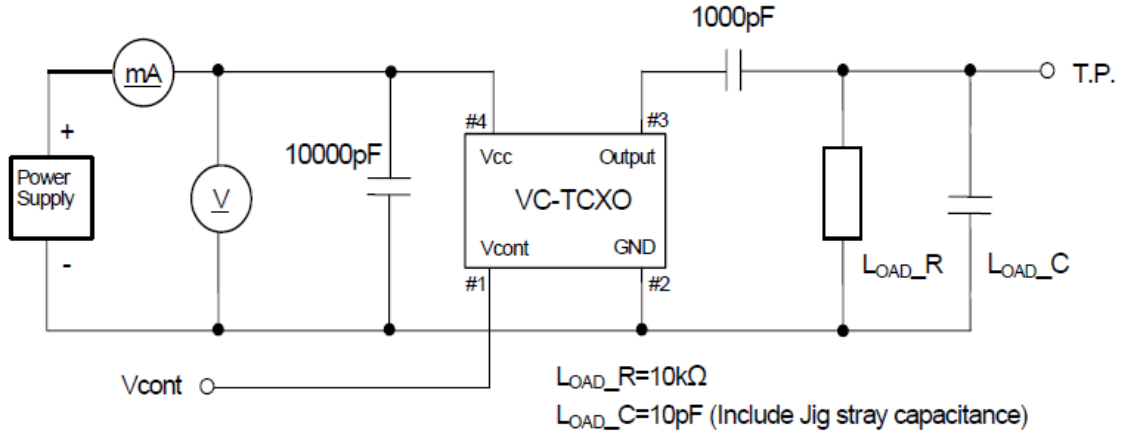


**Note1:** Tolerance  $\pm 0.15$ mm without mark

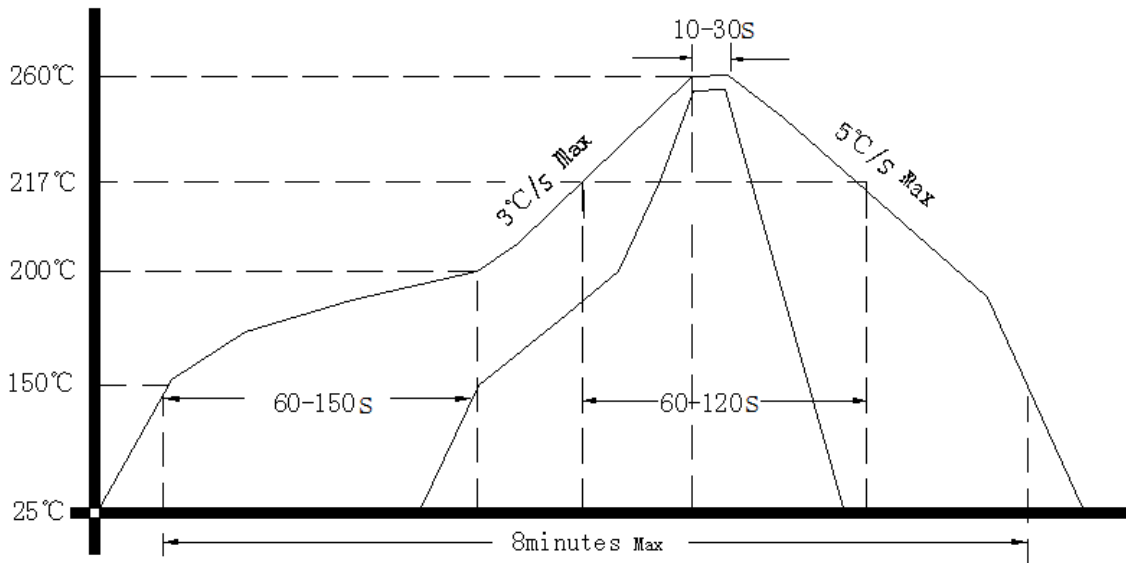
**Note2:** Referential Weight 0.03g



### 3、 Test Circuit



### 4、 Reflow Soldering Curve (RoHS)



### 5、 Package: Tape & Reel (mm)

