

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N :           **T32-F513-16.384MHz**          

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

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.08.31			

## 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>	2020.04.20
1.1	The "Current Consumption" changed	<i>Amway</i>	2023.08.31



## 1. Electrical Parameters

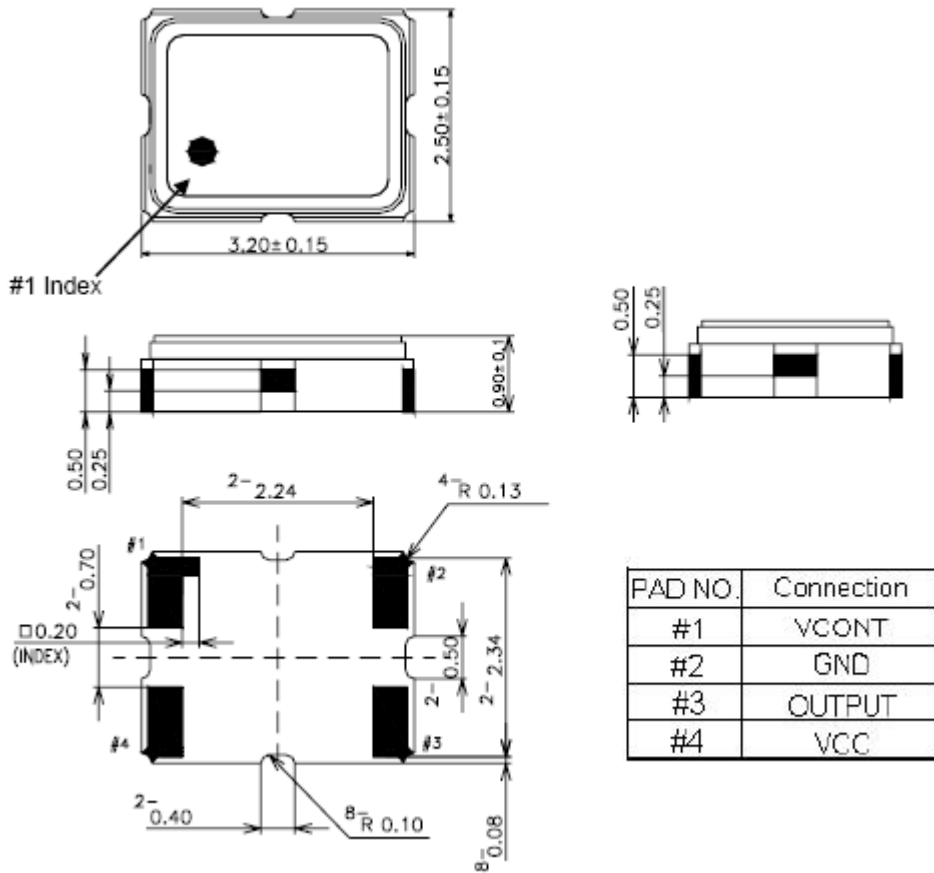
MODEL: T32-F513-16.384MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	16.384			MHz	
	Output Waveform	Clipped Sine Wave				
	V <sub>p-p</sub>	0.6			V	
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	× 10 <sup>-6</sup>	T <sub>A</sub> varied from -30 to 85°C, measurement referenced to frequency observed with f <sub>ref</sub> =(f <sub>max</sub> +f <sub>min</sub> )/2, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, O <sub>load</sub> =10KΩ//10pF, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	× 10 <sup>-6</sup>	Measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	× 10 <sup>-6</sup>	measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>cc</sub> varied from 3.13V to 3.47V, and O <sub>Load</sub> =10KΩ//10pF.
	Frequency Tolerance vs. Load	-0.2		+0.2	× 10 <sup>-6</sup>	2% load change measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, O <sub>Load</sub> =10KΩ//10pF.
	Aging Tolerance Per Day	-0.02		+0.02	× 10 <sup>-6</sup>	T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	× 10 <sup>-6</sup>	
Power Supply	Current Consumption			2	mA	@25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.5V, O <sub>load</sub> =10KΩ//10pF.
	Supply Voltage	3.13	3.3	3.47	V	
Voltage Control	Frequency tuning range			-10	× 10 <sup>-6</sup>	V <sub>c</sub> =0.5V. measurement referenced to V <sub>c</sub> =1.5V.
		-1		+1	× 10 <sup>-6</sup>	V <sub>c</sub> =1.5V. measurement referenced to Exactly 16.384MHz.
		+10			× 10 <sup>-6</sup>	V <sub>c</sub> =2.5V. measurement referenced to V <sub>c</sub> =1.5V.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	



Phase Noise	Phase Noise @25°C		-90	-85	dBc/Hz	10Hz
			-115	-110		100Hz
			-138	-133		1KHz
			-150	-145		10KHz
			-152	-147		100KHz
			-155	-150		1MHz
Environmental Conditions	Operable Temperature	-30		+85	°C	
	Storage Temperature	-55		+105	°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.					
Full Package Storage	Relative humidity (%)	20%~70%				
	Temperature (°C)	-10~35°C				



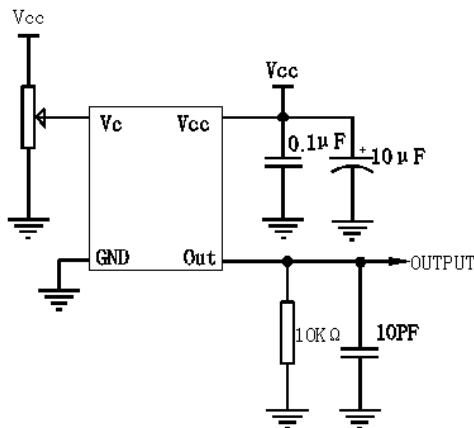
## 2. Mechanical Structure(mm)



**Note1:** Tolerance  $\pm 0.1$ mm without mark

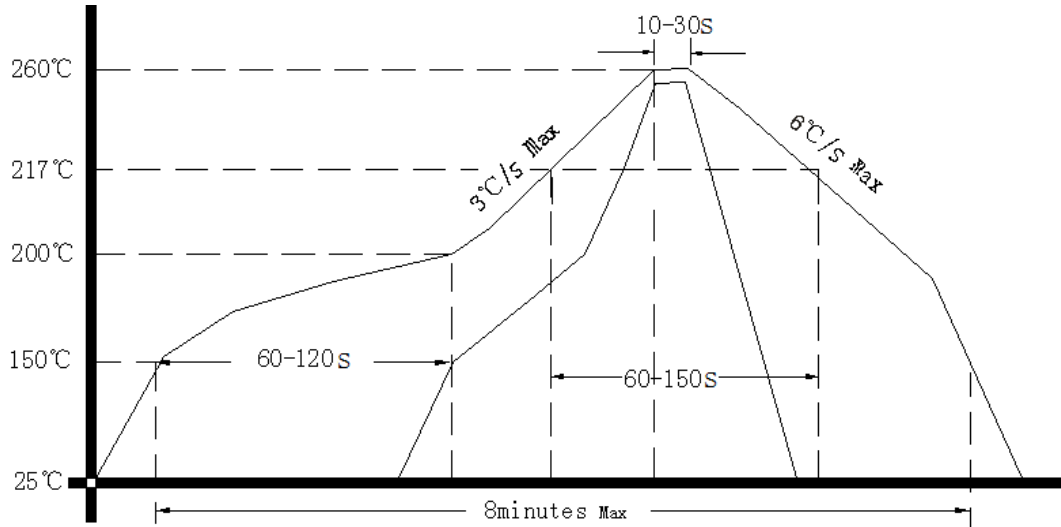
**Note2:** Referential weight 0.02g

## 3. Test circuit





#### 4. Reflow Soldering Curve (RoHS)



#### 5. Package: Tape & Reel (mm)

