

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

# DATASHEET

Standard:     **T22-S513-12.80MHz**    

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

Plot			The Label
Drew	Audited	Approved	
Date: 2022.08.10			Stamp, please! Thanks!

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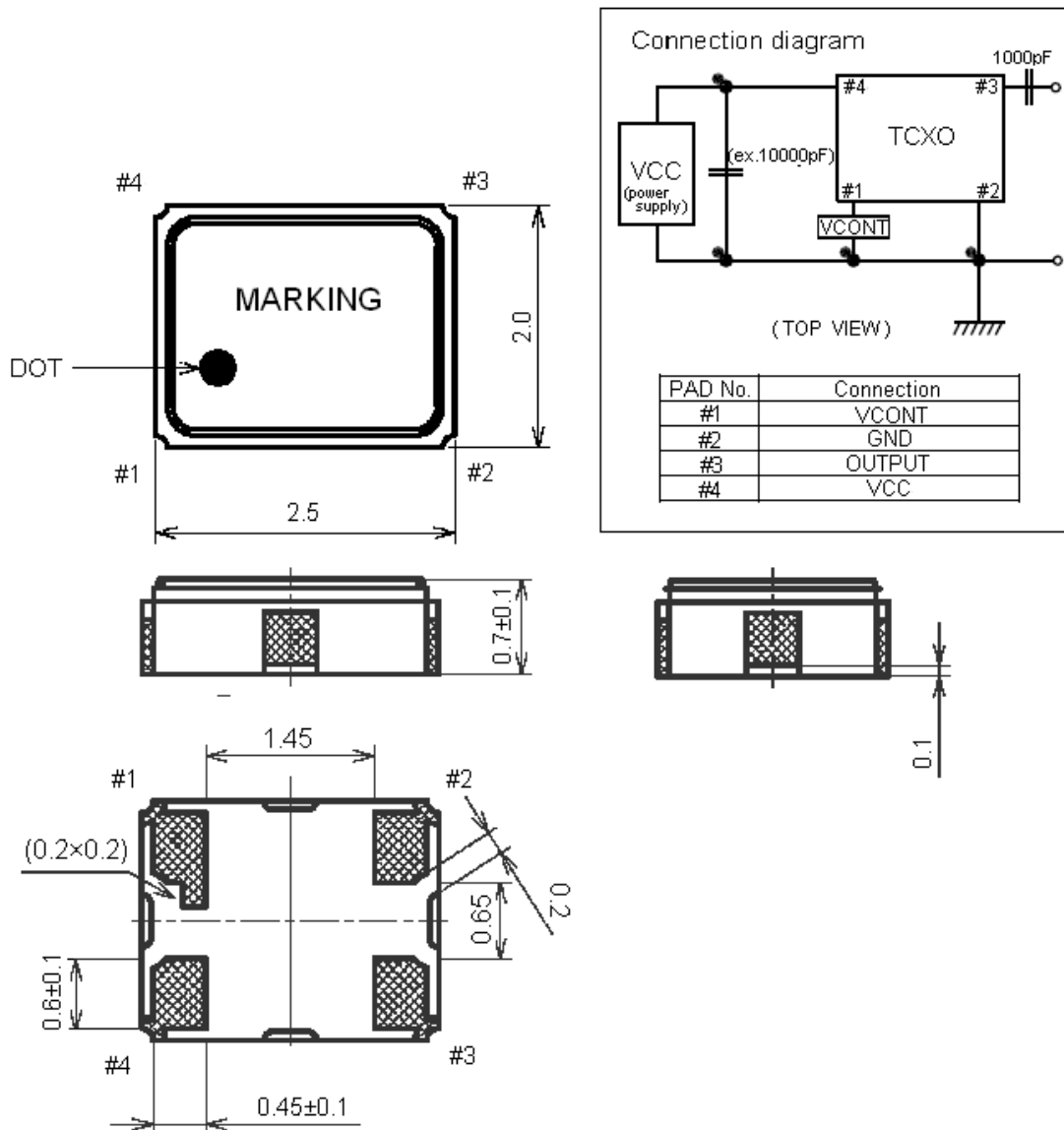
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## Electrical Parameters

MODEL: T53-S513-12.80								
No.	Parameters		SYM.	Electrical Spec.				Notes
				Min.	Typ.	Max.	Units	
1	Nominal Frequency		FL	12.80			MHz	
2	Supply Voltage		VDD	2.85	3.0	3.15	V	
3	Current Drain		-	-	-	1.5	mA	
4	Output Level		-	0.8	-	-	Vp-p	
5	Output Waveform		-	Clipped Sine wave			-	
6	Standard Output Load		-	1K $\Omega$ /5pF			-	
7	Frequency Stability	vs. Tolerance	-	-1.5	-	+1.5	$\times 10^{-6}$	at +25 $\pm$ 2 $^{\circ}$ C, 2hours or more at room ambient after 2 times reflow, based on nominal frequency
8		vs. Temperature	-	-0.5	-	+0.5	$\times 10^{-6}$	T <sub>A</sub> varied from -30 $^{\circ}$ C to +85 $^{\circ}$ C, Ref. to Frequency T <sub>A</sub> =25 $^{\circ}$ C
			-	-2	-	+2	$\times 10^{-6}$	T <sub>A</sub> varied from -40 $^{\circ}$ C to -30 $^{\circ}$ C, Ref. to Frequency T <sub>A</sub> =25 $^{\circ}$ C
9		vs. Load	-	-0.2	-	+0.2	$\times 10^{-6}$	$\pm$ 10% load change measurement referenced to frequency observed with T <sub>A</sub> = 25 $^{\circ}$ C, V <sub>cc</sub> =3.0V, O <sub>Load</sub> = 1K $\Omega$ /5pF .
10		vs. Supply Voltage	-	-0.2	-	+0.2	$\times 10^{-6}$	V <sub>cc</sub> varied from 2.85V to 3.15V
11	Operating Temperature Range		-	-40	~	+85	$^{\circ}$ C	
12	Storage Temperature		-	-40	~	+85	$^{\circ}$ C	
13	Start Up Time		-	-	-	2	ms	@90% of final Vout level
14	Aging		-	-1	-	+1	$\times 10^{-6}$	over 1st Year
15	Frequency Tuning Range		-	-15	-	-10	$\times 10^{-6}$	V <sub>c</sub> = 0.5 V. measurement referenced to V <sub>c</sub> =1.5V
16			-	+10	-	+15	$\times 10^{-6}$	V <sub>c</sub> =2.5V.measurement referenced to V <sub>c</sub> =1.5V
17	Linearity		-	-	-	10	%	
18	Slope			Positive				
19	Input Impedance		-	500	-	-	K $\Omega$	
20	Phase Noise	@ 10Hz Offset	-	-	-	-88	dBc/Hz	
21		@ 100Hz Offset	-	-	-	-114		
22		@ 1KHz Offset	-	-	-	-135		
23		@ 10KHz Offset	-	-	-	-145		
24		@ 100KHz Offset	-	-	-	-145		
25		@ 1MHz Offset	-	-	-	-150		

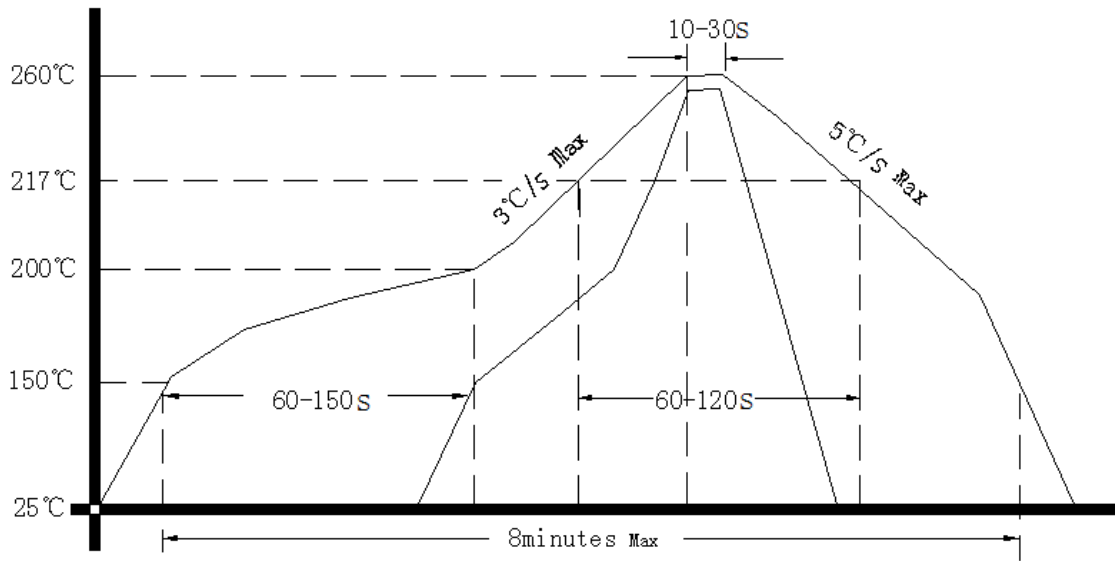
26	ESD Level	Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.
27		Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.
28	Moisture Sensitivity Level	Level 2.
29	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z ) .IEC 68-2-06 Test Fc.
30	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  $\pm 0.1$  mm

### 3、Reflow Soldering Curve (RoHS)



### 4、Package: Tape & Reel (mm)

