Travelling Merchant:_____

DATASHEET

Standard: **T53-B513-19.20MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Carry.Wang	Jason Zhao	
Date: 2020.11.12			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	2020.11.12

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1. Electrical Parameters

MODEL： T53-B513-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			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 ±1.5ppm of final frequency
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1.5		+1.5	$\times 10^{-6}$	T_A varied from -40℃to 90℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, V_c=1.5V, O_{load}=10KΩ//10pF, temperature variable speed less than 2℃per minute.
	Nominal Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	At Shipping,Ref. to Nominal Frequency
		-1.5		+1.5	$\times 10^{-6}$	After 2 times reflow (T_A =25℃),leave after Reflow in 2h or more at room ambient
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 2.97V to 3.63V, V_c=1.5V and O_{Load}=10KΩ//10pF.
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.5V and O_{Load}=10KΩ//10pF .
	Aging Tolerance 10 Year	-1		+1	$\times 10^{-6}$	T_A=25℃, V_{cc}=3.3V, V_c=1.5V and after 1h of operation.
Power Supply	Supply Current			1.5	mA	@25℃, V_{cc}=3.3V, V_c=1.5V, O_{Load}=10KΩ//10pF.
	Supply Voltage	2.97	3.30	3.63	V	

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Voltage Control	Frequency tuning range	-21.5		-19.5	$\times 10^{-6}$	V_c=0.5V. measurement referenced to V_c=1.5V.
		-1.5		+1.5	$\times 10^{-6}$	V_c=1.5V. measurement referenced to Exactly 19.20MHz.
		+19.5		+21.5	$\times 10^{-6}$	V_c=2.5V. measurement referenced to V_c=1.5V.
	Slope	Positive				
	Input Impedance	500			KΩ	
Phase Noise	Phase Noise @25℃			-110	dBc/Hz	100Hz
				-125		1KHz
				-135		10KHz
Environmental Conditions	Operable Temperature	-40		+90	℃	
	Storage Temperature	-40		+90	℃	
	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 (℃)	-10~35℃				

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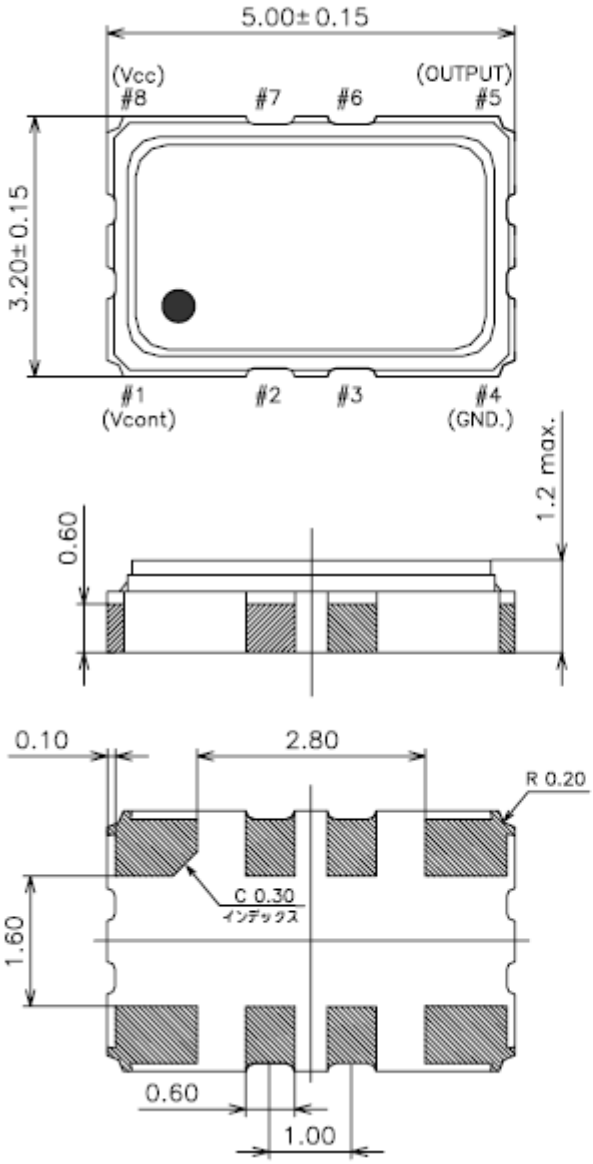
2. Mechanical Structure(mm)



Pin Connections

Pin No.	Connection
#1	VCONT
#2	N.C.
#3	N.C.
#4	GND
#5	OUTPUT
#6	N.C.
#7	N.C.
#8	Vcc

Note1: Tolerance ±0.15mm without mark

Note2: Referential weight 0.05g

Note3: NC is not connect

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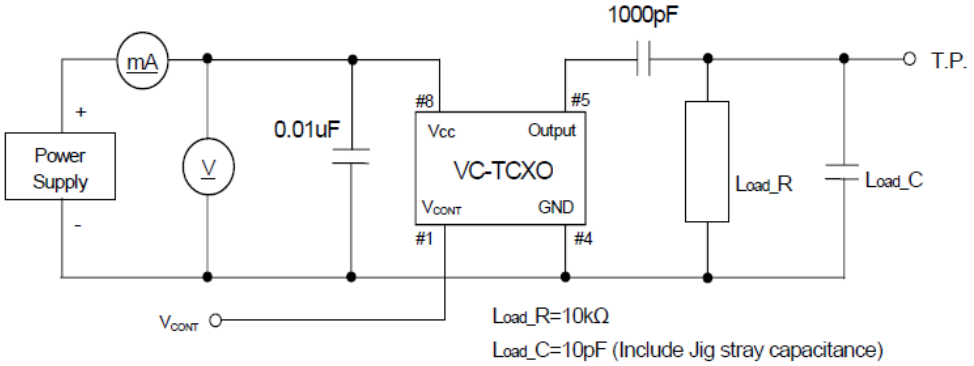
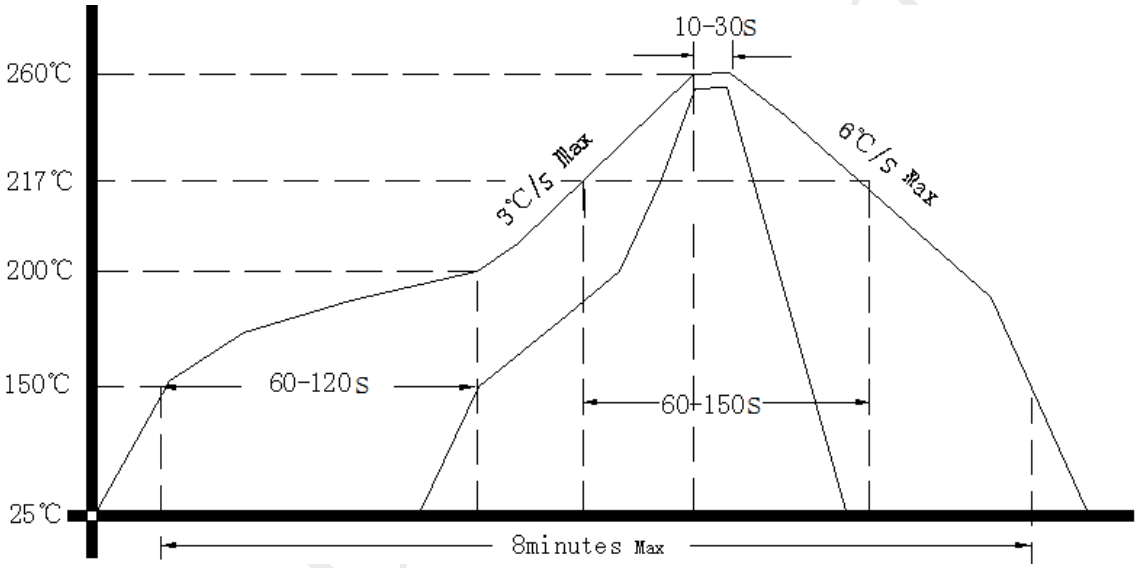
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)