

Travelling Merchant: _____

DATASHEET

Standard: **T53-A513-19.20MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2020.03.12			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2020.03.12

DAPU

Confidential



1. Electrical Parameters

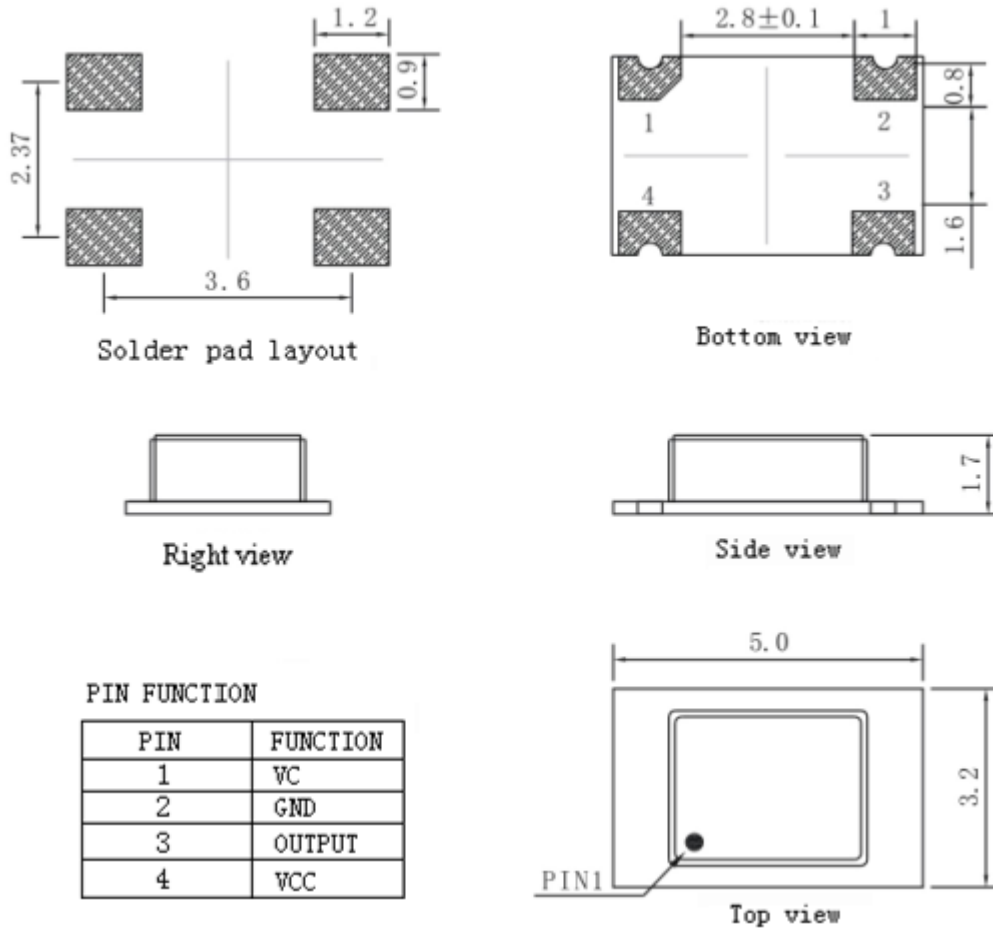
MODEL: T53-A513-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			V	
	Duty Cycle	40		60	%	
	Start-up Time vs. Frequency			5	ms	Within $\pm 1.0\text{ppm}$
	Start-up Time vs. Output Level			5	ms	To 90% of Vp-p
	Load	10K Ω //10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.25		+0.25	$\times 10^{-6}$	T _A varied from -40°C to 85°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V _{cc} =3.3V, V _c =1.5V, O _{load} =10K Ω //10pF, temperature variable speed less than 2°C per minute.
	Nominal Frequency Tolerance	-2		+2	$\times 10^{-6}$	Measurement referenced to frequency observed with T _A =25°C, V _{cc} =3.3V, V _c =1.5V within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.01		+0.01	$\times 10^{-6}$	measurement referenced to frequency observed T _A =25°C, V _{cc} varied from 3.15V to 3.45V, V _c =1.5V and O _{Load} =10K Ω //10pF.
	Frequency Tolerance vs. Load		± 5		$\times 10^{-9}$	2% load change measurement referenced to frequency observed with T _A =25°C, V _{cc} =3.3V, V _c =1.5V and O _{Load} =10K Ω //10pF.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	T _A =25°C, V _{cc} =3.3V, V _c =1.5V and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
Power Supply	Supply Current			3	mA	@25°C, V _{cc} =3.3V, V _c =1.5V, O _{Load} =10K Ω //10pF.
	Supply Voltage	3.15	3.30	3.45	V	



Voltage Control	Frequency tuning range	-15		-5	$\times 10^{-6}$	$V_c=0.5V$. measurement referenced to $V_c=1.5V$.
		-2		+2	$\times 10^{-6}$	$V_c=1.5V$. measurement referenced to Exactly 19.20MHz.
		+5		+15	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to $V_c=1.5V$.
	Linearity			10	%	
	Slope	Positive				
Input Impedance	100				K Ω	
Phase Noise	Phase Noise @25°C			-60	dBc/Hz	1Hz
				-89		10Hz
				-111		100Hz
				-124		1KHz
				-133		10KHz
RMS Phase Jitter	RMS Phase Jitter			1.7	ps	From 10Hz to 1MHz offset
Environmental Conditions	Operable Temperature	-40		+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 3.				
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)

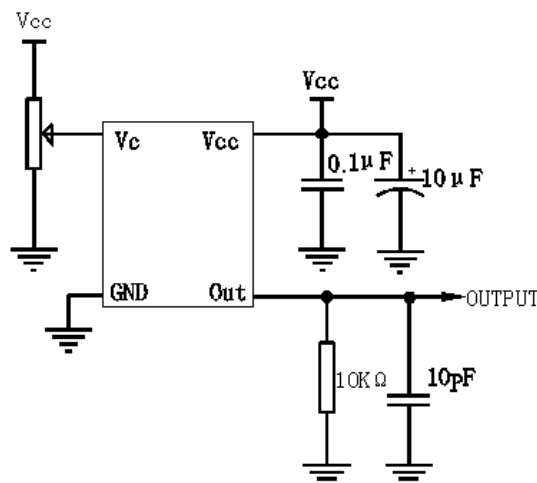


Note1: Tolerance $\pm 0.2\text{mm}$ without mark

Note2: Referential weight 0.05g

Note3: NC is not connect

3. Test Circuit





4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

