Travelling Merchant:_____

DATASHEET

Standard: **T53-1801-38.88MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Carry.Wang	Jason Zhao	
Date: 2020.07.23			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	2020.07.23

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1. Electrical Parameters

MODEL： T53-1801-38.88MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		38.88		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.33	V	V_{cc}=3.3V, O_{load}=15 pF
	Output High Voltage	2.97			V	V_{cc}=3.3V, O_{load}=15 pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time （10%~90%）			5	ns	@25℃
	Start up time			10	ms	
	Spurious Suppression			5	dBc	
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	T_A varied from -40℃ to 105℃, measurement referenced to frequency observed with T_A=25℃, V_{cc}= 3.3V, $O_{load=}$ 15pF, temperature variable speed less than 2℃per minute.
	Nominal Frequency Tolerance	-1.5		+1.5	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V, and O_{Load}= 15pF .
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with T_A= 25℃, V_{cc}=3.3V, O_{Load}= 15pF
	Frequency Slope	-0.05		+0.05	$\times 10^{-6}$/℃	T_A varied from-40℃ to 105℃, Temperature variable speed 2℃per minute.
	G Sensitivity		2		$\times 10^{-9}$/G	Gamma vector of all three axes from 30Hz to 1500Hz.
	Short Term Frequency Stability			0.1	$\times 10^{-9}$/S	No temperature change.
				2	$\times 10^{-9}$/S	The temperature changes by 12℃ per minute
	Overall Tolerance	-7		+7	$\times 10^{-6}$	Including 10 years aging at 85℃.
Power Supply	Current Consumption			10	mA	@25℃, V_{cc}=3.3V, O_{load}=15pF.
	Supply Voltage	3.135	3.3	3.465	V	

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Phase Noise	Phase Noise			-53	dBc/Hz	1Hz
				-90		10Hz
				-121		100Hz
				-130		1KHz
				-155		10KHz
				-155		40 KHz
				-157		100KHz
				-157		1MHz
Jitter	Jitter			0.5	ps-rms	10Hz -100KHz
Environmental Conditions	Operable Temperature	-40		+105	℃	
	Storage Temperature	-55		+125	℃	
	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.				

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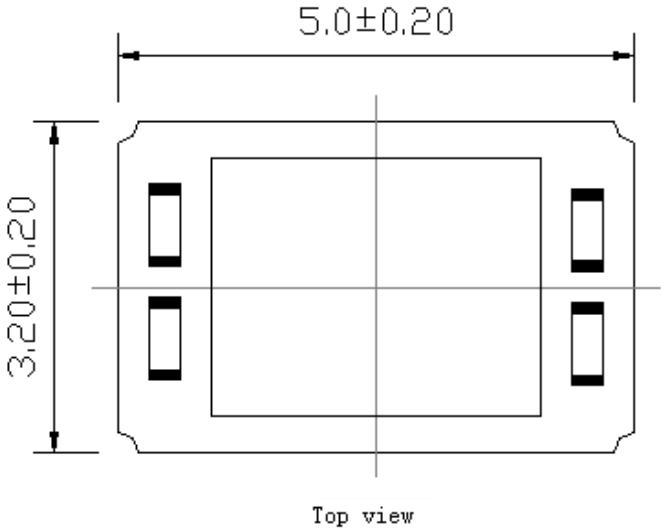
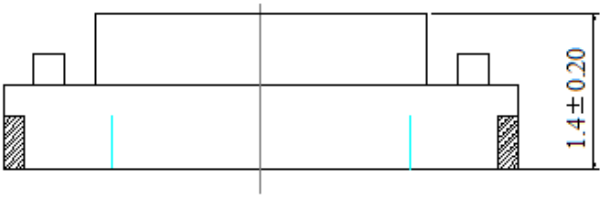
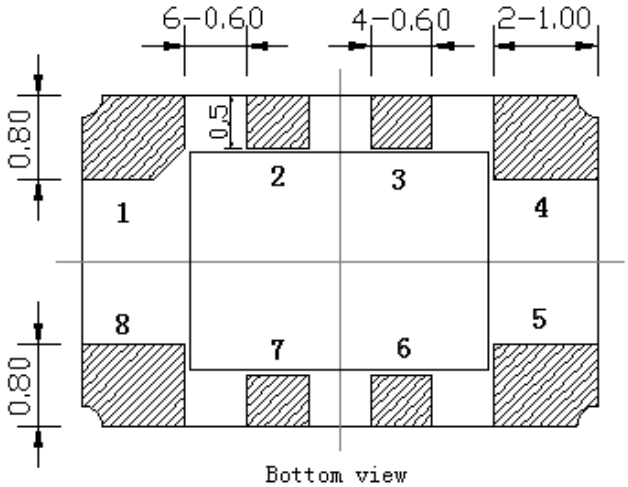
2. Mechanical Structure(mm)



Top view



Side view



Bottom view

PIN FUNCTION

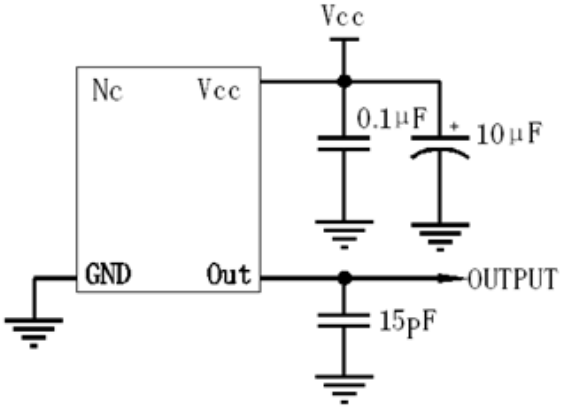
PIN	NOTATION	FUNCTION
1	NC	Not Connect
2	NC	Not Connect
3	Tri-state	Enable/Disable
4	GND	GND
5	OUTPUT	RF Output
6,7	NC	Not Connect
8	VCC	Supply Voltage

Note1: Tolerance ±0.20mm without mark

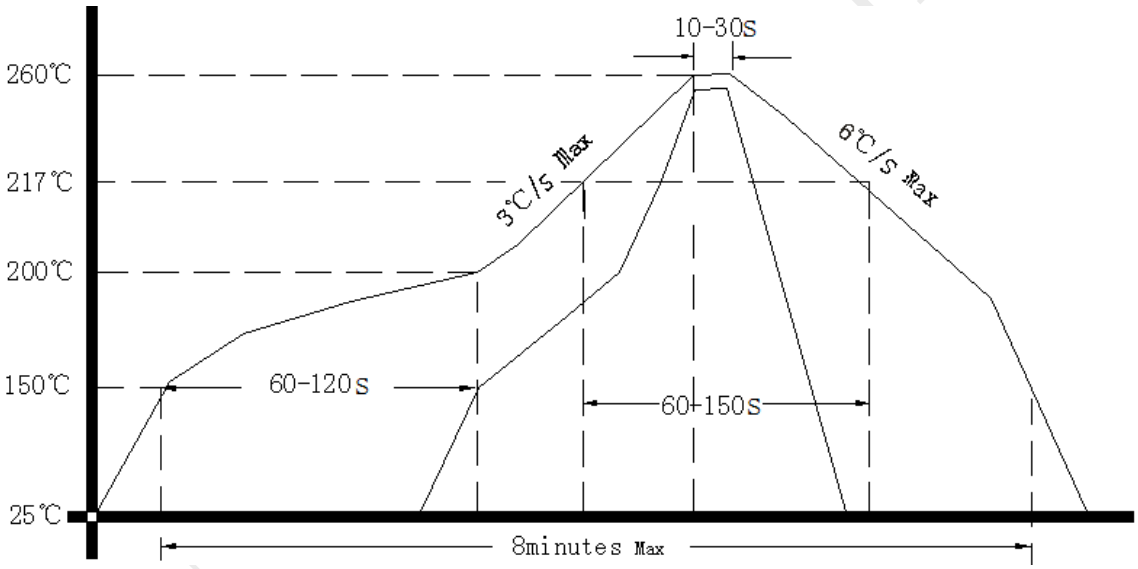
Note2: Referential weight 0.05g

Note3: The Tri-state Enable is "1"or "open", Disable is "0"

3. Test circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)