Travelling Merchant:_____

DATASHEET

Standard: **T53-Q313-26.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Carry.Wang	Jason Zhao	
Date: 2020.10.19			Stamp, please! Thanks!

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2020.10.19

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1. Electrical Parameters

MODEL： T53-Q313-26.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		26.00		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.1Vcc	V	V_{cc}=3.3V, O_{load}=15 pF
	Output High Voltage	0.9Vcc			V	V_{cc}=3.3V, O_{load}=15 pF
	Duty Cycle	45		55	%	@50%
	Start-up Time			15	ms	90% amplitude
	Rise / Fall Time （10%~90%）			8	ns	@25℃
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.1		+0.1	$\times 10^{-6}$	T_A varied from -40℃ to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}= 3.3V, V_c=1.35V, $O_{load=}$ 15pF, temperature variable speed less than 2℃per minute.
	Nominal Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, V_c=1.35V within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.25		+0.25	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V, V_c=1.35V and O_{Load}= 15pF .
	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=1.35V, O_{Load}= 15pF
	Reflow Shift			±0.5	$\times 10^{-6}$	Pre to post reflow Δ F (measured ⩾ 60 minute safter reflow)
	Slope Over Temperature			±0.06	$\times 10^{-6}$/℃	Δ F/ΔT
	Acceleration Sensitivity		2		$\times 10^{-9}$/g	Gamma vector, 3-axes, 30-1500Hz
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	T_A=25℃, V_{cc}=3.3V, V_c=1.35V and after 1h of operation.
	Aging Tolerance 10 Year	-3		+3	$\times 10^{-6}$	
Power Supply	Current Consumption			8	mA	@25℃, V_{cc}=3.3V, V_c=1.35V, O_{load}=15pF.
	Supply Voltage	3.135	3.3	3.465	V	

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Tri-state Control	Tri-state control (pin 6), input level low (VIL)			0.2Vcc	V	Device disabled (output in high impedance state)
	Tri-state control (pin 6), input level high (VIH)	0.6Vcc			V	Device enabled (operating)
Voltage Control Characteristics	Frequency Tuning Range	-10		-5	$\times 10^{-6}$	V_c=0V. measurement referenced to V_c=1.35V.
		-1		+1	$\times 10^{-6}$	V_c=1.35V. measurement referenced to Exactly 26.00MHz.
		+5		+10	$\times 10^{-6}$	V_c=2.7V. measurement referenced to V_c=1.35V.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise @25℃		-60		dBc/Hz	1Hz
			-90			10Hz
			-120			100Hz
			-145			1KHz
			-150			10KHz
			-155			100KHz
			-155			1MHz
Environmental Conditions	Operable Temperature	-40		+85	℃	
	Storage Temperature	-55		+105	℃	
	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.				

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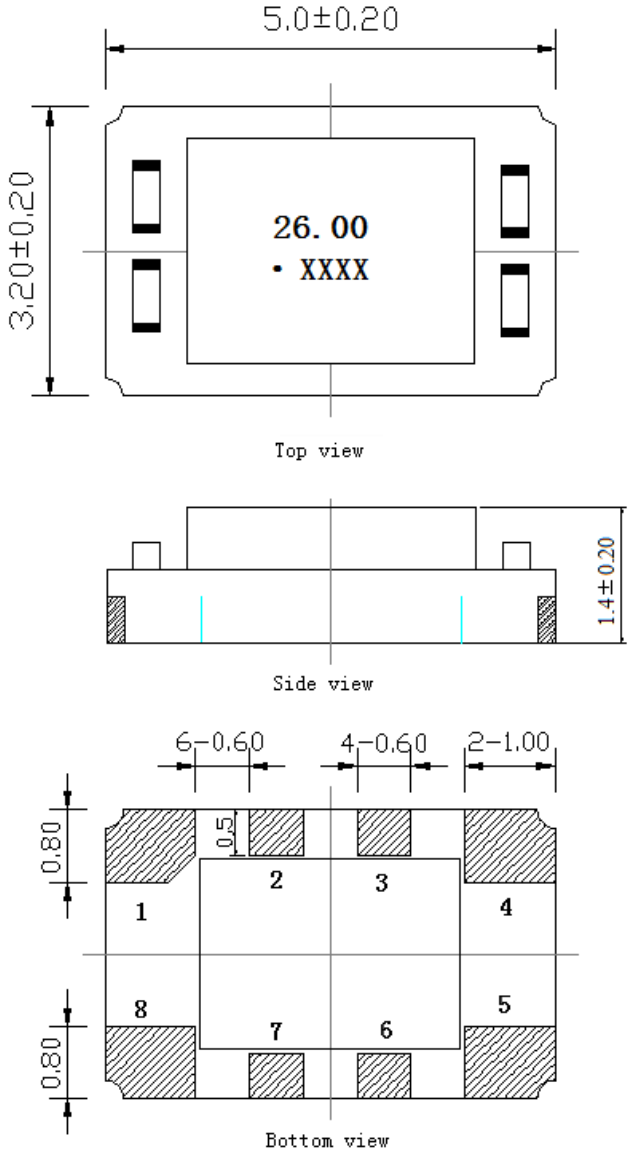
2. Mechanical Structure(mm)



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
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

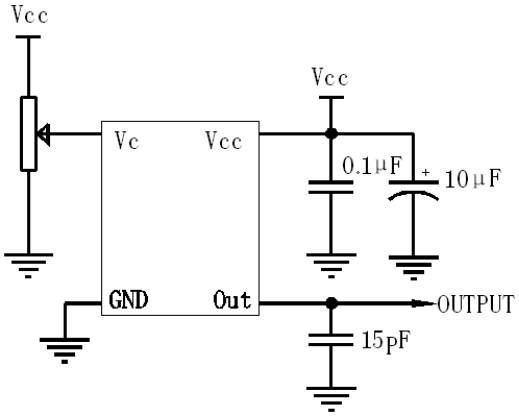
Note2: Referential weight 0.05g

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

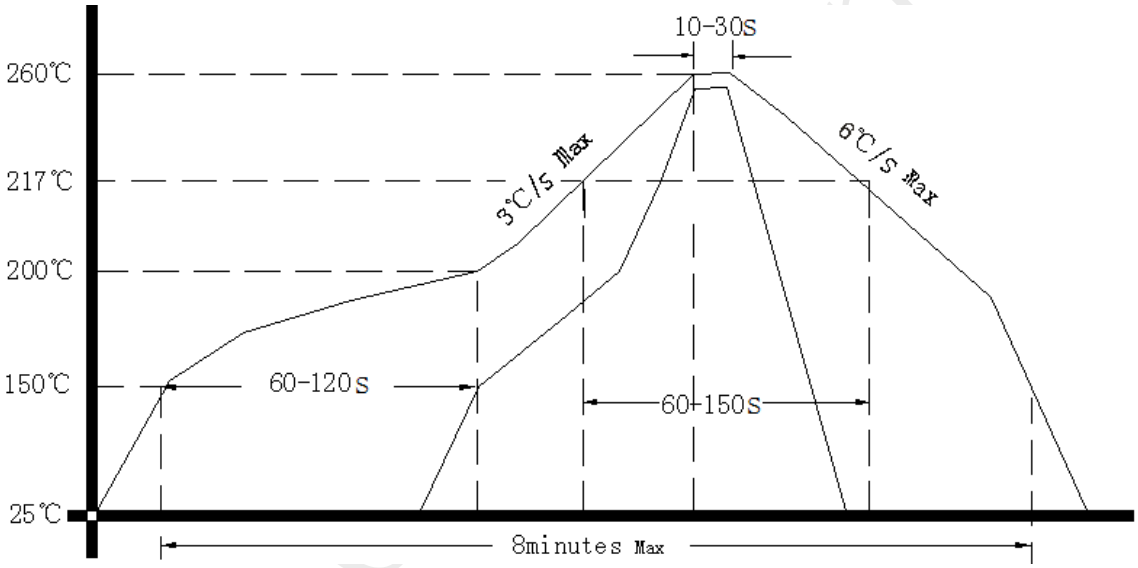
Note4: The first two xx representative: year

After two xx representative: week

3. Test circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)