Travelling Merchant:_____

DATASHEET

Standard: **T53-M583-19.20MHz**
P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Carry . Wang	Jason zhao	
Date: 2022.12.12			

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	2021.07.14
1.1	The “marking”changed	Amway	2022.09.19
1.2	Add “Note3”	Amway	2022.12.12

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1. Electrical Parameters

MODEL： T53-M583-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			V	
	Start-up time			1	ms	Time taken for output to reach 90% of specified output level.
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.25		+0.25	$\times 10^{-6}$	T_A varied from -10℃to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=2.85V, V_c=1.5V, O_{load}=10KΩ//10pF, temperature variable speed less than 1℃per minute.
	Frequency slope	-0.05		+0.05	$\times 10^{-6}$/℃	Minimum of one frequency reading every 2℃ over the operating temperature range.
	Nominal Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with TA=25℃±2℃, V_{cc}=2.85V, V_c=1.5V within 30 days after ex-works.
	Reflow Shift	-1		+1	$\times 10^{-6}$	Two consecutive reflows as per attached profile after 2 hours relaxation at 25℃.
	Frequency Tolerance vs. Supply Voltage	-0.05		+0.05	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 2.71V to 2.99V, V_c=1.5V and O_{Load}=10KΩ//10pF.
	Frequency Tolerance vs. Load	-0.05		+0.05	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=2.85V, V_c=1.5V and O_{Load}=10KΩ//10pF .
	Aging Tolerance 24 hours	-0.02		+0.02	$\times 10^{-6}$	T_A=25℃, V_{cc}=2.85V, V_c=1.5V and after 1h of operation.
	Aging Tolerance 1 month	-0.2		+0.2	$\times 10^{-6}$	
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
	Aging Tolerance 3 Years	-2		+2	$\times 10^{-6}$	

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Power Supply	Supply Current			3.5	mA	@25℃, V_{cc}=2.85V, V_c=1.5V, O_{Load}=10KΩ//10pF.
	Supply Voltage	2.71	2.85	2.99	V	
Voltage Control	Frequency tuning range	-10		-4.5	$\times 10^{-6}$	V_c=0.5V. measurement referenced to V_c=1.5V.
		-1		+1	$\times 10^{-6}$	V_c=1.5V. measurement referenced to Exactly 19.20MHz.
		+4.5		+10	$\times 10^{-6}$	V_c=2.5V. measurement referenced to V_c=1.5V.
	Linearity			10	%	
	Slope	Positive				
	Gain transfer(Kv)		6		ppm/V	
Phase Noise	Phase Noise		-68		dBc/Hz	1Hz
			-95			10Hz
			-118			100Hz
			-141			1KHz
			-155			10KHz
			-156			100KHz
Environmental Conditions	Operable Temperature	-10		+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.				
Full Package Storage	Relative humidity (%)	20%～70%				
	Temperature (℃)	-10~35℃				

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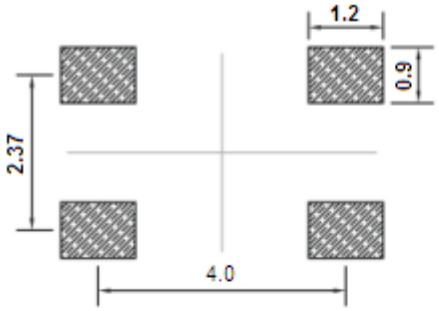
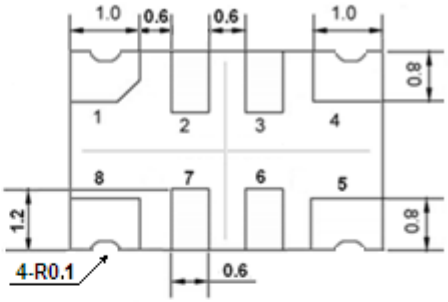
2. Mechanical Structure(mm)



Solder pad layout



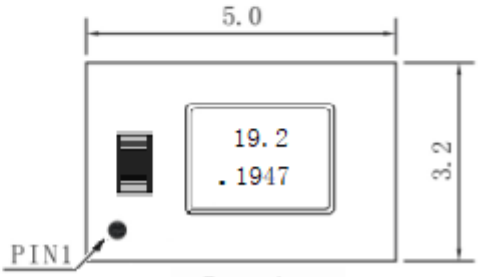
Bottom view

Right view

Side view

PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2, 3	NC	Not Connect
4	GND	GND
5	OUTPUT	RF Output
6, 7	NC	Not Connect
8	VCC	Supply Voltage



Top view

Note1: Tolerance ±0.2mm without mark

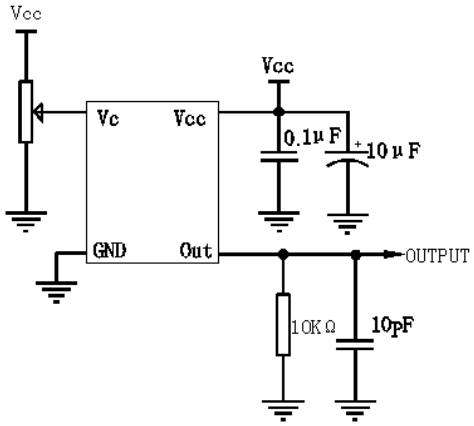
Note2: Referential weight 0.05g

Note3: The marks on components are supplier's product information:

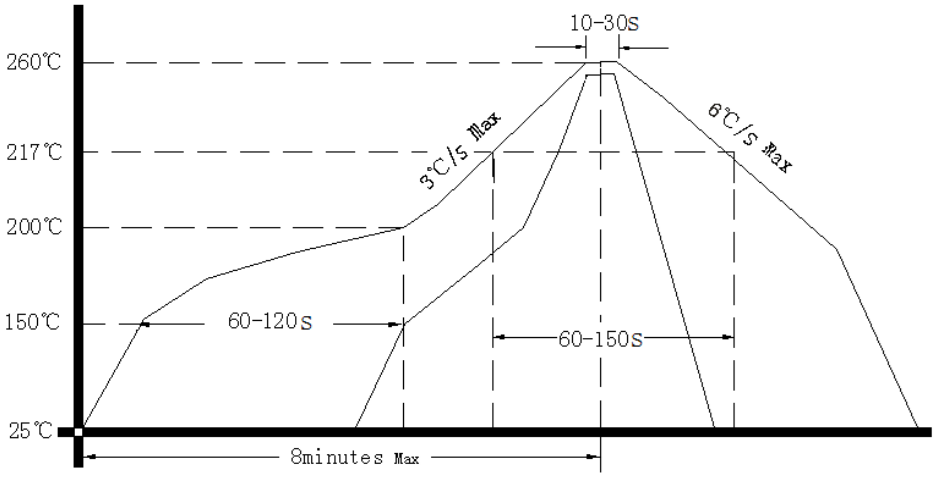
Frequency code is first 3 digits of nominal frequency (19.20MHz showed 19.2)

The first two digits represent the year, and the last two digits represent the week

3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)