Travelling Merchant: A008

DATASHEET

Standard: **T53-0802-20.00MHz**

P/N:

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Carry.Wang	Jason Zhao	
Date: 2024.01.31			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	2020.10.15
1.1	The “Mechanical Structure” changed	Amway	2020.12.01
1.2	The “ESD Level” “Mechanical Structure” “Reflow Soldering Curve” “Package: Tape & Reel” changed	Amway	2023.02.16
1.3	The “Mechanical Structure” “Phase Noise” changed	Amway	2023.04.11
1.4	The “Mechanical Structure” changed	Amway	2023.09.11
1.5	The “Mechanical Structure” changed	Amway	2024.01.31

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1. Electrical Parameters

MODEL： T53-0802-20.00MHz

Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		20.00		MHz	
	Output Waveform		Clipped Sine Wave			
	Vp-p	0.8			V	
	Harmonics Level		-13		dBc	3rd
			-20		dBc	5th
	Start-up time			15	ms	90% amplitude
	Load		10KΩ//10pF			
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	×10-6	T_A varied from -40℃ to 85℃, measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, O_{load}=10KΩ//10pF, temperature variable speed less than 2℃per minute.
	Nominal Frequency Tolerance	-1		+1	×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		±0.025		×10-6	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V and O_{Load}=10KΩ//10pF.
	Frequency Tolerance vs. Load		±0.05		×10-6	10% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V, and O_{Load}=10KΩ//10pF .
	Aging Tolerance 1 Year	-1		+1	×10-6	T_A=25 ℃ , V_{cc}=3.3V and after 1h of operation.
	Aging Tolerance 10 Year	-5		+5	×10-6	
	Acceleration Sensitivity		2		×10-9/g	Gamma vector,3-axes,30-1500Hz.
	Solpe over temperature	-0.1		+0.1	×10-6/℃	ΔF/ΔT
	Reflow Shift	-1		+1	×10-6	Pre to post reflow ΔF(measured ≥ 60 minutes after reflow)
Power Supply	Operating Current			4	mA	@25℃, V_{cc}=3.3V, O_{Load}=10KΩ//10pF.
	Supply Voltage	3.13	3.3	3.47	V	

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Phase Noise	Phase Noise @25℃		-68		dBc/Hz	1Hz
			-95			10Hz
			-122			100Hz
			-142			1KHz
			-152			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 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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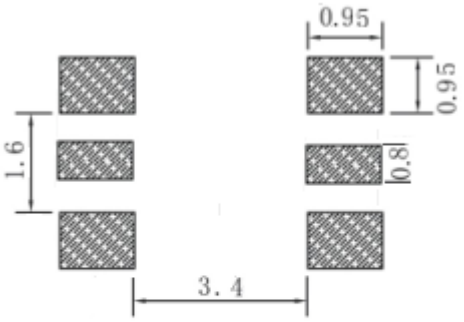
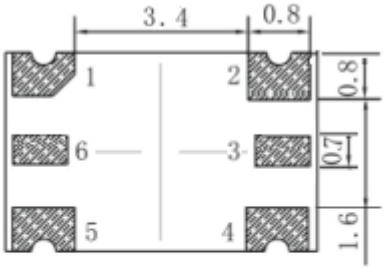
2. Mechanical Structure(mm)



Solder pad layout



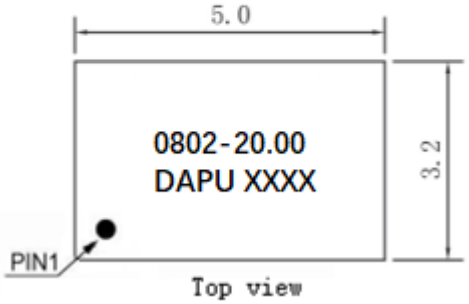
Bottom view

Right view

Side view

PIN FUNCTION

PIN	NOTATION	FUNCTION
1	NC	Not Connect
2	GND	GND
3	NC	Not Connect
4	OUTPUT	RF Output
5	VCC	Supply Voltage
6	NC	Not Connect



Top view

Note1: Tolerance ±0.3mm without mark

Note2: Referential weight 0.05g

Note3: The first two xx representative: week
After two xx representative: year

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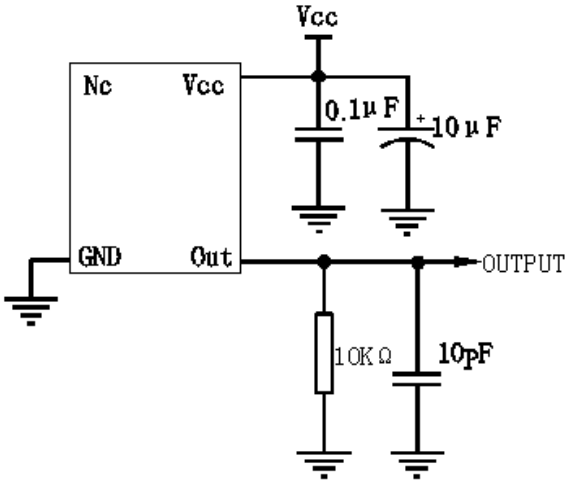
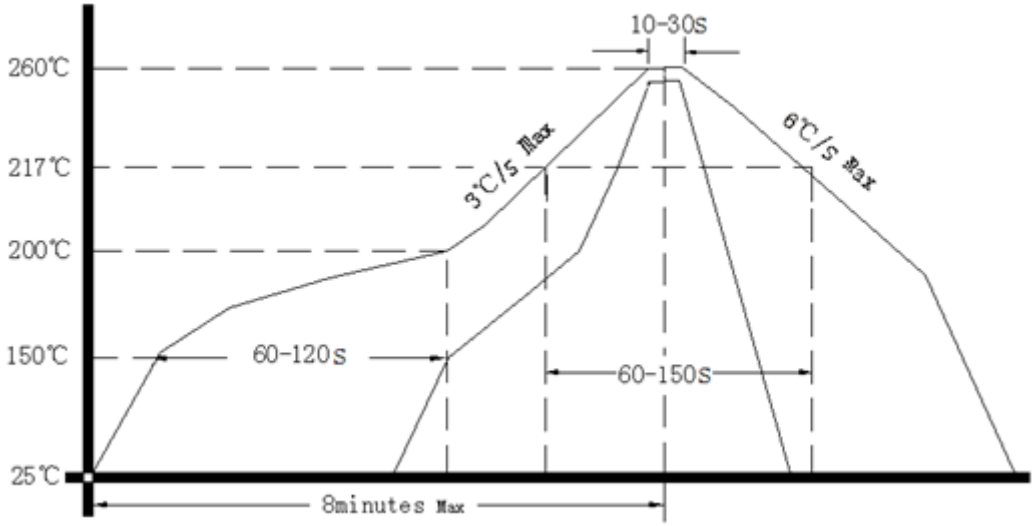
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)