

Travelling Merchant: _____

DATASHEET

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
<i>Amway,wei</i>	<i>Carry, Wang</i>	<i>Jason Zhao</i>	
Date: 2022.12.12			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2021.07.14
1.1	The "marking" changed	<i>Amway</i>	2022.09.19
1.2	Add "Note3"	<i>Amway</i>	2022.12.12



1. Electrical Parameters

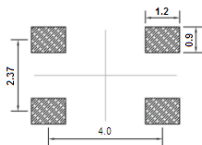
MODEL: T53-M583-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	Clipped Sine Wave				
	V _{p-p}	0.8			V	
	Start-up time			1	ms	Time taken for output to reach 90% of specified output level.
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.25		+0.25	× 10 ⁻⁶	T _A varied from -10°C to 85°C, 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°C per minute.
	Frequency slope	-0.05		+0.05	× 10 ⁻⁶ /°C	Minimum of one frequency reading every 2°C over the operating temperature range.
	Nominal Frequency Tolerance	-1		+1	× 10 ⁻⁶	Measurement referenced to frequency observed with T _A =25°C ± 2°C, V _{cc} =2.85V, V _c =1.5V within 30 days after ex-works.
	Reflow Shift	-1		+1	× 10 ⁻⁶	Two consecutive reflows as per attached profile after 2 hours relaxation at 25°C.
	Frequency Tolerance vs. Supply Voltage	-0.05		+0.05	× 10 ⁻⁶	measurement referenced to frequency observed T _A =25°C, 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	× 10 ⁻⁶	10% load change measurement referenced to frequency observed with T _A =25°C, V _{cc} =2.85V, V _c =1.5V and O _{load} =10KΩ//10pF.
	Aging Tolerance 24 hours	-0.02		+0.02	× 10 ⁻⁶	T _A =25°C, V _{cc} =2.85V, V _c =1.5V and after 1h of operation.
	Aging Tolerance 1 month	-0.2		+0.2	× 10 ⁻⁶	
	Aging Tolerance 1 Year	-1		+1	× 10 ⁻⁶	
Aging Tolerance 3 Years	-2		+2	× 10 ⁻⁶		



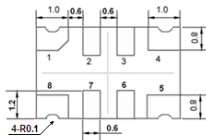
Power Supply	Supply Current			3.5	mA	@25°C, V _{cc} =2.85V, V _c =1.5V, O _{Load} =10KΩ/10pF.
	Supply Voltage	2.71	2.85	2.99	V	
Voltage Control	Frequency tuning range	-10		-4.5	× 10 ⁻⁶	V _c =0.5V. measurement referenced to V _c =1.5V.
		-1		+1	× 10 ⁻⁶	V _c =1.5V. measurement referenced to Exactly 19.20MHz.
		+4.5		+10	× 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	°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 Fe.				
	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)



Solder pad layout



Bottom view



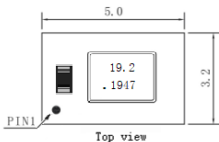
Right view



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	WCC	Supply Voltage



Top view

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

Note2: Referential weight 0.05g

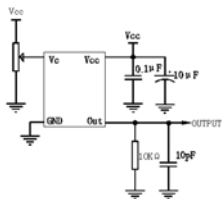
Note3: The marks on components are supplier's product information:

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

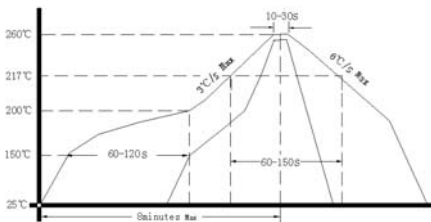
The first two digits represent the year, and the last two digits represent the week



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

