

Travelling Merchant: _____

DATASHEET

Standard: **T53-E426-52.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2019.05.20			

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1. Electrical Parameters

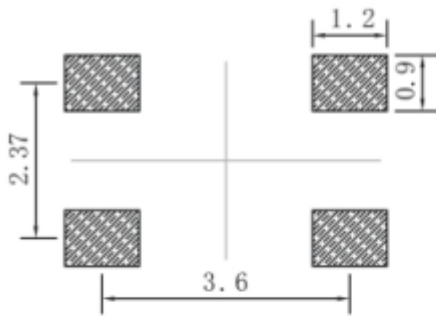
MODEL: T53-E426-52.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	52.00			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			V	
	Symmetry	40		60	%	
	Spurious			-75	dBc	
	Load	10 K Ω /10 pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	T_A varied from -40°C to 85°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=2.85\text{V}$, $V_c=1.5\text{V}$, $O_{\text{load}}=10\text{K}\Omega//10\text{pF}$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=2.85\text{V}$, $V_c=1.5\text{V}$ within 30 days after ex-works.
	Nominal Frequency Tolerance	-1.5		+1.5	$\times 10^{-6}$	Frequency at $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ sixty minutes after 2 times reflow processes (compare 52.00MHz)
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 2.71V to 2.99V, $V_c=1.5\text{V}$ and $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$.
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=2.85\text{V}$, $V_c=1.5\text{V}$ and $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$.
	Short-Term Stability: Allan Variance			0.2	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C ; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	0.01		0.01	$\times 10^{-6}$	V_{cc} , V_c , T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=2.85\text{V}$, $V_c=1.5\text{V}$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.5		+0.5	$\times 10^{-6}$	
Power Supply	Operating Current			5	mA	@ 25°C , $V_{\text{cc}}=2.85\text{V}$, $V_c=1.5\text{V}$, $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$.
	Startup time			2	ms	@90% of final Vout level
	Supply Voltage	2.71	2.85	2.99	V	



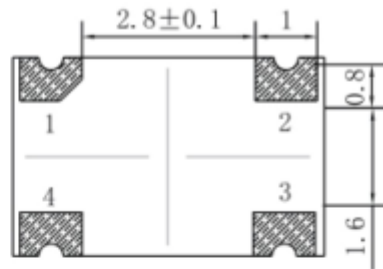
Voltage Control	Frequency tuning range			-3	$\times 10^{-6}$	$V_c=0.5V$. measurement referenced to $V_c=1.5V$.
		-1		+1	$\times 10^{-6}$	$V_c=1.5V$. measurement referenced to Exactly 52.00MHz.
		+3			$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to $V_c=1.5V$.
	Linearity			10	%	
	Slope	Positive				
Phase Noise	Phase Noise		-110		dBc/Hz	100Hz
			-130			1KHz
			-145			10KHz
			-150			100KHz
Environmental Conditions	Operable Temperature	-40		+85	°C	
	Storage Temperature	-55		+100	°C	
	ESD Level	Human Body Model,class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.				
	Moisture Sensitivity Level	Level 3.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 1 hour. (3 times for each 3 directions X , Y , Z) .IEC 68-2-06 Test Fc.				
	Shock	50g; 11ms; half sine wave (3 times for each 3 directions X , Y , Z),IEC 68-2-27 Test Ea				
Drop	Free fall on concrete or steel surface at 100cm height, IEC 68-2-32 .					
Full Package Storage	Relative humidity (%)	20% ~70%				
	Temperature (°C)	-10~35°C				



2. Mechanical Structure(mm)



Solder pad layout



Bottom view



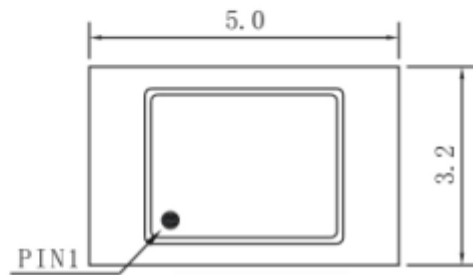
Right view



Side view

PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	GND	GND
3	OUTPUT	RF Output
4	VCC	Supply Voltage



Top view

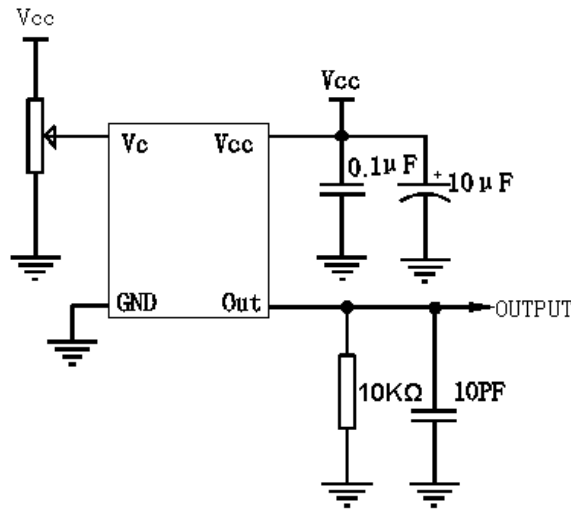
Note1: Tolerance $\pm 0.2\text{mm}$ without mark

Note2: Referential weight 0.2g

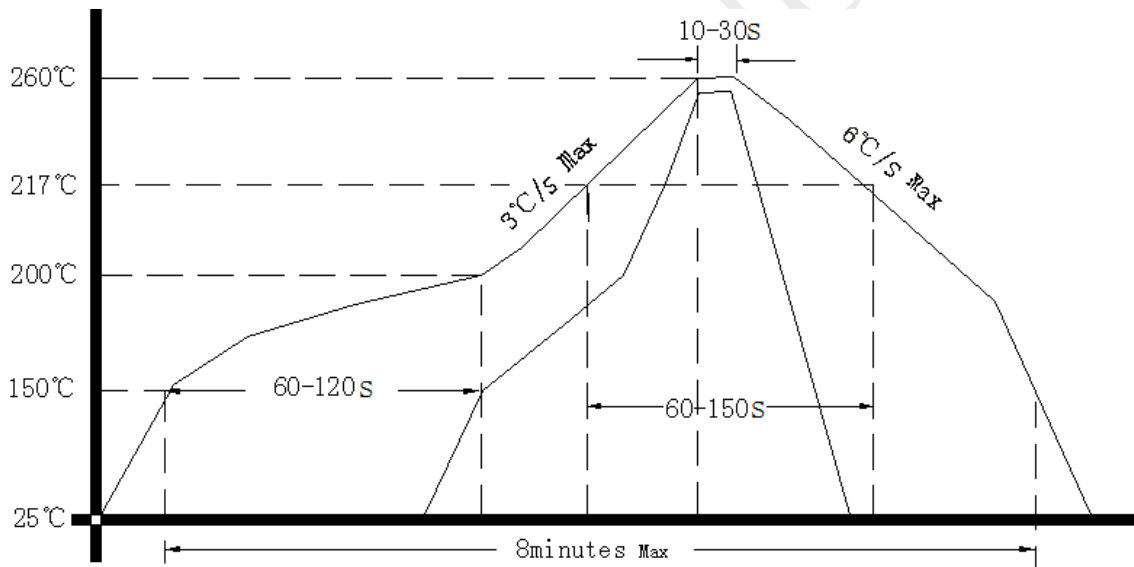
Note3: NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

