

Travelling Merchant: _____

DATASHEET

Standard: T75A-D513-27.00MHz-I

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.07.25			

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1. Electrical Parameters

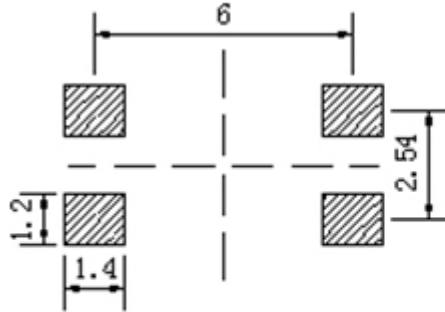
MODEL: T75A-D513-27.00MHz-I						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	27.00			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			V	
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	T_A varied from 0°C to 70°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, $V_{cc}=3.3V$, $V_c=1.5V$, $O_{load}=10K\Omega//10pF$, temperature variable speed less than 2°C per minute.
	Nominal Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ C$, $V_{cc}=3.3V$, $V_c=1.5V$ within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^\circ C$, V_{cc} varied from 3.13V to 3.47V, $V_c=1.5V$ and $O_{Load}=10K\Omega//10pF$.
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ C$, $V_{cc}=3.3V$, $V_c=1.5V$ and $O_{Load}=10K\Omega//10pF$.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	$T_A=25^\circ C$, $V_{cc}=3.3V$, $V_c=1.5V$ and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-5		+5	$\times 10^{-6}$	
Power Supply	Operating Current			4	mA	@25°C, $V_{cc}=3.3V$, $V_c=1.5V$, $O_{Load}=10K\Omega//10pF$.
	Supply Voltage	3.13	3.3	3.47	V	



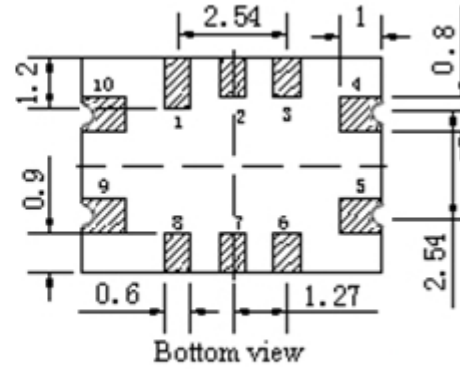
Voltage Control	Frequency tuning range	-10		-5	$\times 10^{-6}$	$V_c=0.5\text{ V}$. measurement referenced to $V_c=1.5\text{V}$.
		-1		+1	$\times 10^{-6}$	$V_c=1.5\text{V}$. measurement referenced to Exactly 27.00MHz.
		+5		+10	$\times 10^{-6}$	$V_c=2.5\text{V}$. measurement referenced to $V_c=1.5\text{V}$.
	Linearity			10	%	
	Slope	Positive				
Input Impedance	100				K Ω	
Phase Noise	Phase Noise			-75	dBc/Hz	10Hz
				-105		100Hz
				-128		1KHz
				-138		10KHz
Environmental Conditions	Operable Temperature	0		+70	$^{\circ}\text{C}$	
	Storage Temperature	-55		+105	$^{\circ}\text{C}$	
	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 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 ($^{\circ}\text{C}$)	-10~35 $^{\circ}\text{C}$				



2. Mechanical Structure(mm)



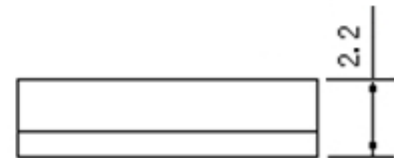
Solder pad layout



Bottom view



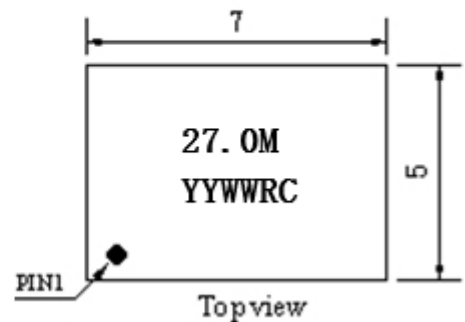
Right view



Front view

PIN FUNCTION

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



Topview

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

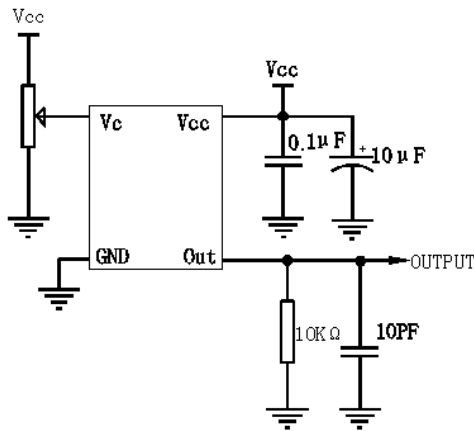
Note2: The first two YY representative: year
After two WW representative: week

Note3: Referential weight 0.2g

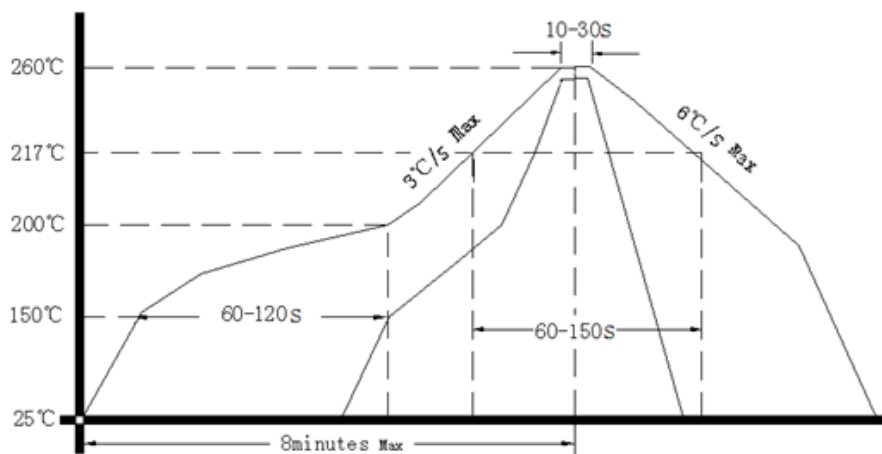
Note4: NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



Note: If soldering with a hot air gun, ensure the temperature < 320°C , soldering time < 15 seconds.

5. Package: Tape & Reel (mm)

