

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard: **T75B-K319-25.00MHz-X337**

P/N: \_\_\_\_\_

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.09.24			

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## 1. Electrical Parameters

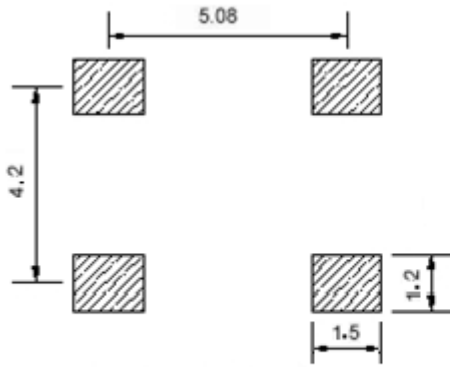
MODEL: T75B-K319-25.00MHz-X337							
Item	Description	Parameters			Unit	Test Condition	
		Min.	Typ.	Max.			
Output	Frequency	25.00			MHz		
	Output Waveform	HCMOS					
	Output Low Voltage			0.33	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$	
	Output High Voltage	2.97			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$	
	Duty Cycle	45	50	55	%	@50%	
	Rise / Fall Time (10%~90%)			6	ns	@25°C	
	Start up time			2.0	ms		
	Load	15			pF		
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.28		+0.28	$\times 10^{-6}$	$T_A$ varied from -40°C to 85°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15\text{ pF}$ , temperature variable speed less than 2°C per minute.	
	Nominal Frequency Tolerance	-1.0		+1.0	$\times 10^{-6}$	Frequency at 25°C, 1 hour after reflow	
	Root Allan variance			1.0	$\times 10^{-9}$	Tau=100ms	
	Frequency Drift				20	$\times 10^{-9}$ pk-pk	over 1hr after warm-up 15 min. @ fixed temp.
					40	$\times 10^{-9}$ pk-pk	over 24hrs after warm-up 1hr @ fixed temp.
	Frequency stability (Overall)	-4.6		+4.6	$\times 10^{-6}$	Inclusive of calibration @25°C, frequency stability over temperature, supply voltage $V_{cc}\pm 5\%, \pm 10\%$ load change, reflow soldering and 20 years aging.	
Holdover	-0.32		+0.32	$\times 10^{-6}$	Including 24hrs aging, supply voltage $V_{cc}\pm 5\%$ and frequency stability over temperature.		



Power Supply	Current Consumption			6	mA	@25°C, V <sub>cc</sub> =3.3V, O <sub>Load</sub> =15pF.
	Supply Voltage	3.13	3.3	3.47	V	
Phase Noise	Phase Noise			-85	dBc/Hz	10Hz
				-115		100Hz
				-138		1KHz
				-150		10KHz
				-152		100KHz
Environmental Conditions	Operable Temperature	-40		+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 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 (°C)	-10~35°C				



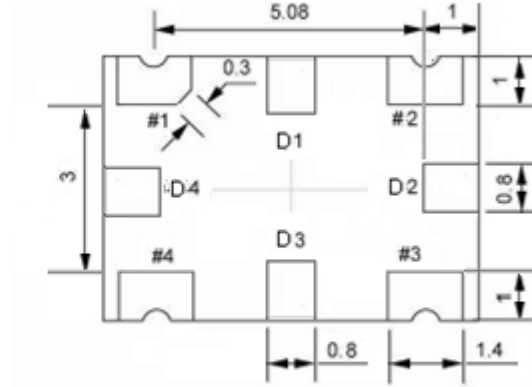
## 2. Mechanical Structure(mm)



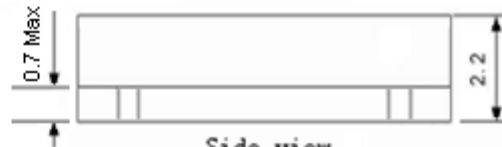
Solder pad layout



Right view



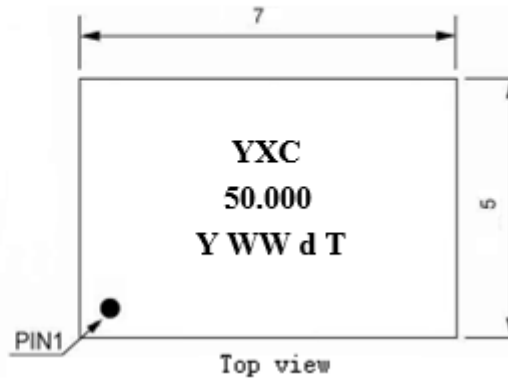
Bottom view



Side view

### PIN FUNCTION

PIN	NOTATION	FUNCTION
D1, D2, D3, D4	NC	Not Connect
1	NC	Not Connect
2	GND	GND
3	OUTPUT	RF Output
4	VCC	Supply Voltage



Top view

**Note1:** Tolerance  $\pm 0.3\text{mm}$  without mark

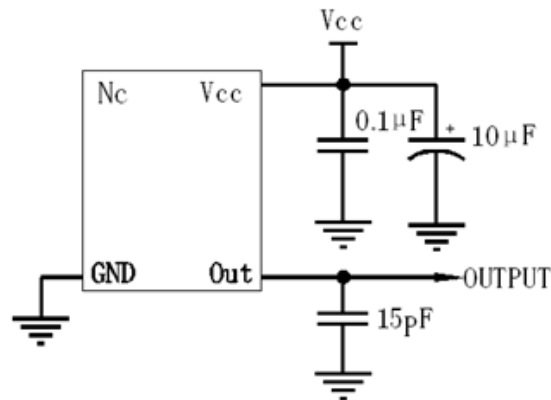
**Note2:** The first Y representative: year  
After two WW representative: week

**Note3:** Referential weight 0.2g

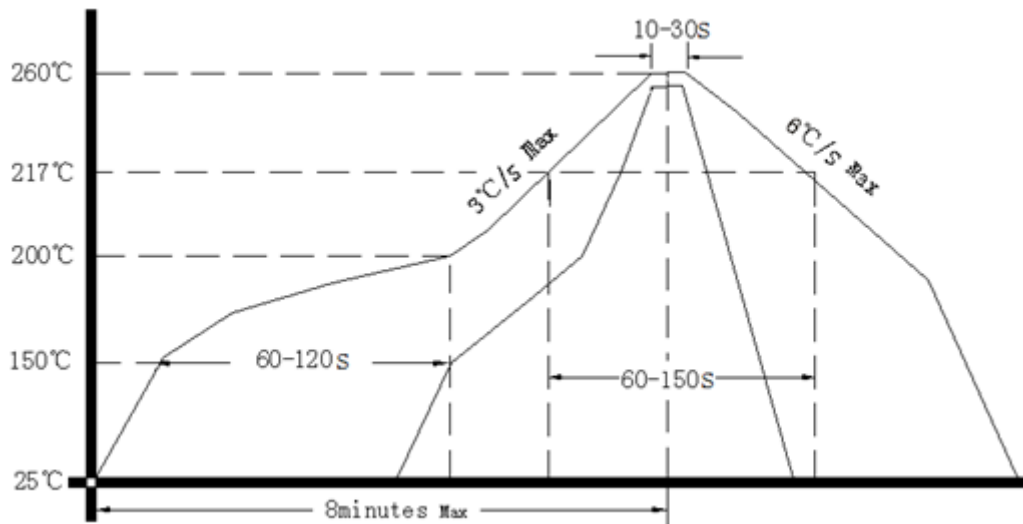
**Note4:** NC is not connect



### 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)

