

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

# DATASHEET

Standard: T75A-G322-32.00MHz-G215

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.02.23			

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## 1. Electrical Parameters

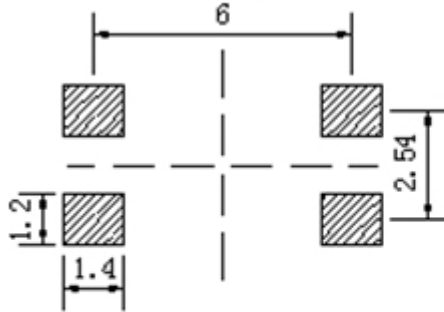
MODEL: T75A-G322-32.00MHz-G215						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	32.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=5V, O_{load}=15\text{ pF}$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			8	ns	@25°C
	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 $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=5V, V_c=1.5V, O_{load}=15\text{ pF}$ , temperature variable speed less than 2°C per minute.
	Frequency Calibration	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=5V, V_c=1.5V$ , within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}, V_{cc}$ varied from 4.75V to 5.25V and $V_c=1.5V, O_{Load}=15\text{ pF}$ .
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=5V, V_c=1.5V$ , and $O_{Load}=15\text{ pF}$ .
	Aging Tolerance Per Day	-0.01		+0.01	$\times 10^{-6}$	$T_A=25^\circ\text{C}, V_{cc}=5V, V_c=1.5V$ and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
Power Supply	Operating Current			10	mA	@25°C.
	Supply Voltage	4.75	5	5.25	V	



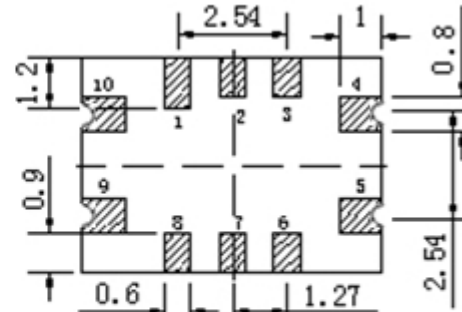
Voltage Control Characteristics	Frequency Tuning Range	-15		-5	$\times 10^{-6}$	$V_c=0.5$ V. measurement referenced to $V_c=1.5$ V.
		-1		+1	$\times 10^{-6}$	$V_c=1.5$ V. measurement referenced to Exactly 32.00MHz.
		+5		+15	$\times 10^{-6}$	$V_c=2.5$ V. measurement referenced to $V_c=1.5$ V.
	Linearity			10	%	
	Slope	Positive				
Input Impedance	100				K $\Omega$	
Phase Noise	Phase Noise @25 $^{\circ}$ C		-88	-83	dBc/Hz	10Hz
			-115	-110		100Hz
			-135	-130		1KHz
			-150	-145		10KHz
			-153	-148		100KHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}$ C	
	Storage Temperature	-55		+125	$^{\circ}$ 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 ( $^{\circ}$ C)	-10~35 $^{\circ}$ C				



## 2. Mechanical Structure(mm)



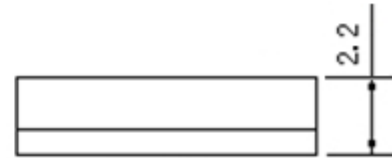
Solder pad layout



Bottom view



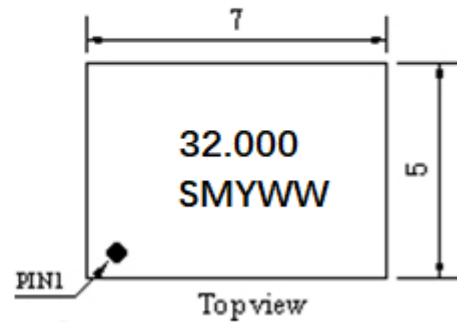
Right view



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



Top view

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

**Note2:** The first Y representative: year

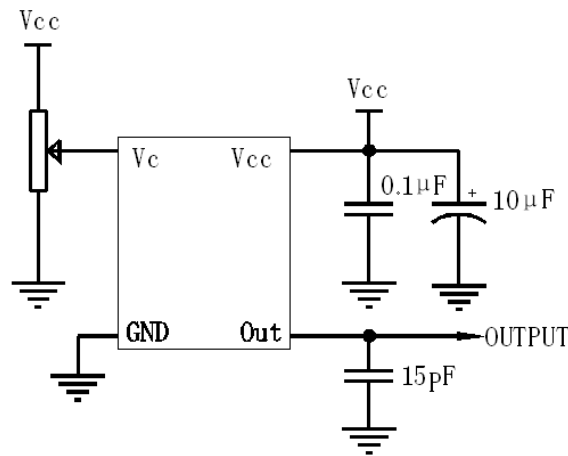
After two WW representative: week

**Note3:** Referential weight 0.2g

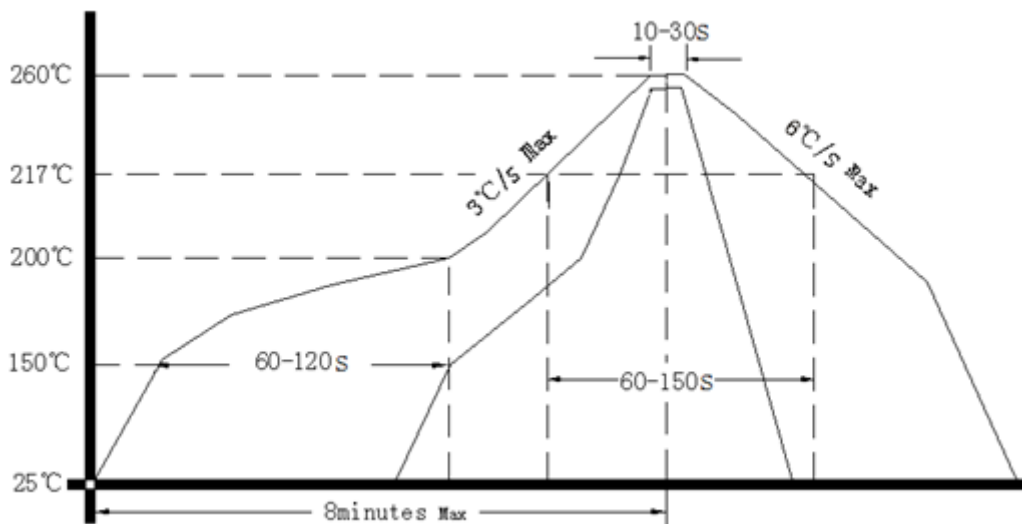
**Note4:** NC is not connect



### 3. Test Circuit



### 4. Output Waveform



Note: If soldering with a hot air gun, ensure the temperature  $< 320^{\circ}\text{C}$  , soldering time  $< 15$  seconds.

### 5. Package: Tape & Reel (mm)

