

Customer Code : _____

DATASHEET

DAPU P/N : **T32-T513-24.00MHz**
X3225YF24001

Customer P/N: _____

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2020.03.11			

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1. Electrical Parameters

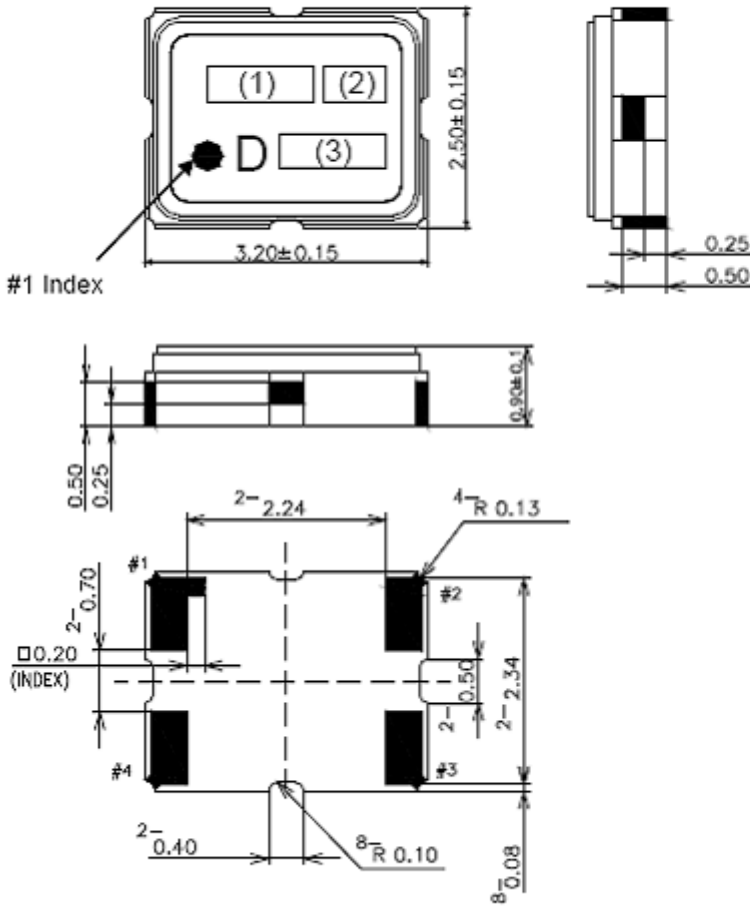
MODEL: T32-T513-24.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	24.00			MHz	
	Output Waveform	Clipped Sine Wave				
	Vp-p	0.8			V	
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	T_A varied from -30°C to 85°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.5\text{V}$, $O_{\text{load}}=10\text{K}\Omega//10\text{pF}$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.5\text{V}$ within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.2		+0.2	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 3.13V to 3.47V, $V_c=1.5\text{V}$ 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 $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.5\text{V}$ and $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	TA=25°C, Vcc=3.3V, Vc=1.5V and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
Power Supply	Operating Current			3	mA	@25°C, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.5\text{V}$, $O_{\text{Load}}=10\text{K}\Omega//10\text{pF}$.
	Supply Voltage	3.13	3.3	3.47	V	
Voltage Control	Frequency tuning range	-15		-10	$\times 10^{-6}$	$V_c=0.5\text{V}$. measurement referenced to $V_c=1.5\text{V}$.
		-1		+1	$\times 10^{-6}$	$V_c=1.5\text{V}$. measurement referenced to Exactly 24.00MHz.
		+10		+15	$\times 10^{-6}$	$V_c=2.5\text{V}$. measurement referenced to $V_c=1.5\text{V}$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	



Phase Noise	Phase Noise @25°C		-80	-75	dBc/Hz	10Hz
			-108	-103		100Hz
			-133	-128		1KHz
			-145	-140		10KHz
			-150	-145		100KHz
			-150	-145		1MHz
Environmental Conditions	Operable Temperature	-30		+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)



Pin Connections

Pin No.	Connection
#1	V _{CONT}
#2	GND
#3	Output
#4	V _{CC}

Marking

- (1) Frequency 24.00 (MHz, 4digits)
- (2) Model code BN
- (3) Date code Year (1digit) +Week (2digits)
e.g.2017/01/01 → 701

unit: mm

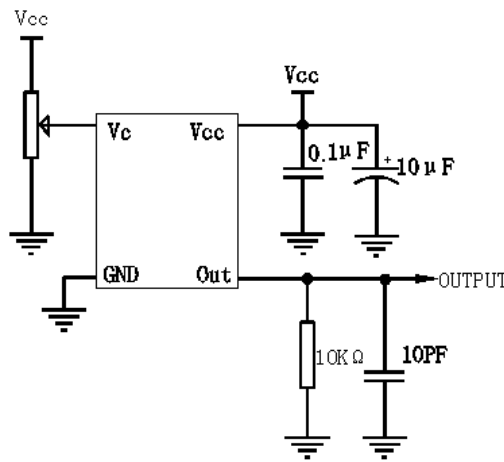
Dimensional Tolerance: ± 0.15

(Unless otherwise noted)

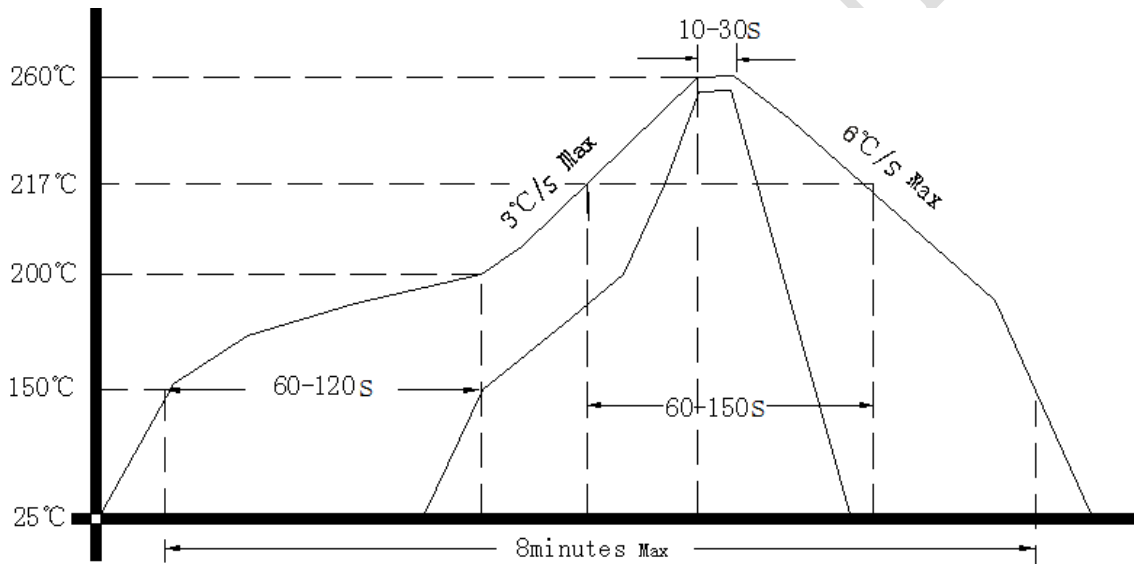
DAPU



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)

