

Travelling Merchant: _____

DATASHEET

Standard: **T11A-Q326-21.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2019.12.24			

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1. Electrical Parameters

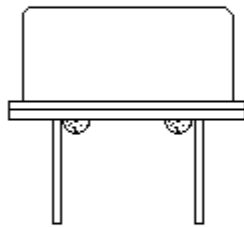
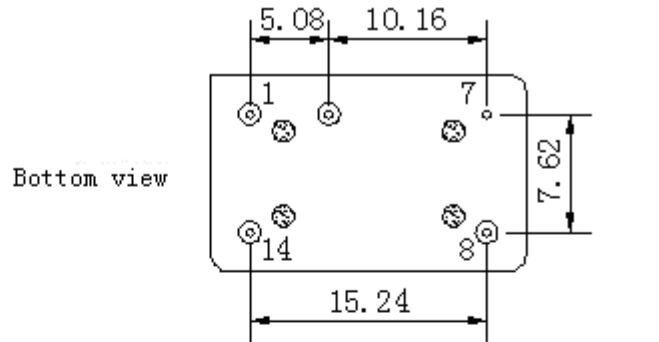
MODEL: T11A-Q326-21.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	21.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.5	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	4.0			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			3	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1.0		+1.0	$\times 10^{-6}$	T_A varied from $-30^{\circ}C$ to $70^{\circ}C$, measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V, O_{load}=15pF$, temperature variable speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-1.0		+1.0	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$, and after 15 minutes of operation, 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 4.75V to 5.25V, $V_c=2.5V$ and $O_{Load}=15pF$.
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$, and $O_{Load}=15pF$.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	V_{cc}, V_c, T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V, V_c=2.5V$ and after 30 days of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Current Consumption			20	mA	@ $25^{\circ}C, V_{cc}=5.0V, O_{Load}=15pF$.



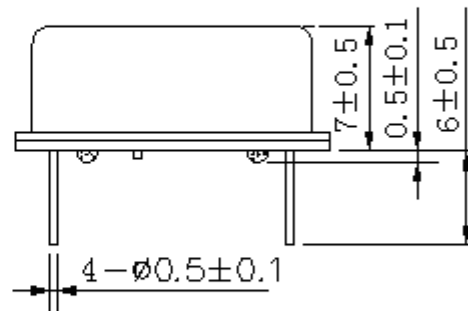
Voltage Control Characteristics	Frequency Tuning Range			-5	$\times 10^{-6}$	$V_c=0.5V$. measurement referenced to $V_c=2.5V$
		-1.0		+1.0	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 21.00MHz
		+5			$\times 10^{-6}$	$V_c=4.5V$. measurement referenced to $V_c=2.5V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise		-130		dBc/Hz	1KHz
Environmental Conditions	Operable Temperature	-30		+70	$^{\circ}C$	
	Storage Temperature	-55		+105	$^{\circ}C$	
	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	Not humidity sensitive.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~500Hz, one cycle per 30 min, test 2 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/Severity 50A.					
Full Package Storage	Relative humidity (%)	20%~70%				
	Temperature ($^{\circ}C$)	-10~35 $^{\circ}C$				



2. Mechanical Structure (mm)



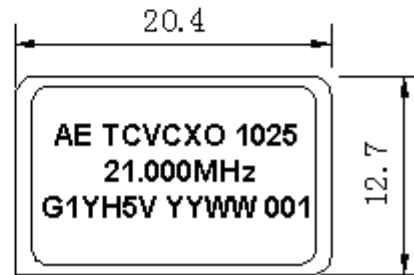
Side view



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
7	GND	GND
8	OUTPUT	RF Output
14	VCC	Supply Voltage

Top view



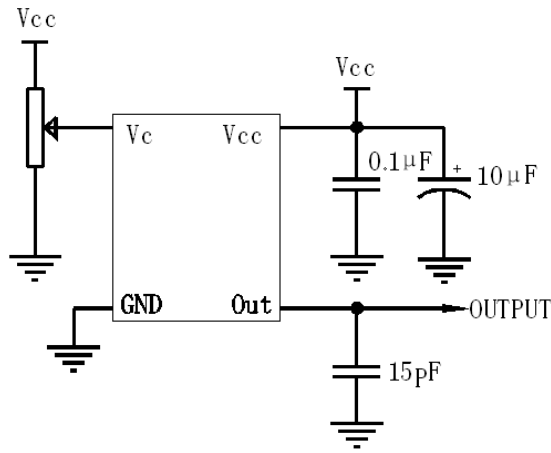
Note1: Tolerance ± 0.20 mm without mark

Note2: The first YY representative: year
After two WW representative: week
001 representative: serial number

Note3: Referential weight 4.2g



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

