

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N:     **T10A-P313-19.20MHz**    

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.11.29			

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### Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2017.11.29



## 1. Electrical Parameters

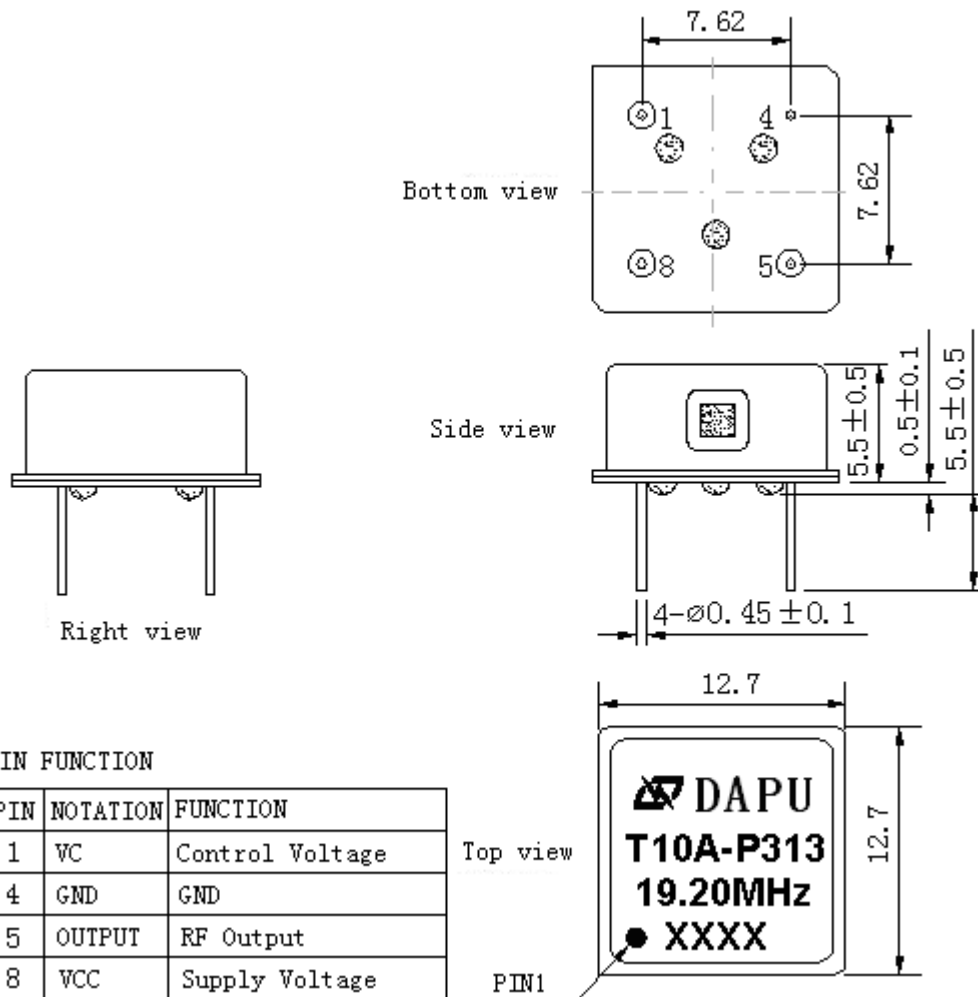
MODEL: T10A-P313-19.20MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	19.20			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.7			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	@25°C
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.2		+0.2	$\times 10^{-6}$	$T_A$ varied from -40°C to 85°C, measurement referenced to frequency observed with $T_A = 25^\circ\text{C}, V_{cc}= 3.3V, V_c=1.65V, O_{load}=15\text{pF}$ , temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1.0		+1.0	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A = 25^\circ\text{C}, V_{cc}= 3.3V, V_c=1.65V$ 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, $V_c=1.65V$ and $O_{Load}= 15\text{pF}$ .
	Frequency Tolerance vs. Load	-0.2		+0.2	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A= 25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V, O_{Load}= 15\text{pF}$
	Short-Term Stability: Allan Variance			0.2	$\times 10^{-9}$	Temperature stability, no EMI/EMC or other interference, test after power for 30 minutes ref. to 25°C; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	$T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$ and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
Power Supply	Current Consumption			10	mA	@25°C, $V_{cc}=3.3V, V_c=1.65V, O_{load}=15\text{pF}$ .
	Supply Voltage	3.13	3.3	3.47	V	



Voltage Control Characteristics	Frequency Tuning Range	-10		-5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-1.0		+1.0	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to exactly 19.20MHz
		+5		+10	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise		-75	-70	dBc/Hz	10Hz
			-105	-100		100Hz
			-130	-125		1KHz
			-140	-135		10KHz
			-142	-137		100KHz
			-148	-143		600KHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	Storage Temperature	-45		+90	$^{\circ}C$	
	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~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)



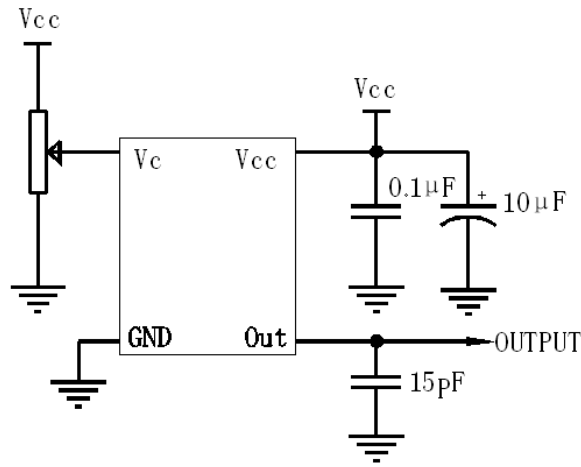
**Note1:** Tolerance ±0.20mm without mark

**Note2:** The first two xx representative: week  
After two xx representative: year

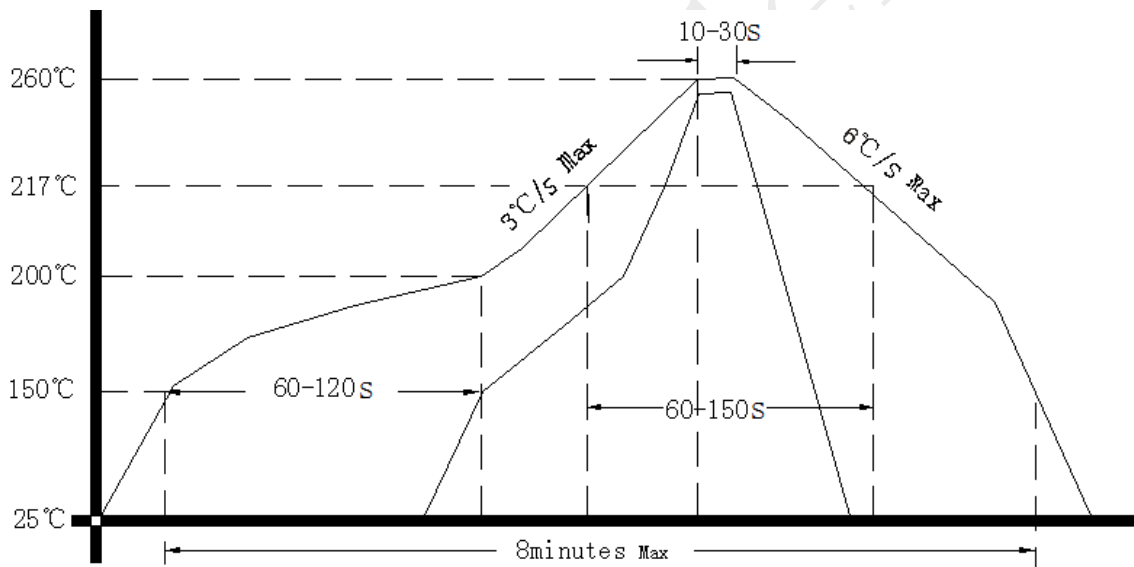
**Note3:** Referential weight 2.3g



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: PVC Tube,15pcs (mm)

