CUSTOMER: _____

DATASHEET

PRODUCT TYPE: **DPTC2016**

DAPU P/N: ZT21-B599-19.20MHz-U

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Jack	David	William	
Date: 2023.03.13			

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Table of amendment

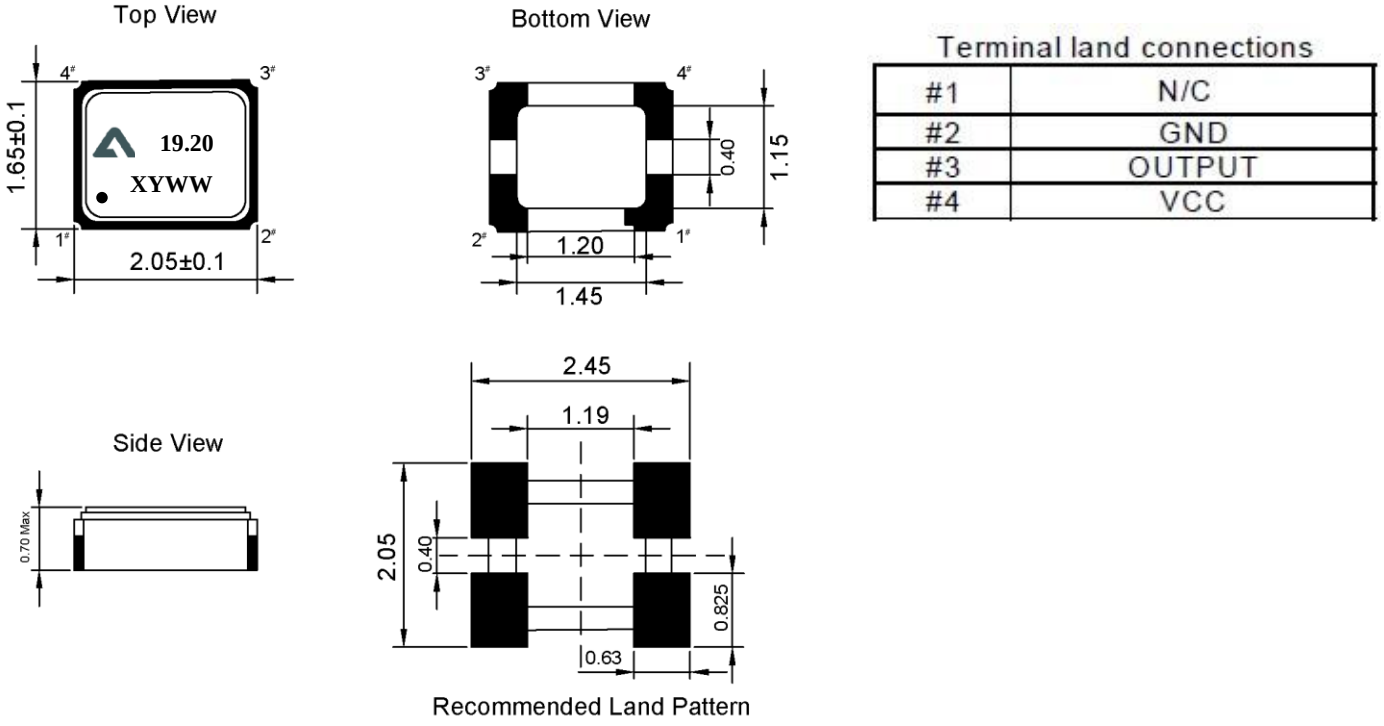
Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Jack	2023.03.13

1、Electrical Parameters

MODEL： ZT21-B599-19.20MHz-U						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		19.20		MHz	
	Output Waveform		Clipped Sine Wave			
	Vp-p	0.8		1.2	V	
	Spurious Suppression		-10	-8	dBc	
	Load		10KΩ//10pF			
Frequency Stabilities	Initial Frequency Tolerance	-1.0		+1.0	$\times 10^{-6}$	@25±2℃,2H, after 2 times reflow soldering, base on nominal frequency.
	vs. Operating Temperature Range	-0.5		+0.5	$\times 10^{-6}$	T_A varied from -40℃ to 85℃, measurement referenced to frequency observed with T_A=25℃, Vcc=1.8V or 3.3V, O_{load}=10KΩ //10pF, temperature variable speed less than 2℃per minute.
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	$\times 10^{-6}$	5% Voltage change measurement referenced to frequency observed T_A=25℃, and O_{Load}=10KΩ//10pF.
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with T_A=25℃, Vcc=1.8V or 3.3V , and O_{Load}=10KΩ//10pF
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	T_A=25℃, V_{cc}=1.8V or 3.3V , and after 1h of operation.
	Aging Tolerance 2Year	-2		+2	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-4		+4	$\times 10^{-6}$	
	Jitter			8.5	ps	10Hz-1MHz
	Frequency Slope	-0.1		+0.1	$\times 10^{-6}$/℃	T_A varied from -30℃ to 85℃
		-0.5		+0.5	$\times 10^{-6}$/℃	T_A varied from -40℃ to -30℃
	G-Sensitivity			1.5	ppb/g	Random vibration 30Hz to 1.5kHz,3 axes
Power Supply	Current consumption			1.7	mA	@25℃, V_{cc}=1.8V,O_{Load}=10KΩ//10pF.
				1.8	mA	@25℃, V_{cc}=3.3V,O_{Load}=10KΩ//10pF.
	Start up Time			2	ms	More than 90% of final output voltage
	Supply Voltage	1.7	3.3	3.6	V	

SSB Phase Noise	Phase Noise@25 ± 2℃		-55	-50	dBc/Hz	1Hz
			-90	-85		10Hz
			-120	-115		100Hz
			-145	-138		1KHz
			-154	-148		10KHz
			-157	-152		100KHz
Environmental Conditions	Operable Temperature	-40		+85	℃	
	Storage Temperature	-55		+125	℃	
	Shock	-0.5		+0.5	$\times 10^{-6}$	Frequency shift after 1000G 250 us sine
	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 1.				
	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 (℃)	-10~35℃				

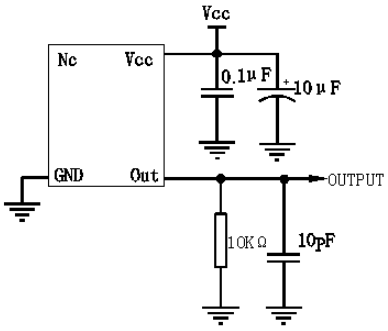
2、Mechanical Structure(mm)



Note1: N/C is not connected.

Note2: X representative internal code ,Y representative year, WW representative week.

3. Test Circuit



4. Reflow Soldering Curve (RoHS)