

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

# DATASHEET

Standard:           **O22B-3201-12.80MHz**          

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

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2013.03.18			

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## 1. Electrical Parameters

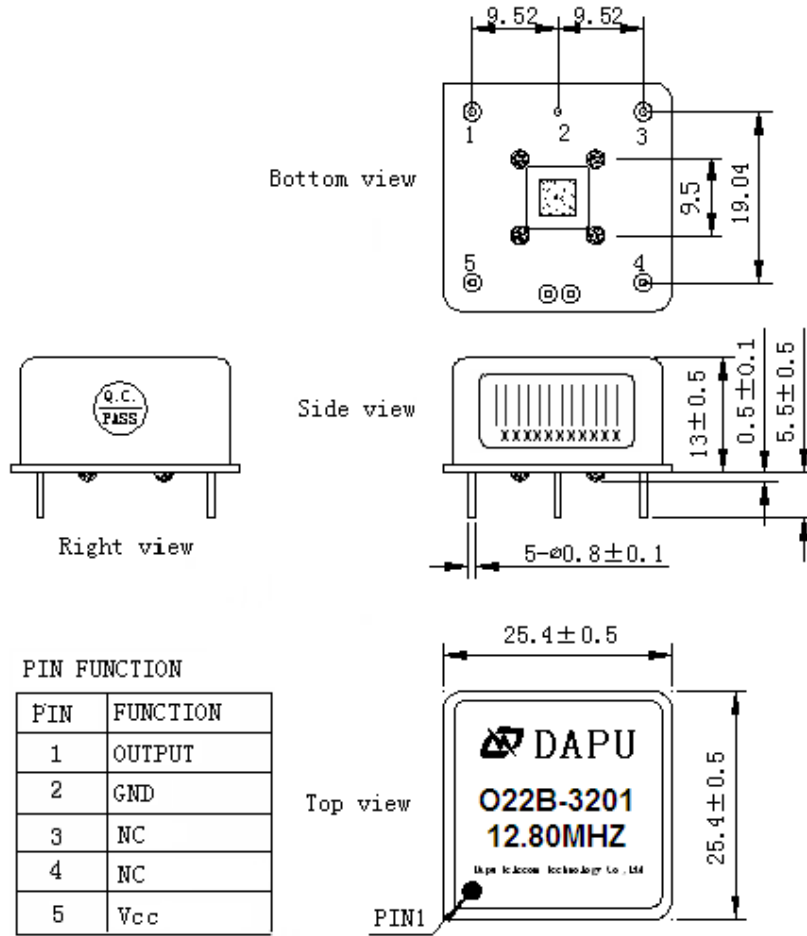
MODEL: O22B-3201-12.80MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	12.80			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=10K\Omega//15pF$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=10K\Omega//15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	
	Load	10K $\Omega$ //15pF			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range			0.01	$\times 10^{-6}$	$T_A$ varied from 0°C to 70°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}-f_{min})/2f_0, V_{cc}=3.3V, O_{load}=10K\Omega//15pF$ , temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ C, V_{cc}$ varied from 3.13V to 3.47V, and $O_{Load}=10K\Omega//15pF$ .
	Frequency Tolerance vs. Load	-3		+3	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and $O_{Load}=10K\Omega//15pF$ .
	Short-Term Stability: Allan Variance			0.01	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-1		+1	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Steady Consumption			450	mA	@25°C
	Warm-Up Time			5	min	To $\pm 0.1 \times 10^{-6}$ of final frequency (24 hours reading @25°C.
	Warm up current			1000	mA	



Phase Noise	Phase Noise		-90	-80	dBc/Hz	1Hz
			-125	-115		10Hz
			-145	-135		100Hz
			-150	-145		1KHz
			-155	-150		10KHz
			-160	-155		100KHz
			-160	-155		1MHz
		Environmental Conditions	Operable Temperature	-40		
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; 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.					



## 2. Mechanical Structure (mm)

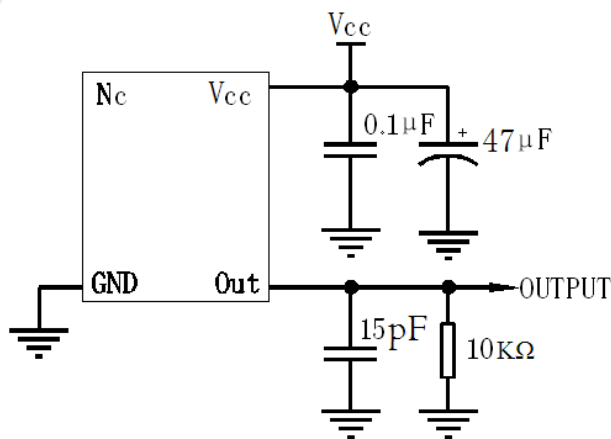


**Note1:** Tolerance  $\pm 0.2\text{mm}$  without mark

**Note2:** Referential Weight 13.6g

**Note3:** NC is not connect

## 3. Test Circuit





#### 4. Reflow Soldering Curve (RoHS)



#### 5. Package (mm)

