

Travelling Merchant: _____

DATASHEET

Standard: **O75A-1201-20.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2020.08.12			

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1. Electrical Parameters

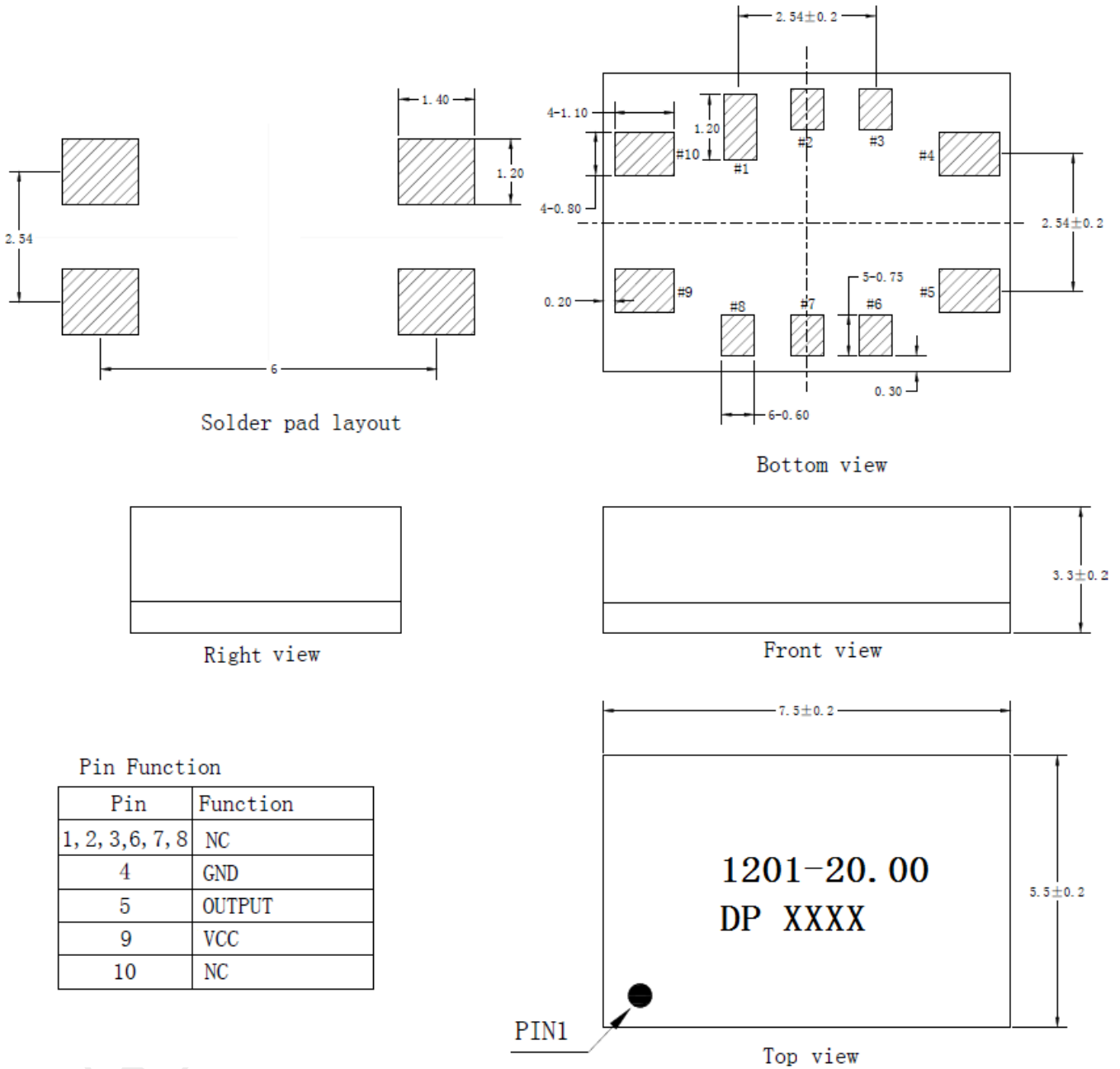
MODEL: O75A-1201-20.00MHZ						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	20.00			MHz	
	Output Waveform	LVCMOS				
	Output Low Voltage			0.33	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time			2	ns	10%~90%
				1	ns/V	Measured at mid-point of rising edge.
	Startup time till valid waveform			15	ms	Time until RF output waveform is within output level, duty cycle and rise/fall time spec
Load	15			pF		
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.1		+0.1	$\times 10^{-6}$	T_A varied from -40°C to 95°C , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15\text{pF}$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V$ within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A= -40\sim 95^\circ\text{C}, V_{cc}$ varied from 3.135V to 3.465V, and $O_{Load}=15\text{pF}$.
	Frequency Tolerance vs. Load	-0.01		+0.01	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, O_{Load}=15\text{pF}$.
	Frequency vs. temperature slope	-5		+5	$\times 10^{-9}/^\circ\text{C}$	T_{amb} slope $\pm 1^\circ\text{C}/\text{min}$ with any temperature window over operating temperature range. Includes also hysteresis effects. Slope measurement for device qualification as described in the related note.
	Aging Tolerance Per Day	-5		+5	$\times 10^{-9}$	$T_A=25^\circ\text{C}, V_{cc}=3.3V$, and after 30days of operation.
	Overall Tolerance Over 15years	-4.6		+4.6	$\times 10^{-6}$	Over operating temperature range.



	Retrace accuracy	-0.025		+0.025	$\times 10^{-6}$	Cycle: 1st power on 1h, power off 15 min, 2nd power on. First reading 30 s after 2nd power on, referenced to last frequency reading immediately before power off, T_A varied from -40°C to 95°C.
	Warm up Time			30	s	Time until RF output is within ± 0.025 ppm referenced to last frequency reading 1 h after startup, T_A varied from -40°C to 95°C.
	Rate of temperature variation	-1		+1	°C/min	
	Steady Consumption			230	mA	@25°C
	Warm up current			460	mA	
	Supply Voltage	3.135	3.3	3.465	V	
Phase Noise	Phase Noise -40~95°C		-75	-63	dBc/Hz	1Hz
			-110	-89		10Hz
			-140	-116		100Hz
			-160	-134		1KHz
			-165	-144		10KHz
			-165	-144		100KHz
Maximum accumulated power of spurs and sub harmonic distortions				-84	dBc	$10\text{Hz} \leq f_{\text{offset}}$
Environmental Conditions	Operating Temperature	-40		+95	°C	
	Operable Temperature	-45		+105	°C	
	Storage Temperature	-55		+105	°C	
	Relative Humidity Range	5		95	%	
	Absolute Humidity Range	1		29	g/m^3	
	Air Pressure Range	70		106	kPa	
	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 3.				
	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.				



2. Mechanical Structure(mm)



Pin Function

Pin	Function
1, 2, 3, 6, 7, 8	NC
4	GND
5	OUTPUT
9	VCC
10	NC

Note1: Tolerance ±0.2mm without mark

Note2: The first two xx representative: week

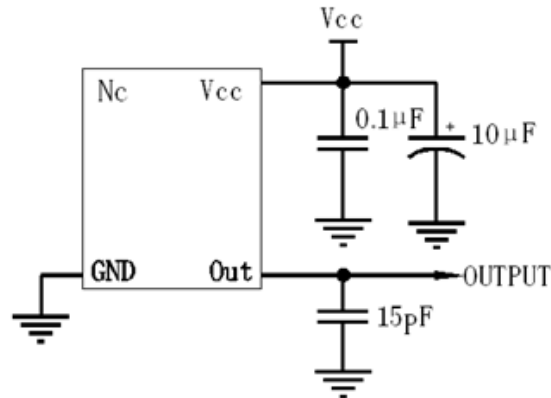
After two xx representative: year

Note3: Referential Weight 0.2g

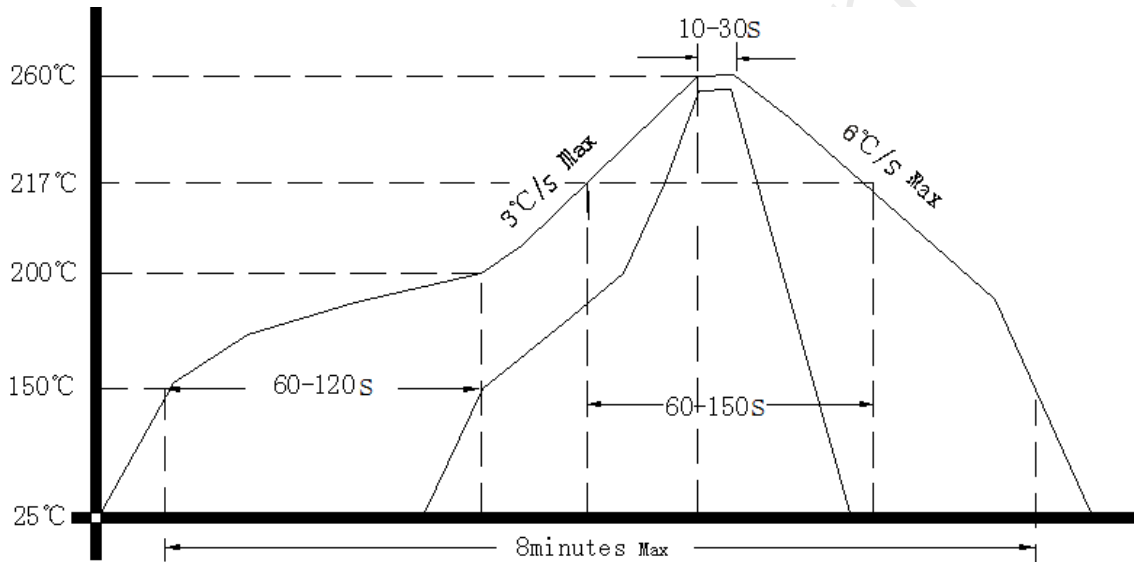
Note4: NC is not connect



3. Test circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

