Travelling Merchant:_____

DATASHEET

Standard: **O75A-K319-20.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Tony · Wang	Jason Zhao	
Date: 2020.09.25			Stamp, please! Thanks!

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2019.08.28
1.1	The “Output Low Voltage” “Initial Frequency Tolerance” “Frequency Tolerance vs. Supply Voltage” “Frequency Tolerance vs. Load” “Phase Noise” “Mechanical Structure”changed,Add “Frequency vs. temperature slope” “Retrace accuracy” “Warm up Time”	Amway	2020.09.25

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1. Electrical Parameters

MODEL: O75A-K319-20.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		20.00		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.33	V	V_{cc}=3.3V, O_{load}=15 pF
	Output High Voltage	2.4			V	V_{cc}=3.3V, O_{load}=15 pF
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time			5	ns	10%~90%
	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℃to 95℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=3.3V, O_{load}=15pF, temperature variable speed less than 2℃per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, 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= -40~95℃, V_{cc} varied from 3.135V to 3.465V, and O_{Load}=15pF .
	Frequency Tolerance vs. Load	-0.01		+0.01	$\times 10^{-6}$	10% load change measurement referenced to frequency observed withT_A=25℃,V_{cc}=3.3V, O_{Load}=15pF.
	Frequency vs. temperature slope	-5		+5	$\times 10^{-9}$/℃	T_{amb} slope ±1 ℃/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℃, V_{cc}=3.3V, and after 30days of operation.
	Overall Tolerance Over 15years	-4.6		+4.6	$\times 10^{-6}$	Over operating temperature range.

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	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℃to 95℃.
	Warm up Time			60	s	Time until RF output is within ±0.025 ppm referenced to last frequency reading 1 h after startup, T_A varied from-40℃to 95℃.
	Steady Consumption			230	mA	@25℃
	Warm up current			460	mA	
	Supply Voltage	3.135	3.3	3.465	V	
Phase Noise	Phase Noise -40~95℃		-75	-65	dBc/Hz	1Hz
			-110	-100		10Hz
			-140	-130		100Hz
			-160	-155		1KHz
			-165	-160		10KHz
			-165	-160		100KHz
Environmental Conditions	Operable Temperature	-40		+95	℃	
	Storage Temperature	-55		+105	℃	
	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.				

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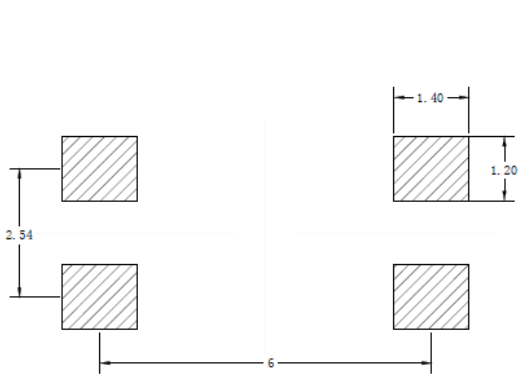
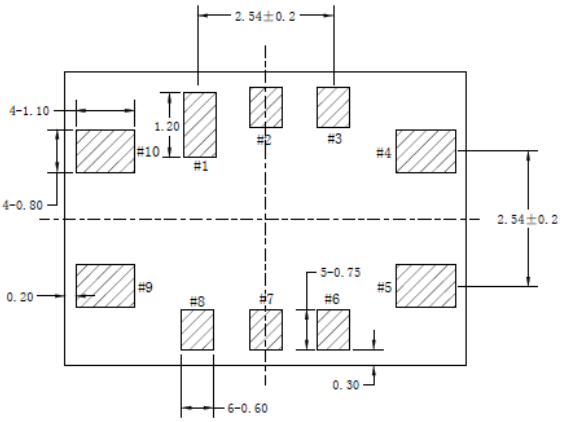
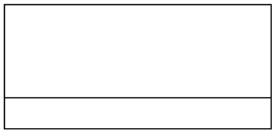
2. Mechanical Structure(mm)



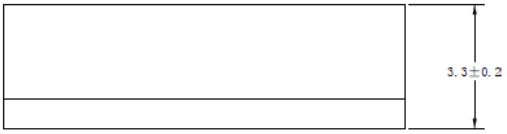
Solder pad layout



Bottom view



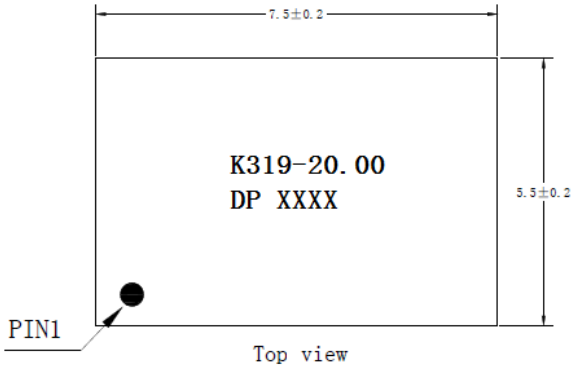
Right view



Front view

Pin Function

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



Top view

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

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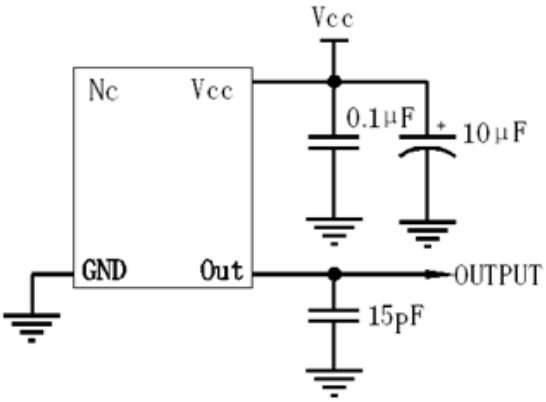
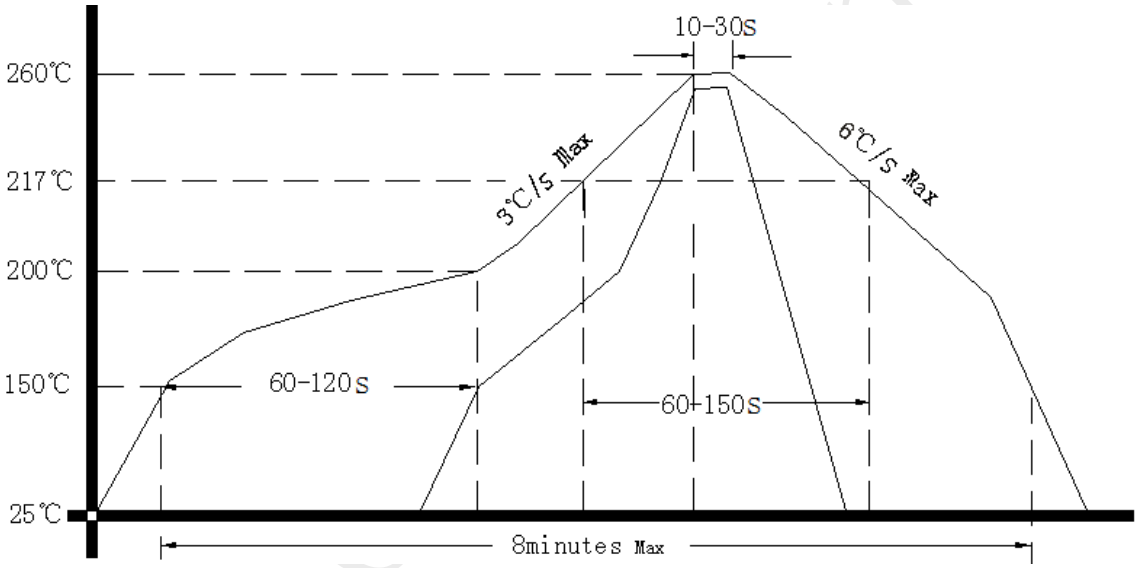
3. Test circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)