Customer Code : A021

DATASHEET

DAPU P/N : **T75A-2103-12.80MHz**

Customer P/N :

DAPU			Customer Approval
Drew	Audited	Approved	
Amway.wei	Carry.Wang	James.Liu	
Date: 2015.03.05			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2014.11.24
1.1	Modified the 1st page "Full Package Storage" added	Amway	2015.03.05

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1. Electrical Parameters

MODEL： T75A-2103-12.80MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		12.80		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.33	V	V_{cc}=3.3V, O_{load}=15 pF
	Output High Voltage	2.97			V	V_{cc}=3.3V, O_{load}=15 pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time （10%~90%）			5	ns	@25℃
	Load		15		pF	
	Start Time			2	ms	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.2		+0.2	$\times 10^{-6}$	T_A varied from-40℃to 85℃, 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	-1.0		+1.0	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.05		+0.05	$\times 10^{-6}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 3.13V to 3.47V, and O_{Load}=15pF .
	Frequency Tolerance vs. Load	-0.05		+0.05	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with T_A=25℃,V_{cc}=3.3V, O_{Load}=15pF.
	Frequency slope			0.02	$\times 10^{-6}$/℃	Δ F/ΔT, measured in 1 ℃ steps / 1 minute soak per step.
	Holdover 24hours Drift	-0.04		+0.04	$\times 10^{-6}$/day	ΔT ≤ ±0.5℃, ΔVs ≤ ±1% , after 48 hours of continuous operation.
		-0.3		+0.3	$\times 10^{-6}$	Inclusive of the following: - operating temperature -40℃ to 85℃ - 3.3V ±5% - 24 hours aging
	Overall Stability	-4.6		+4.6	$\times 10^{-6}$	Inclusive of the following: - initial tolerance (@25℃) - operating temperature -40℃ to 85℃ - 3.3V ±5% - 15pF load ±5% - Reflow soldering - 20 years aging

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Power Supply	Current Consumption			10	mA	@25℃, V_{cc}=3.3V, O_{Load}=15pF.
	Supply Voltage	3.13	3.3	3.47	V	
Phase Noise	Phase Noise @25℃		-85	-82	dBc/Hz	10Hz
			-115	-110		100Hz
			-135	-130		1KHz
			-145	-140		10KHz
			-150	-145		100KHz
			-150	-145		1MHz
Environmental Conditions	Operable Temperature	-40		+85	℃	
	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; ANSI/ESDA/JEDEC JS-001-2010.				
	Moisture Sensitivity Level	Level 2.				
	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℃				

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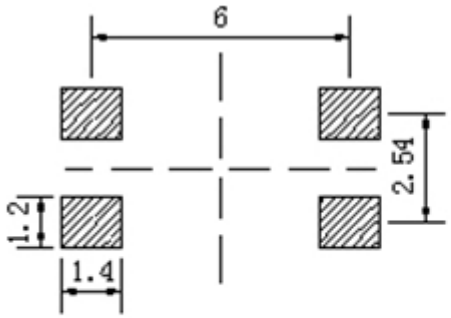
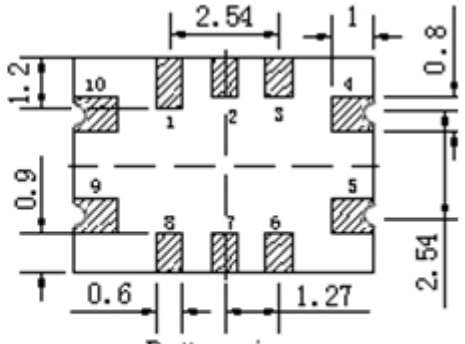
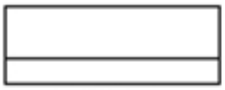
2. Mechanical Structure(mm)



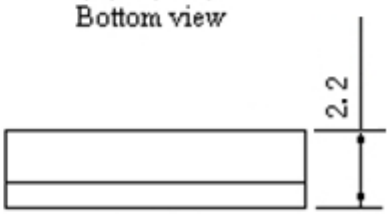
Solder pad layout



Bottom view



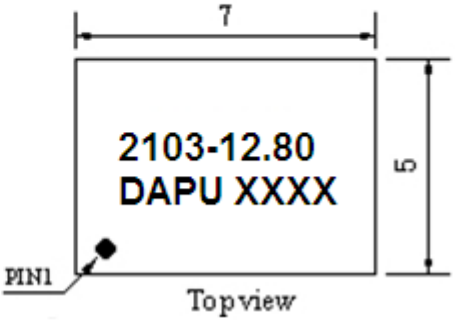
Right view



Front view

PIN FUNCTION

PIN	NOTATION	FUNCTION
1, 2, 3, 6, 7, 8	NC	Not Connect
4	GND	GND
5	OUTPUT	RF Output
9	VCC	Supply Voltage
10	NC	Not Connect



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

Note5: Material composition：
Pad/terminals：Cu （Surface plating: Ni 3-6um，Au 0.1～0.5um）
Base: High-TG FR4

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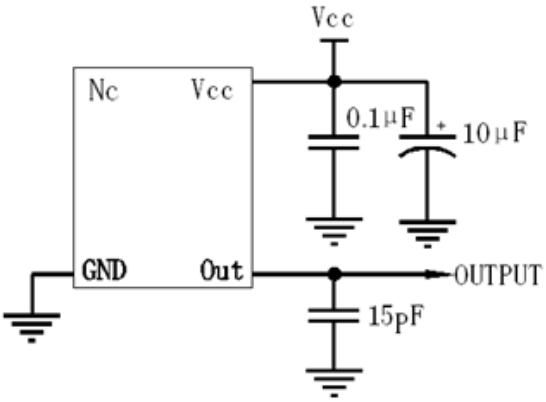
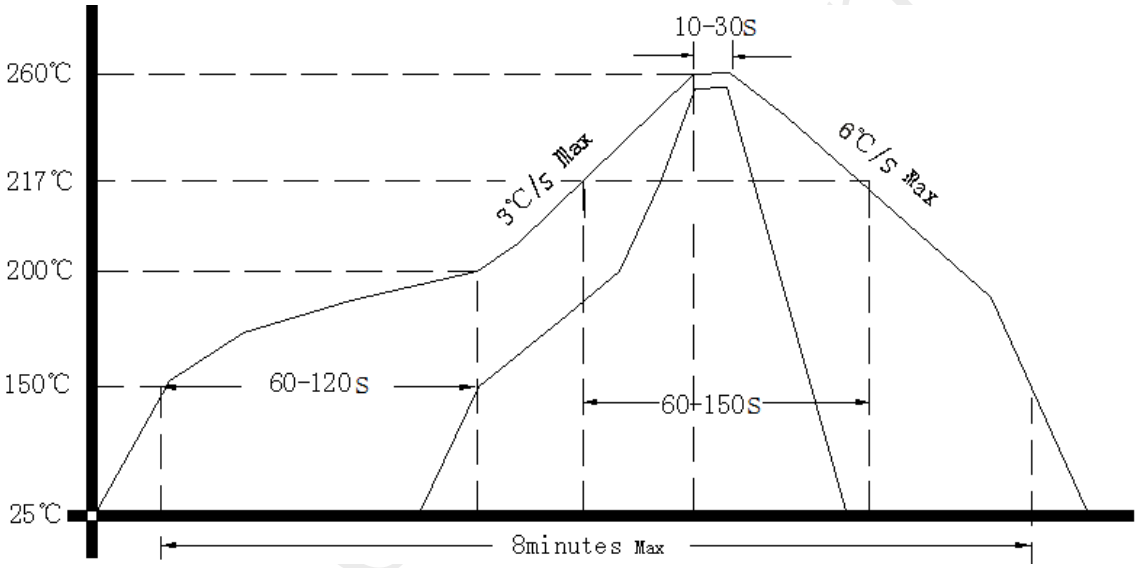
3. Test circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)