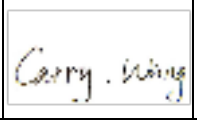
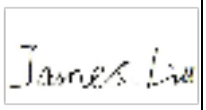
Customer Code : _____

DATASHEET

DAPU P/N: **T936-F319-20.00MHz**

Customer P/N: _____

Oscillators Type: **TCXO**

DAPU			Customer Approval
Drew	Audited	Approved	
			
Date: 2017.05.03			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

Bldg 16,.N.Ind.Zone,SSL Industry Park, Dongguan City, Guangdong Province, China

TEL：0086-0769-88010888 FAX：0086-0769-81800098

Bldg 16,.N.Ind.Zone,SSL Industry Park,
Dongguan City, Guangdong Province,
PRC China
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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2016.07.29
1.1	Add “Oscillators Type”	Amway	2016.08.03
1.2	The “Mechanical Structure” changed	Amway	2017.05.03

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PRC China
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1. Electrical Parameters

MODEL： T936-F319-20.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		20.00		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.1Vdd	V	V_{cc}=3.3V, O_{load}=15 pF
	Output High Voltage	0.9Vdd			V	V_{cc}=3.3V, O_{load}=15 pF
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time （10%~90%）			8	ns	@25℃
	Load		15		pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.28		+0.28	$\times 10^{-6}$	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		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=3.3V within 30 days after ex-works.
	Holdover Stability 24hr	-0.33		+0.33	$\times 10^{-6}$	Per GR-1244 Str. 3, Fig. 5-2, Var. temp. per GR-63 Table 4-4 (temperature variable speed less than 1℃per minute). Referenced to (Fmax + Fmin)/2.,
	Frequency Tolerance vs. Supply Voltage	-0.01		+0.01	$\times 10^{-6}$	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	-0.01		+0.01	$\times 10^{-6}$	5% load change measurement referenced to frequency observed withT_A=25℃,V_{cc}=3.3V, O_{Load}=15pF.
	Aging Tolerance Per Day	-0.02		+0.02	$\times 10^{-6}$	T_A=25℃, V_{cc}=3.3V, and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	
	Overall Stability	-4.6		+4.6	$\times 10^{-6}$	Inclusive of the following: - operating temperature -40℃ to 85℃ - 3.3V±5% - 15pF load ±5% - Reflow soldering - 20 years aging reference to nominal frequency

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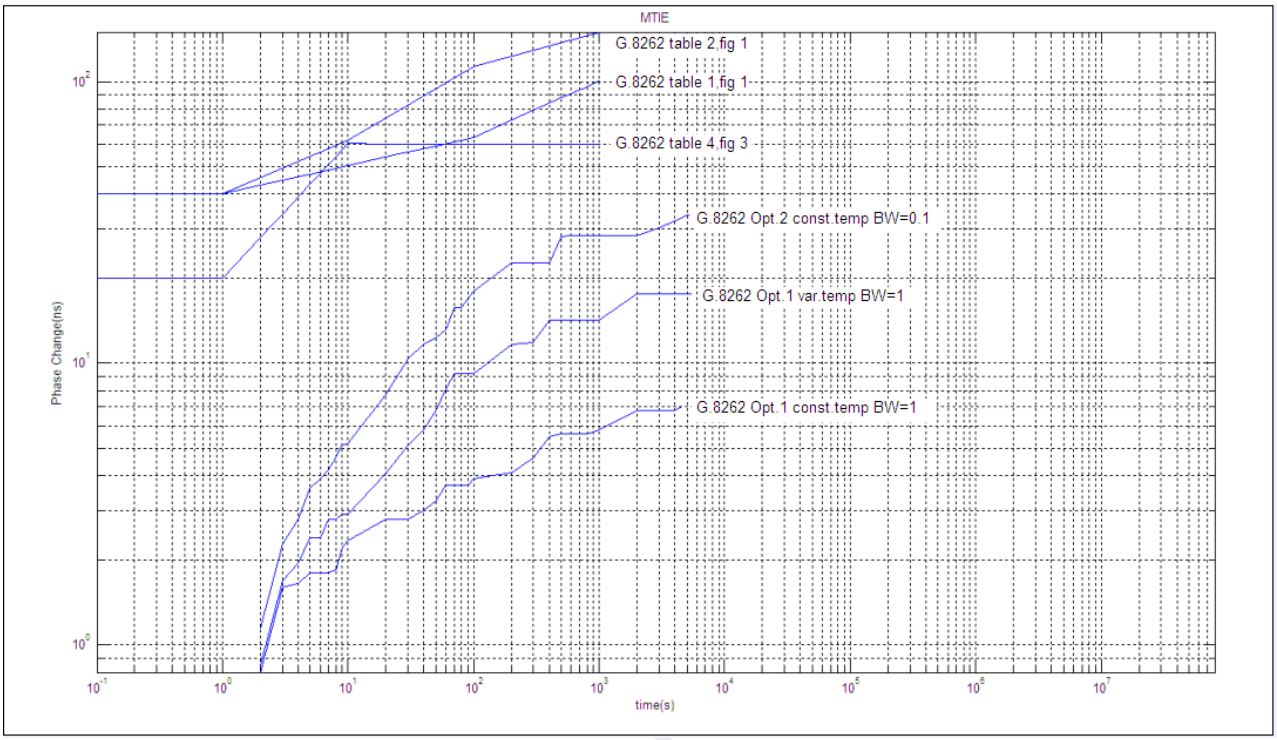
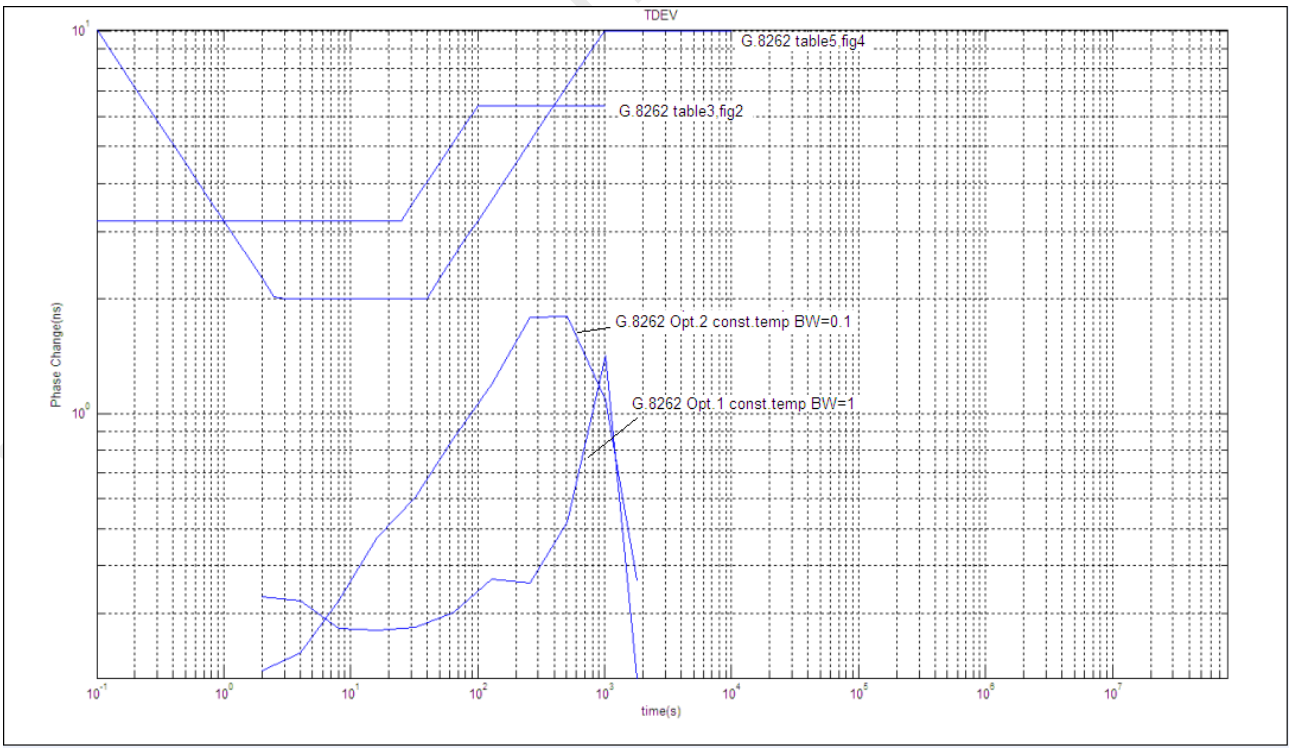
Power Supply	Current Consumption			8	mA	@25℃, V_{cc}=3.3V, O_{Load}=15pF.
	Supply Voltage	3.13	3.3	3.47	V	
Phase Noise	Phase Noise @25℃		-85	-80	dBc/Hz	10Hz
			-115	-110		100Hz
			-135	-130		1KHz
			-145	-140		10KHz
			-145	-140		100KHz
			-148	-143		1MHz
Environmental Conditions	Operable Temperature	-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℃				

2. Test Standard

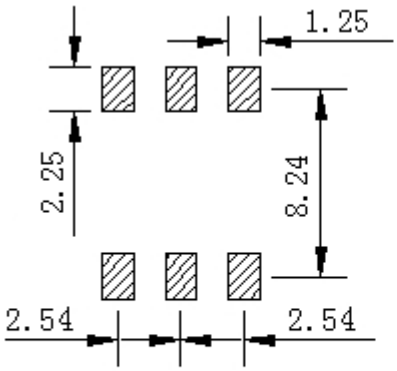
MTIE airflow=1m/s; Temp.gradient per GR-63 Table 4-4;



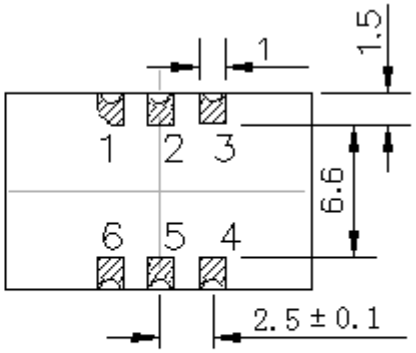
TDEV airflow=1m/s;



3. Mechanical Structure(mm)

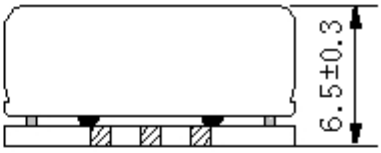


Solder Pad layout



Bottom view

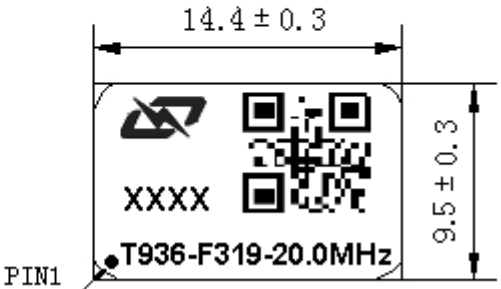

Right view



Side view

PIN FUNCTION

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



Top view

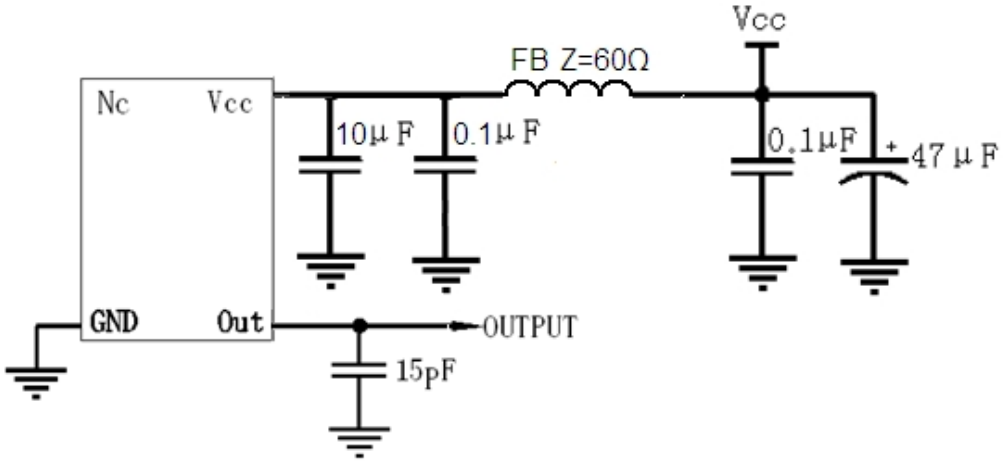
Note1: Tolerance ±0.20mm without mark

Note2: The first two xx representative: week
After two xx representative: year

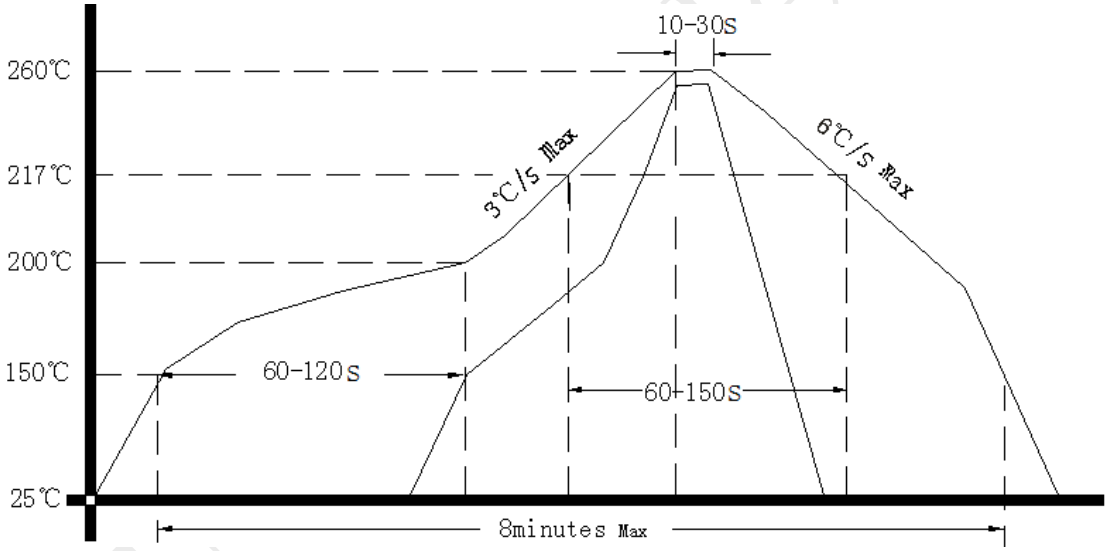
Note3: Referential weight 0.2g

Note4: NC is not connect

4. Test circuit



5. Reflow Soldering Curve (RoHS)



6. Package: Tape & Reel (mm)