Travelling Merchant:_____

DATASHEET

Standard: **DP7X27000005**

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Amway.wei	Carry.Wang	James.Liu	
Date: 2017.04.05			

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1、Electrical Parameters

MODEL：DP7X27000005							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	FL	27.00			MHz	
2	Frequency Stability	-	-30		+30	$\times 10^{-6}$	incl. 25℃ tolerance, tolerance over operating temperature range, input voltage change, load change, 1 year aging
3	Operating Temperature	Topr	-40	-	85	℃	
4	Storage Temperature	Tstg	-55	~	125	℃	
5	Supply Voltage	VDD	3.3±10%			V	
6	Input Current	Icc	-	-	10	mA	
7	Output State Control	-	Enable/disable			-	
8	Output Load： CMOS	CL	15			pF	
9	Output Voltage High	VoH	90%Vdd	-	-	V	
10	Output Voltage Low	Vol	-	-	10%Vdd	V	
11	Rise Time	Tr	-	-	5	ns	10%-90%VDD Level
12	Fall Time	Tf	-	-	5	ns	90%-10%VDD Level
13	Symmetry（Duty ratio）	TH/T	40	50	60	%	
14	Start-up Time	Tosc	-	-	3	ms	
15	Standby current			-	10	μA	
16	Phase Jitter(rms)		-	-	1	ps	12kHz to 20MHz
17	Aging	-	±3			$\times 10^{-6}$/yr.	1st. Year at 25℃
18	Oscillation mode		Fundamental				

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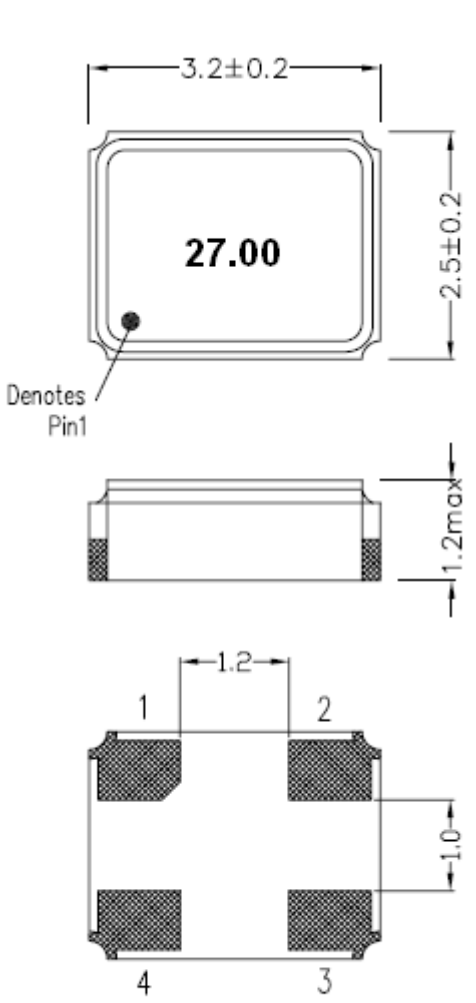
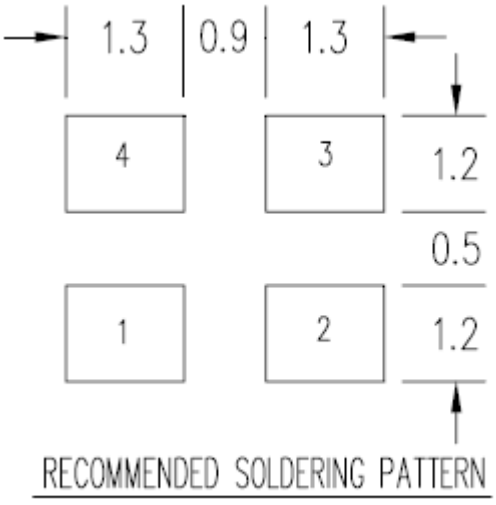
2、Mechanical Structure(mm)





PIN CONNECTION

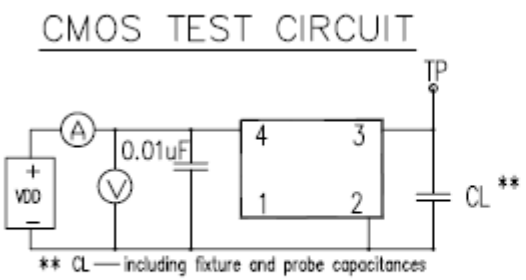
P/N	FUNCTION
1	Enable/Disable*
2	GND
3	Output
4	VDD

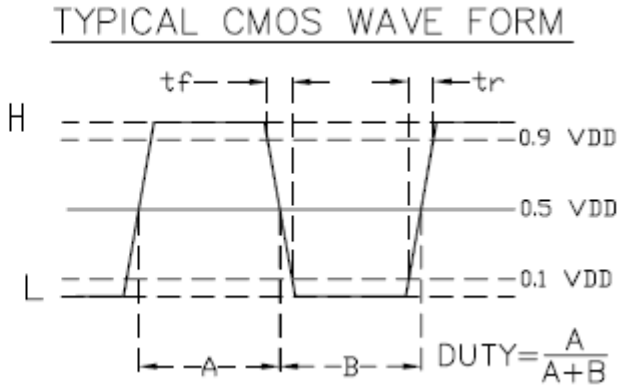
* Enable/Disable functional description

When pin1 goes high (>=0.7VDD) or open ,the Oscillator in normal operation and has output in frequency. When pin1 goes low (<=0.3VDD) ,the oscillator stops and the oscillator output (Pin3) becomes high impedance.

Note1: Tolerance ±0.2mm

3、Test Circuit and Wave Form





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4、Reliability Specifications

NO.	ITEM	SPECIFICATION	TEST METHOD
4.1	Temperature Cycle (GB/T 2423.22-2002, Method Nb)	Frequency change after test≤± 5ppm.	10 cycles from -55°C to 125°C. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.2	Low Temperature Storage (GB/T 2423.1-2001, Method Aa)	Frequency change after test≤± 5ppm.	Spending 72 hrs at -55°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.3	High Temperature Storage (GB/T 2423.2-2001, Method Ba)	Frequency change after test≤± 5ppm.	Spending 72 hrs at 125°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.4	Humidity (GB/T 2423.3-2006, Method Cab)	Frequency change after test≤± 5ppm.	Spending 96 hrs at 40 °C ± 3 °C, with 90± 3% R.H. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.5	Vibration (GB/T 2423.10-1995, Method Fc)	Frequency change after test≤± 5ppm.	Apply 0.75mm vibration at sweep frequency 10～500 Hz, for 2h. 10 cycles in each direction of 3 axis. Measurement taken after 1 hour.
4.6	Shock (GB/T 2423.5-1995, Method Ea)	Frequency change after test≤± 5ppm. No visible damages.	Peak 1000m/s2, normal width 6ms half sine wave form, 3.7m/s, 3 perpendicular axis of samples, 3 cycles / direction, total 18 cycles. Measurement taken after 1 hour.
4.7	Drop (GB/T 2423.8-1995, Method Ed)	Frequency change after test≤± 5ppm. No visible damages.	Free drop to the wooden plate from 1.0 m heights for 3 times.
4.8	Solderability (GB/T 2423.28-2005, Method Tc)	Terminals shall be covered more then 95% with solder.	In 245 ± 5℃ solder bath for 2 ± 0.5 seconds. There is no need to do functioned test. 8-12X magnifier.
4.9	Terminal Strength (JIS-C-6429 Method 1 & 2)	No visible damage	Mount on a glass-epoxy board (100x50x1.6mm), then bend to 2mm displacement (velocity 1mm/sec) and keep for 5 seconds. or pulling force 0.5 kg for at least 60 seconds.
4.10	Resistance to Soldering Heat (GB/T 2423.28-2005, Test Tb Method 1B)	Frequency change after test≤± 5ppm.	Passed through the re-flow oven under the following condition. Preheat to 150°C±5°C for 60 to 120sec,and peak 265°C±5°C for 10s±3sec.Measurement taken after DUT being left at room temperature for at 24±2 hours.

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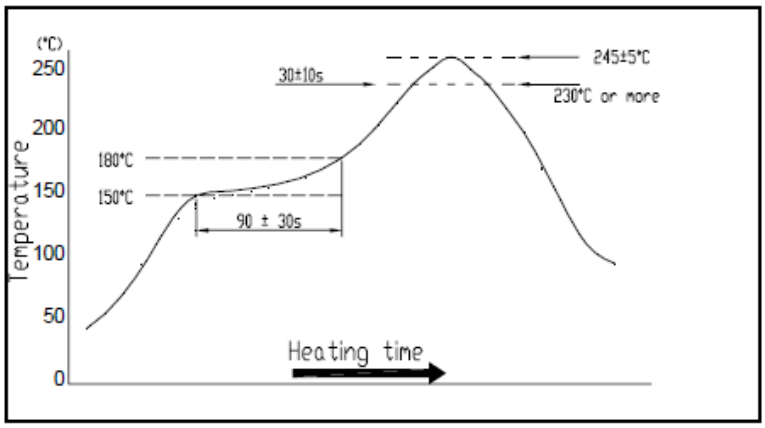
5、Recommended Reflow soldering condition (SMD)

■ Solder profile

Peak: 245±5℃ Soldering zone: 230℃ or more, 30±10s.
Pre-heating zone 1: 150～180℃, 90±30s



Temperature profile for reflow soldering

6、Package: Tape & Reel (mm)