



ShaanXi DongXin HengKe Electronics Co., LTD

陕西东芯恒科电子有限公司

SMD QUARTZ CRYSTAL OSCILLATOR

SMD X'TAL 7.00 x 5.00mm

Applications

Automotive
Electronics

Features

Dimensions: 7.00 x 5.00mm
Excellent Reliability Performance



Specifications

PARAMETERS	项目	SPECIFICATION 规格
Frequency Range	频率范围	1.0~220MHz
Supply Voltage	工作电压	1.8V、2.5V、2.8V、3.3V、5.0V
Supply Current	输入电流	See below
Frequency Stability Overall	频率稳定度	±20ppm~±50ppm
Operating Temp. Range	工作温度范围	-10~+60°C to -40~+85°C
Storage Temp. Range	储存温度范围	40~+85°C/-55~+125°C
Output Load	输出负载	HCMOS/TTL (15pF~30pF/10TTL)
Symmetry	占空比	45% ~ 55% typ. (40% ~ 60% max.) at 0.5×Vdc
Start-up Time	起振时间	10mS max
Enable/ Disable Function	三态控制	O/E or E/D

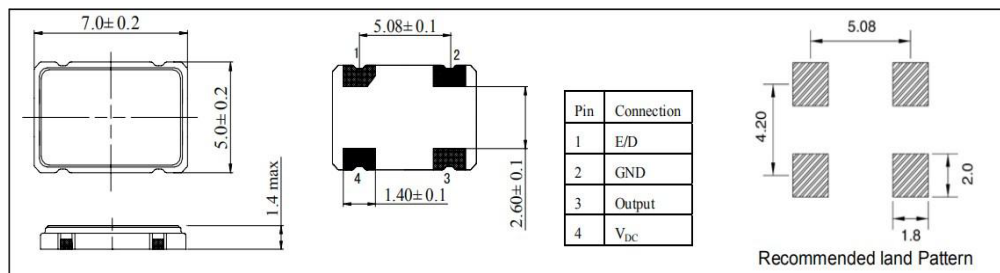
Table 1: Operating temperature range and frequency stability

Operation Temperature Range	Frequency Stability			
	±20ppm	±25ppm	±30ppm	±50ppm
-10°C~+60°C	○	●	●	●
-20°C~+70°C	○	○	●	●
-40°C~+85°C	○	○	○	●

Table 2: Rise & Fall TIME MA

Frequency	Rise & Fall Time	Note
1.0~9.9 MHz	6nS max	rise time: 0.1 VDC ~ 0.9 VDC fall time: 0.9 VDC ~ 0.1 VDC
10.0~39.9 MHz	5nS max	
40.0~69.9MHz	4nS max	
70.0~220.0MHz	3nS max	

Dimensions and Patterns [unit:mm]



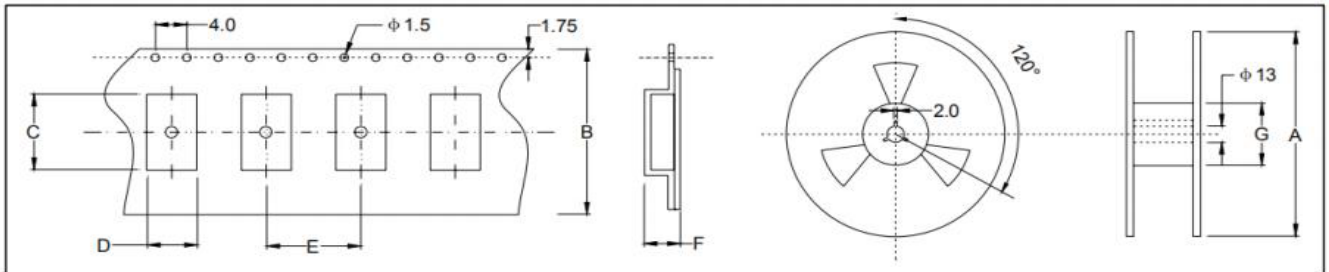
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INPUT CURRENT

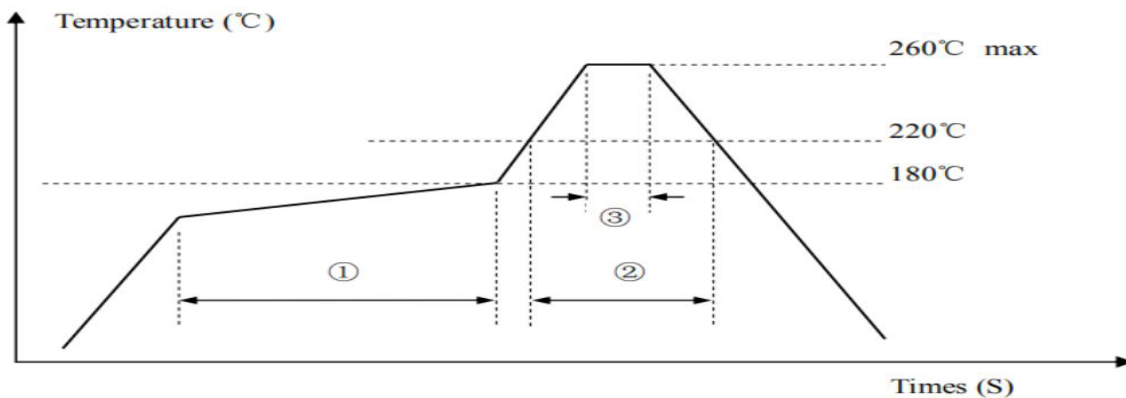
Vdc= 5.0V				Vdc= 3.3V			
15PF LOAD		30PF LOAD		15PF LOAD		30PF LOAD	
1.0 ~ 19.9 MHz	12 mA	1.0 ~ 19.9 MHz	15 mA	1.0 ~ 19.9 MHz	8 mA	1.0 ~ 19.9 MHz	15 mA
20.0 ~ 39.9 MHz	20 mA	20.0 ~ 39.9 MHz	30 mA	20.0 ~ 39.9 MHz	15 mA	20.0 ~ 39.9 MHz	25 mA
40.0 ~ 59.9 MHz	30 mA	40.0 ~ 49.9 MHz	35 mA	40.0 ~ 59.9 MHz	25 mA	40.0 ~ 59.9 MHz	30 mA
60.0 ~ 79.9 MHz	45 mA	50.0 ~ 80.0 MHz	55 mA	60.0 ~ 80.0 MHz	35 mA	60.0 ~ 79.9 MHz	35 mA
80.0 ~ 220.0 MHz	60 mA			80.0 ~ 220.0MHz	45 mA		

Taping Specification(Unit: mm)



	A	B	C	D	E	F	G
OSC-SMD7050	178±2.0	16.0±0.3	7.40±0.15	5.40±0.15	8.0±0.1	2.2±0.1	60.5±1.0
1000 pcs per reel							

REFLOW SOLDERING PROFILE



Pb free reflow A	①	Preheat	160~180°C	120sec. max
	②	Primary heat	220°C	60sec. max
	③	Peak	260°C	10sec. max.