



ShaanXi DongXin HengKe Electronics Co., LTD

陕西东芯恒科电子有限公司

SMD QUARTZ CRYSTAL OSCILLATOR

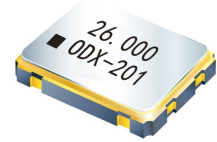
SMD X'TAL 2.50 x 2.00mm

Applications

Automotive  
Electronics

Features

Dimensions:2.50 x 2.00mm  
Excellent Reliability Performance



Specifications

PARAMETERS	参数	SPECIFICATION 规格
Frequency Range	频率范围	2.0M~50.0MHz
Supply Voltage	工作电压	1.8V、2.5V、2.8V、3.3V
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	-55~+125°C
Output Load	输出负载	HC MOS/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

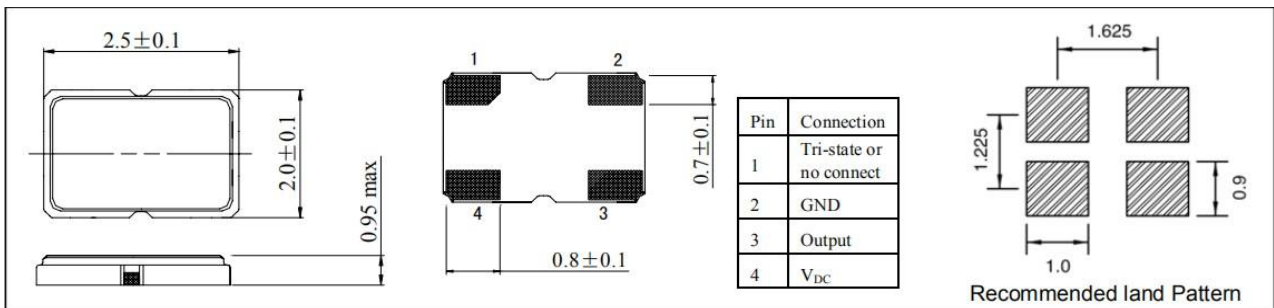
Table 1: Operating temperature range and frequency stability

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	VDC	Rise & Fall Time	VDC
2.0~9.9 MHz	5nS max	3.3V	6nS max	1.8V
10.0~19.9 MHz	5nS max		6nS max	
20.0~31.9 MHz	5nS max		6nS max	
32.0~50MHz	5nS max		6nS max	

Dimensions and Patterns [unit:mm]



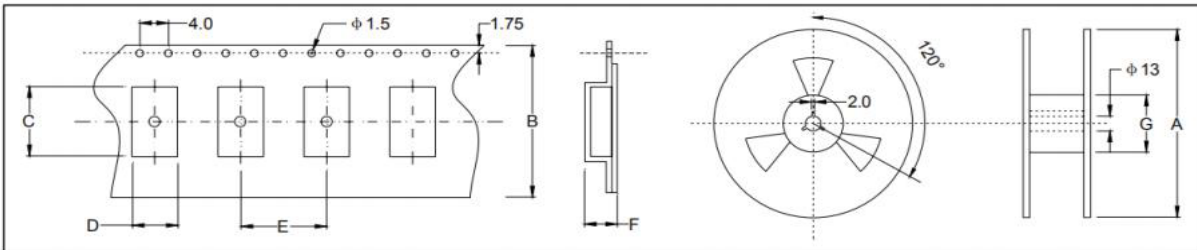
SMD QUARTZ CRYSTAL OSCILLATOR

SMD X'TAL 2.50 x 2.00mm

INPUT CURRENT

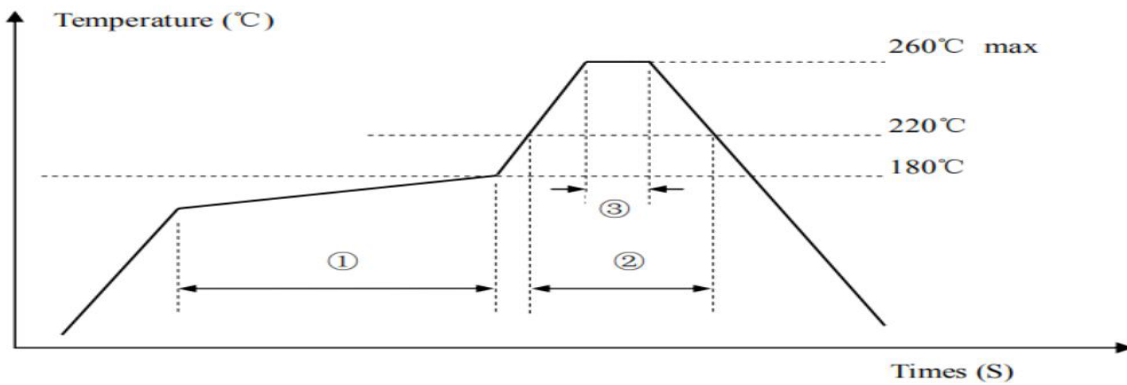
Vdc= 3.3V		Vdc=2.5V		Vdc=1.8V	
2.0 ~ 9.9 MHz	7 mA	2.0 ~ 9.9 MHz	8 mA	2.0 ~ 9.9 MHz	3 mA
10.0 ~ 19.9 MHz	7 mA	10.0 ~ 19.9 MHz	8 mA	10.0 ~ 19.9 MHz	5 mA
20.0 ~ 31.9 MHz	12 mA	20.0 ~ 31.9 MHz	8 mA	20.0 ~ 31.9 MHz	5 mA
32.0 ~ 50.0 MHz	20 mA	32.0 ~ 50.0 MHz	20 mA	32.0 ~ 50.0 MHz	10 mA

Taping Specification(Unit: mm)



	A	B	C	D	E	F	G
OSC-SMD2520	178±2.0	8.0±0.2	2.80±0.10	2.30±0.10	4.0±0.1	1.15±0.1	60.5±1.0
3000 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.