



ShaanXi DongXin HengKe Electronics Co., LTD

陕西东芯恒科电子有限公司

AUTOMOTIVE CLASS CRYSTAL RESONATORS

SMD X'TAL 3.2×2.5×0.7mm

Applications

GPS Auto Monitoring electronics

Features

Dimensions: 3.20 x 2.50 x 0.70 mm
 Reflow soldering is available
 Extremely good for reducing EMI effect
 High resolution frequency tolerance is obtained.



Specifications

Project	项目	SPECIFICATION 规格
Frequency Range	频率范围	12M~60MHz
Operation Mode	振动模式	Fundamental
Loading Capacitance	负载电容	9pF Std. 8 to 32pF , Series available
Drive Level	激励电平	10μW (200μW Max)
Frequency Tolerance	频率偏差	±10ppm ~±30PPM (at 25°C)
Equivalent Resistance	谐振电阻	See Below
Frequency Stability	频率稳定性	±10ppm ~±50PPM
Operating Temp. Range	工作温度范围	-40~+125°C
Storage Temp. Range	储存温度范围	-55 ~ +125°C

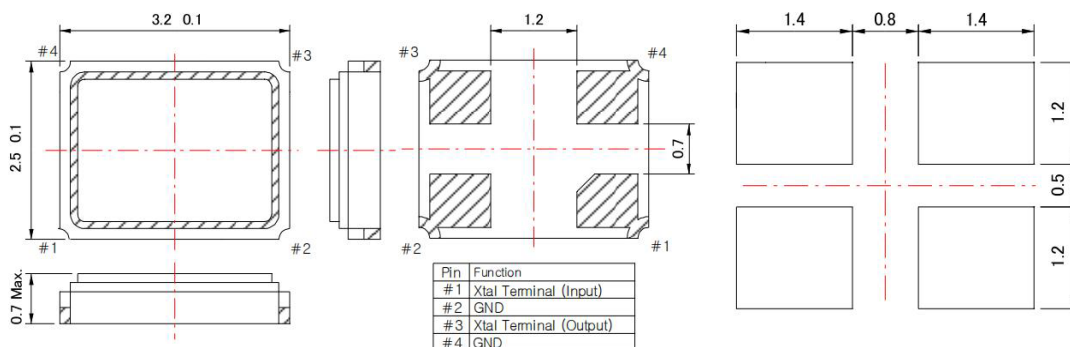
■ Table 1: Operating temperature range and frequency stability

Operation Temperature Range	Frequency Stability				
	±10PPM	±15PPM	±20PPM	±30PPM	±50PPM
-20°C~+70°C	●	●	●	●	●
-40°C~+85°C	○	○	○	●	●
-40°C~+125°C	○	○	○	○	●

■ Table 2: Equivalent series resistance

Frequency (MHz)	Overtone Order	ESR (Ω MAX)
8 ~11MHz	Fundamental	150 Ω (MAX)
12-16MHz	Fundamental	80 Ω (MAX)
17-24MHz	Fundamental	50 Ω (MAX)
25-60MHz	Fundamental	40 Ω (MAX)

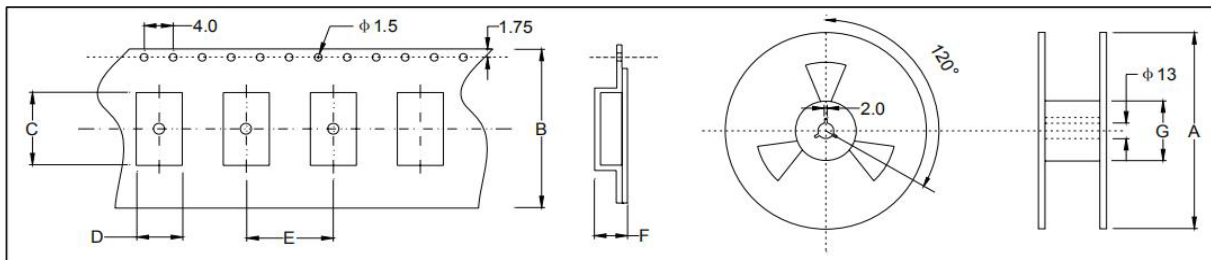
Dimensions and Patterns [unit:mm]



SMD QUARTZ CRYSTAL RESONATOR

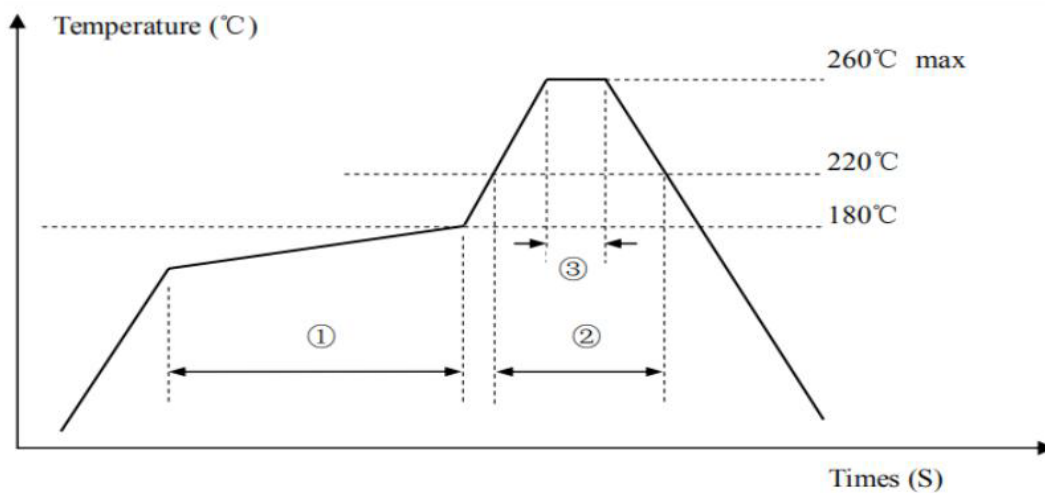
SMD X'TAL 3.2×2. 5×0.7mm

Taping Specification(Unit: mm)



	A	B	C	D	E	F	G
SMD3225	178±2.0	12.0±0.3	3.55±0.10	2.80±0.10	4.0±0.1	0.85±0.10	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.