



ShaanXi DongXin HengKe Electronics Co., LTD

陕西东芯恒科电子有限公司

AUTOMOTIVE CLASS CRYSTAL RESONATORS

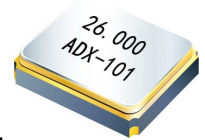
SMD X'TAL 1.6×1.2×0.35mm

Applications

GPS Auto Monitoring electronics

Features

Dimensions: 1.60 x 1.20 x 0.35 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	24M~60MHz
Operation Mode	振动模式	Fundamental
Loading Capacitance	负载电容	9pF Std. 8 to 22pF , Series available
Drive Level	激励电平	10μW (100μW 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

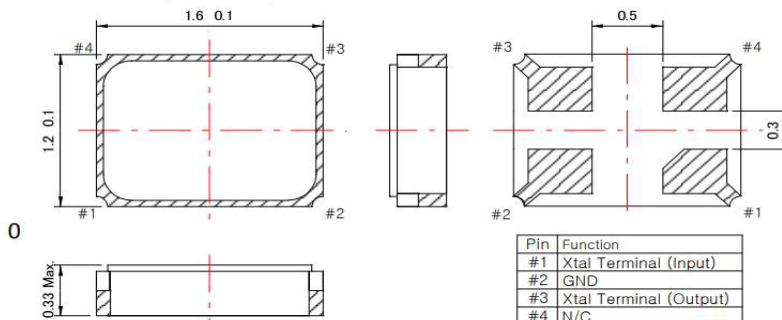
Operation Temperature Range	Frequency Stability				
	±10PPM	±15PPM	±20PPM	±30PPM	±50PPM
-20°C~+70°C	●	●	●	●	●
-40°C~+85°C	○	○	○	●	●
-40°C~+125°C	○	○	○	○	●

Table 2: Equivalent series resistance

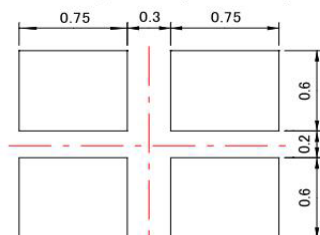
Frequency (MHz)	Overtone Order	ESR (Ω MAX)
24-31.999MHz	Fundamental	80Ω(MAX)
32-40.999MHz	Fundamental	70Ω(MAX)
41-52.999MHz	Fundamental	60Ω(MAX)
53-60MHz	Fundamental	50Ω(MAX)

Dimensions and Patterns [unit:mm]

Dimensions (unit: mm)



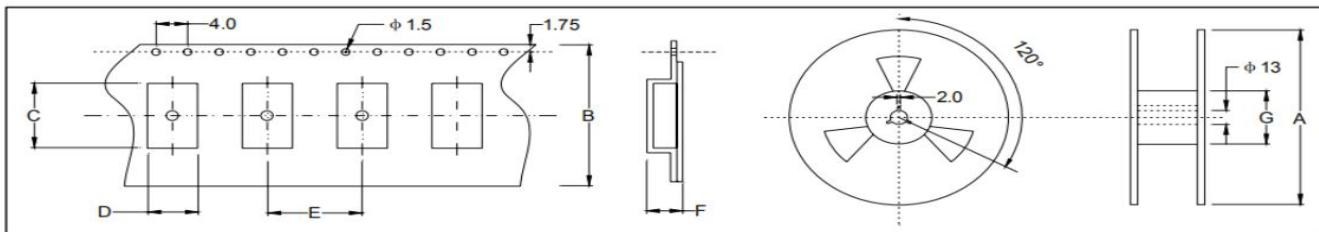
Land pattern (unit: mm)



Pin	Function
#1	Xtal Terminal (Input)
#2	GND
#3	Xtal Terminal (Output)
#4	N/C

SMD QUARTZ CRYSTAL RESONATOR SMD X'TAL 1.6×1.2×0.35mm

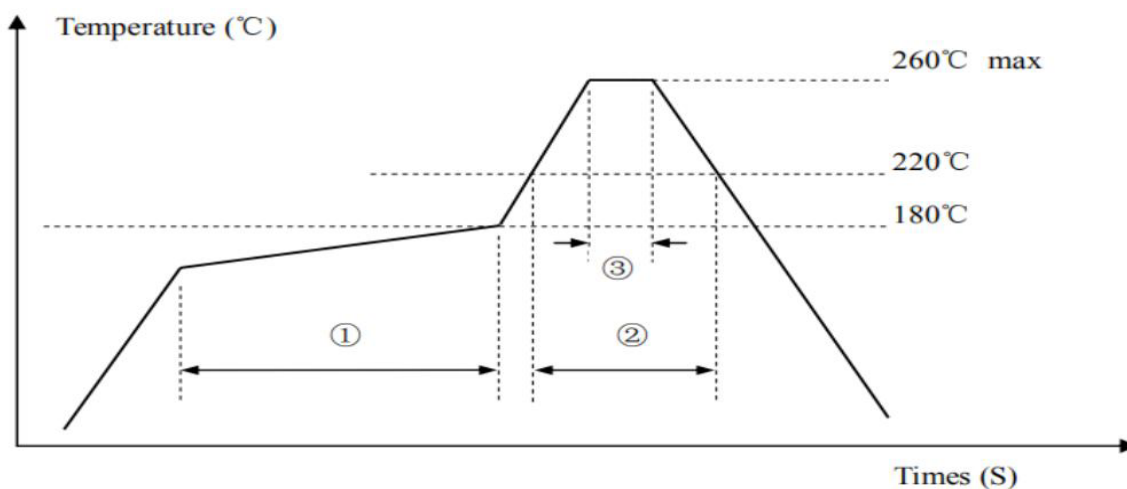
Taping Specification(Unit: mm)



	A	B	C	D	E	F	G
SMD1612	178±2.0	8.0±0.3	2.70±0.05	2.25±0.05	4.0±0.1	0.65±0.05	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.