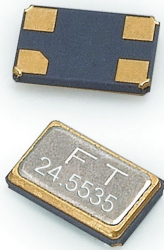


## SMD QUARTZ CRYSTAL RESONATOR



### 4 Pad Version 6.0×3.5 mm

- ±10 ppm type available
- Excellent Reliability Performance
- EMI shielding possible by grounded lid
- Reflow soldering temperature: 260°C max
- Ceramic Seam Weld package



RoHS compliant

### ★ PARAMETERS

PARAMETERS	SPECIFICATION
Frequency Range	7.3~50MHz
Operation Mode	Fundamental
Loading Capacitance	12pF Std. 8 to 32pF Series available
Drive Level	10 μ W ( 500 μ W Max )
Frequency Tolerance	±10ppm~±30ppm ( at 25°C )
Equivalent Resistance	60 Ω Max
Frequency Stability	±10ppm~±50ppm
Operating Temp. Range:	-10~+60°C to -40~+85°C
Storage Temp. Range:	-55~+125°C

○ All specification subject change without notice.

### ★ FREQUENCY STABILITY VS. TEMPERATURE

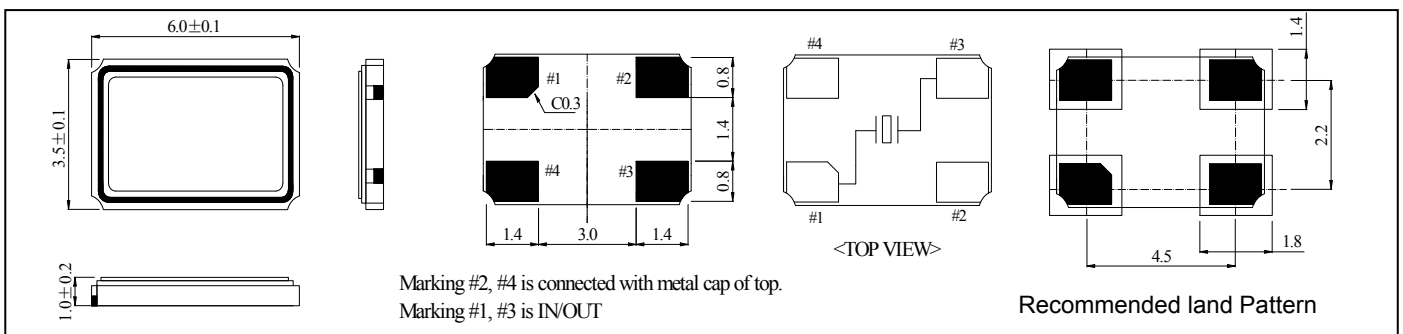
Operation Temperature Range	Frequency Stability				
	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
-10°C~+60°C	●	○	○	○	○
-20°C~+70°C	○	○	●	○	○
-40°C~+85°C		○	○	●	○

● standard ○ available

### ★ ESR (SERIES RESISTANCE RS)

Frequency	Vibration Mode	ESR
7.3-11.999MHz	AT CUT/FUND.	60Ω(MAX)
12-15.999MHz	AT CUT/FUND.	50Ω(MAX)
16-24.999MHz	AT CUT/FUND.	40Ω(MAX)
25-50.000MHz	AT CUT/FUND.	30Ω(MAX)

### ★ DIMENSIONS & LAND PATTERN LAYOUT (Unit: mm)



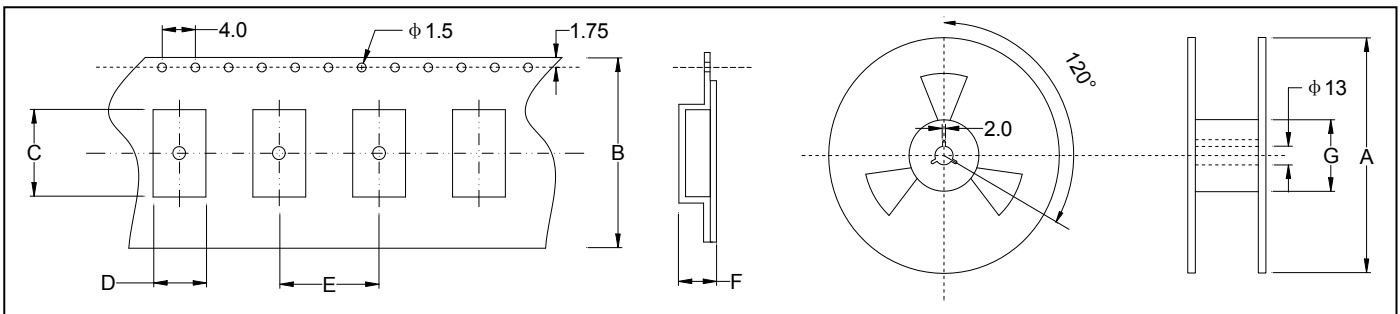
### ★ PART NUMBER GUIDE

e.g. FTX12.000M18SM6S-20/20B (\*SM6S=6.0×3.5 SMD SEAM TYPE)

Logo	Quartz Crystal Resonator	Frequency Hz	Load Capacitance pF	Package	Frequency Tolerance ppm	Frequency Stability ppm	Operating Temp. Range
FT	X	12.000M	18	SM6S	20	20	B

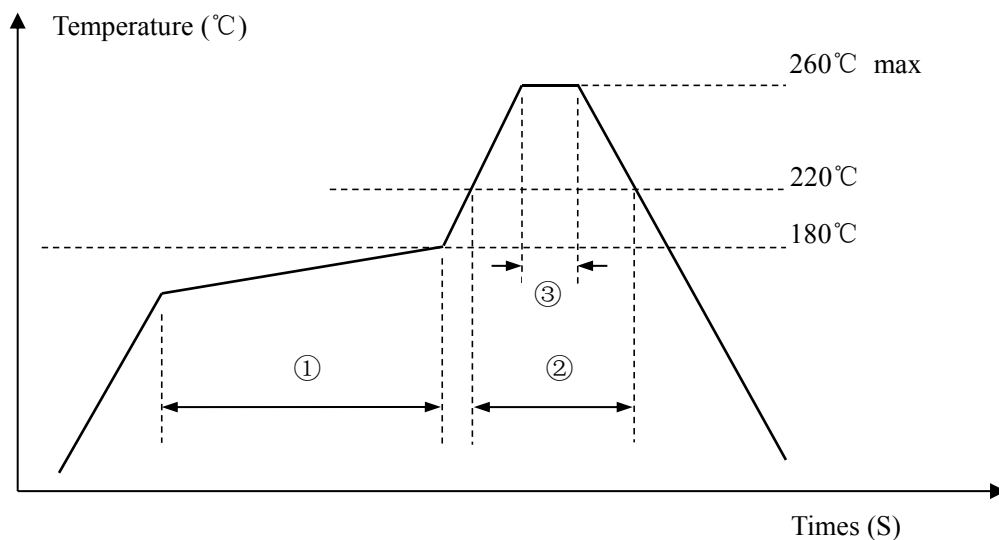
Definition	Description
Operating Temperature Range	A: -10~+60℃
	B: -20~+70℃
	C: -30~+80℃
	D: -40~+85℃
	E: Customer specified

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
SMD6035	178±2.0	16.0±0.3	6.40±0.10	3.90±0.10	8.0±0.1	1.5±0.1	60.5±1.0
1000 pcs per reel							

★ REFLOW SOLDERING PROFILE



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