

**SMD QUARTZ CRYSTAL RESONATOR**



**2 Pad Version 5.0×3.2 mm**

- ±10 ppm type available
- Excellent Reliability Performance
- Reflow soldering temperature: 260°C max
- Ceramic Glass sealed



RoHS compliant

**★ PARAMETERS**

PARAMETERS	SPECIFICATION
Frequency Range	8~54MHz
Operation Mode	Fundamental
Loading Capacitance	20pF Std. 8 to 32pF Series available
Drive Level	100 μ W ( 500 μ W Max )
Frequency Tolerance	±10ppm~±30ppm ( at 25°C )
Equivalent Resistance	100Ω Max
Frequency Stability	±10ppm~±50ppm
Operating Temp. Range:	-10~+60°C to -40~+125°C
Storage Temp. Range:	-55~+125°C

○ All specification subject change without notice.

**★ FREQUENCY STABILITY VS. TEMPERATURE**

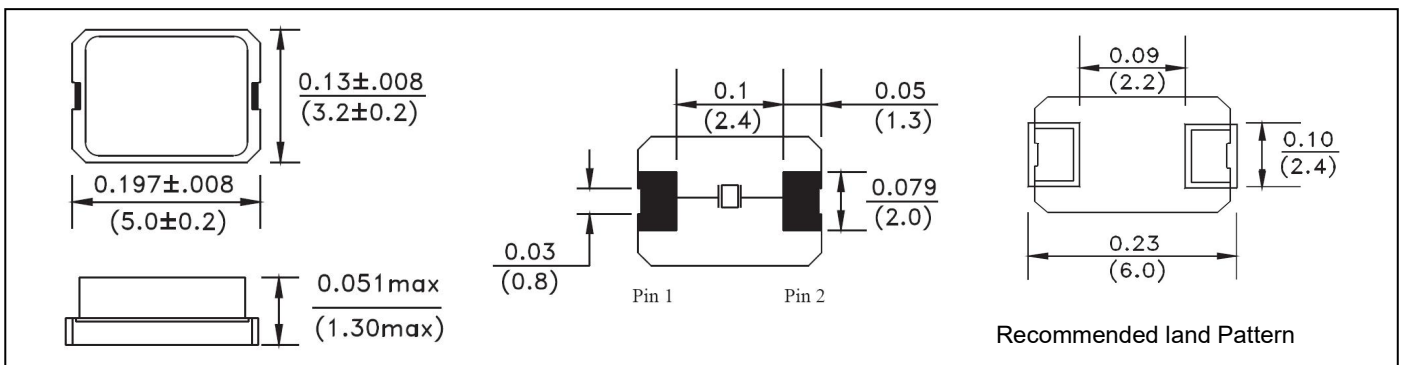
Operation Temperature Range	Frequency Stability					
	±5ppm	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
-10°C~+60°C		●	○	●	○	○
-20°C~+70°C		○	○	●	○	○
-40°C~+85°C				○	●	○

● standard ○ available

**★ ESR (SERIES RESISTANCE RS)**

Frequency	Vibration Mode	ESR
8-9.999MHz	AT CUT/FUND.	100Ω Max.
10-11.999MHz	AT CUT/FUND.	60Ω Max.
12-15.999MHz	AT CUT/FUND.	50Ω Max.
16-24.999MHz	AT CUT/FUND.	40Ω Max.
25-54.000MHz	AT CUT/FUND.	30Ω Max.

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



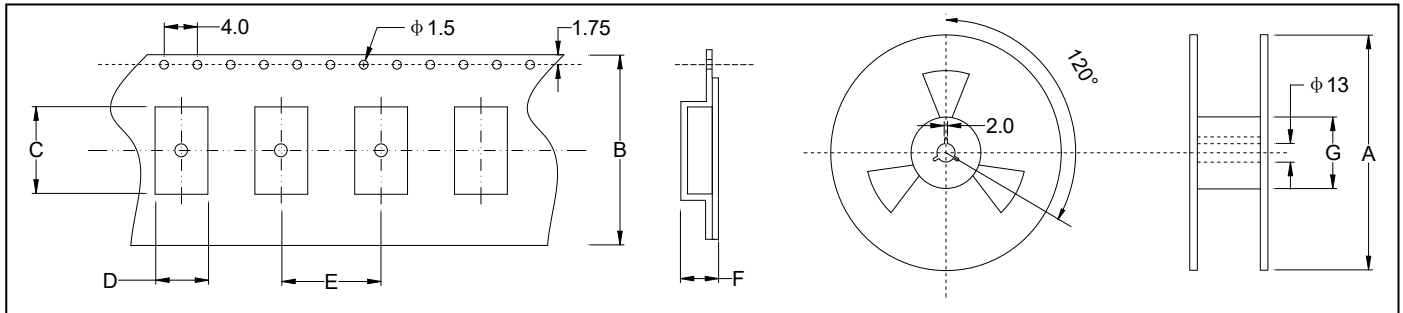
**★ PART NUMBER GUIDE**

e.g. FTX12.000M20SM5GA-30/30B (\*SM5G=5.0×3.2 SMD GLASS 2PAD TYPE)

Logo	Quartz Crystal Resonator	Frequency Hz	Load Capacitance pF	Package	Frequency Tolerance ppm	Frequency Stability ppm	Operating Temp. Range
FT	X	12.000M	20	SM5GA	30	30	B

Definition	Description	
Operating Temperature Range	A: -10~+60°C	B: -20~+70°C
	C: -30~+80°C	D: -40~+85°C
	E: -30~+105°C	F: -40~+105°C
	G: -40~+125°C	S: Customer specified

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
SMD5032G	178±2.0	12.0±0.3	5.40±0.10	3.60±0.10	8.0±0.1	1.1±0.1	60.5±1.0
1000 pcs per reel							

★ REFLOW SOLDERING PROFILE

