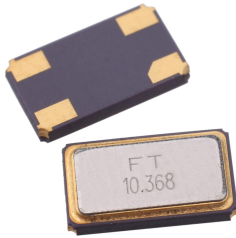


SMD QUARTZ CRYSTAL RESONATOR



4 Pad Version 7.0×5.0 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	6~133MHz
Operation Mode	Fundamental, 3 rd Overtone
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	80Ω 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

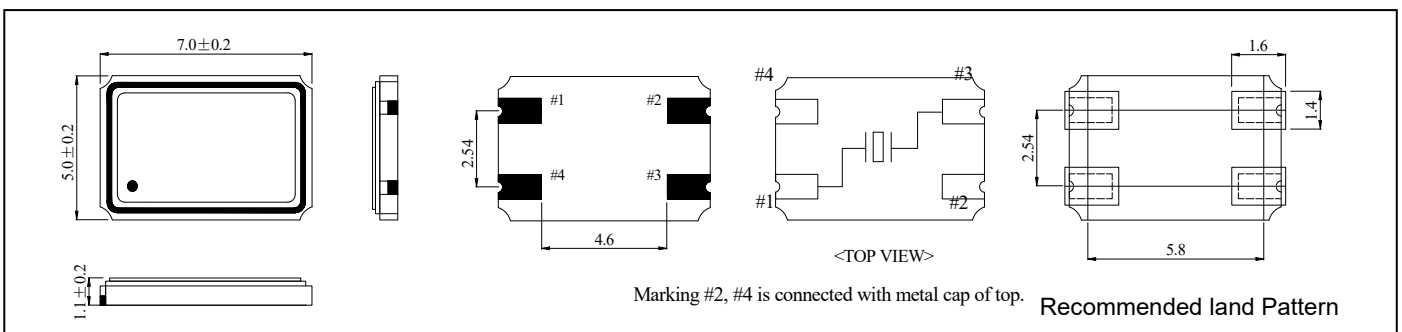
Operation Temperature Range	Frequency Stability				
	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
-10°C~+60°C	●	○	○	○	○
-20°C~+70°C	○	○	●	○	○
-40°C~+85°C		○	○	●	○

● standard ○ available

★ ESR (SERIES RESISTANCE RS)

Frequency	Vibration Mode	ESR
6-9.999MHz	AT CUT/FUND.	80Ω Max.
10-15.999MHz	AT CUT/FUND.	50Ω Max.
16-24.999MHz	AT CUT/FUND.	40Ω Max.
25-50.000MHz	AT CUT/FUND.	30Ω Max.
40-133.000MHz	AT 3 rd OT	on request

★ DIMENSIONS& LAND PATTERN LAYOUT (Unit: mm)

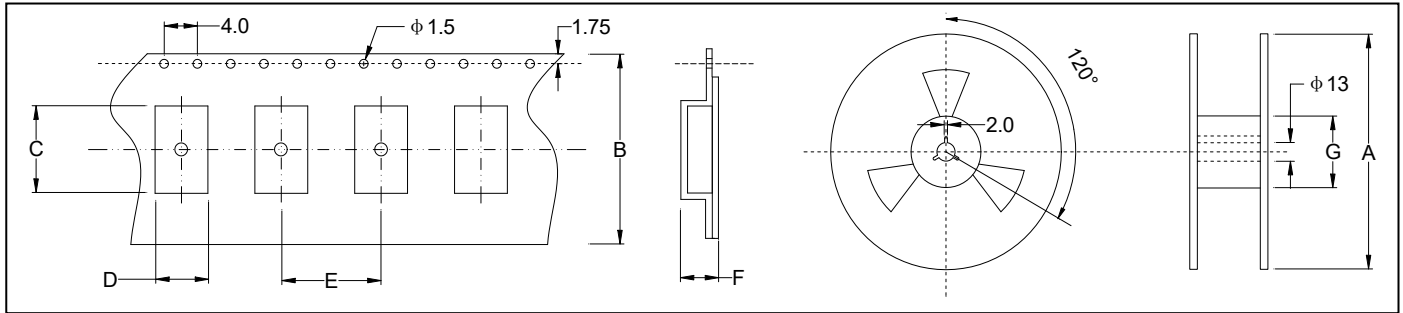


★ PART NUMBER GUIDE e.g. FTX12.000M18SM7S-20/20B (*SM7S=7.0×5.0 SMD SEAM TYPE)

Logo	Quartz Crystal Resonator	Frequency Hz	Load Capacitance pF	Package	Frequency Tolerance ppm	Frequency Stability ppm	Operating Temp. Range
FT	X	12.000M	18	SM7S	20	20	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
SMD7050	178±2.0	16.0±0.3	7.40±0.10	5.40±0.10	8.0±0.1	1.8±0.1	60.5±1.0
1000 pcs per reel							

★ REFLOW SOLDERING PROFILE

