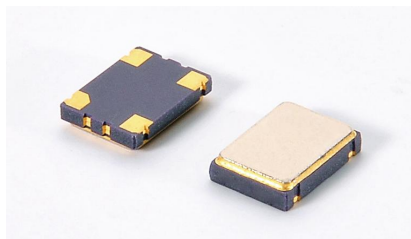


SMD QUARTZ CRYSTAL OSCILLATOR



4 Pad Version 7.0×5.0 mm

- ± 20 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	1~125MHz
Supply voltage	1.8V、2.5V、2.8V、3.3V、5.0V
Input Current	See Below
Frequency Stability Overall	± 20 ppm~ ± 50 ppm
Operating Temp. Range	-10~+60°C to -40~+85°C
Storage Temp. Range	-55~+125°C
Output Load	HCMOS/TTL (15pF~30pF/10TTL)
Symmetry	45% ~ 55% typ. (40% ~ 60% max.) at 0.5×Vdc
Start-up time	10mS max
Enable/ Disable Function	O/E or E/D

○ All specification subject change without notice.

★ FREQUENCY STABILITY VS. TEMPERATURE

Operation Temperature Range	Frequency Stability			
	± 20 ppm	± 25 ppm	± 30 ppm	± 50 ppm
-10°C~+60°C	○	●	○	○
-20°C~+70°C		○	●	○
-40°C~+85°C		○	○	●

● standard ○ available

★ Rise & Fall TIME MAX.

Frequency	Rise & Fall Time	Note
1.0~9.9 MHz	6nS max	rise time: 0.1 Vdc ~ 0.9 Vdc
10.0~39.9 MHz	5nS max	
40.0~69.9 MHz	4nS max	fall time: 0.9 Vdc ~ 0.1 Vdc
70.0~125.0 MHz	3nS max	

★ DIMENSIONS& LAND PATTERN LAYOUT (Unit: mm)

Top view dimensions: 7.0 ± 0.2 (width), 5.0 ± 0.2 (height).

Side view dimension: 1.4 max (thickness).

Bottom view dimensions: 5.08 ± 0.1 (distance between pins 1 and 2), 1.40 ± 0.1 (width of pins 3 and 4), 2.60 ± 0.1 (distance between pins 2 and 3).

Pin numbers: 1, 2, 3, 4.

Pin	Connection
1	E/D
2	GND
3	Output
4	V _{DC}

Recommended land pattern dimensions: 5.08 (distance between pads), 4.20 (distance between pads), 2.0 (width of pads), 1.8 (distance between pads).

Recommended land Pattern

★ PART NUMBER GUIDE e.g. FXO12.000M3.3SM7-50D(*SM7=7.0×5.0SMD TYPE)

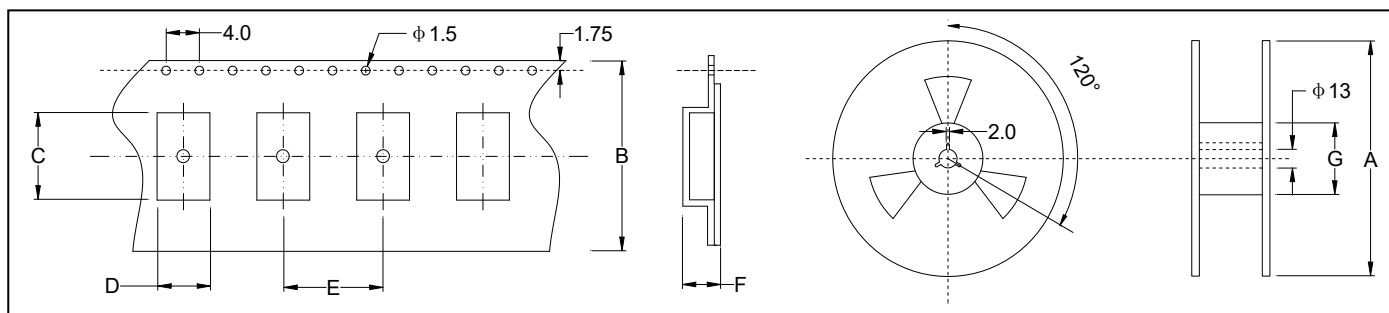
	Quartz Crystal Oscillator	Frequency	Supply voltage	Package	Frequency Stability ppm	Operating Temp. Range
F	XO	12.000	3.3	SM7	50	D

Definition	Description	Definition	Description
Frequency Stability	A: $\pm 25\text{ppm}$	Operating Temp.	A: $0\sim+70^{\circ}\text{C}$
	B: $\pm 50\text{ppm}$		B: $-20\sim+70^{\circ}\text{C}$
	C: $\pm 100\text{ppm}$		C: $-30\sim+85^{\circ}\text{C}$
	D: Customer specified		D: $-40\sim+85^{\circ}\text{C}$
			E: Customer specified

★ INPUT CURRENT

Vdc=5.0V				Vdc=3.3V			
15pF load		30pF load		15pF load		30pF load	
1.0 ~ 19.9 MHz	12 mA	1.0 ~ 19.9 MHz	15 mA	1.0 ~ 19.9 MHz	8 mA	1.0 ~ 19.9 MHz	15 mA
20.0 ~ 39.9 MHz	20 mA	20.0 ~ 39.9 MHz	30 mA	20.0 ~ 39.9 MHz	15 mA	20.0 ~ 39.9 MHz	25 mA
40.0 ~ 59.9 MHz	30 mA	40.0 ~ 59.9 MHz	35 mA	40.0 ~ 59.9 MHz	25 mA	40.0 ~ 59.9 MHz	30 mA
60.0 ~ 79.9 MHz	45 mA	50.0 ~ 80.0 MHz	55 mA	60.0 ~ 79.9 MHz	35 mA	60.0 ~ 79.9 MHz	35 mA
80.0 ~ 125.0MHz	60 mA			80.0 ~ 125.0MHz	45 mA		

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
OSC-SMD7050	178 ± 2.0	16.0 ± 0.3	7.40 ± 0.15	5.40 ± 0.15	8.0 ± 0.1	2.2 ± 0.1	60.5 ± 1.0
1000 pcs per reel							

★ REFLOW SOLDERING PROFILE

