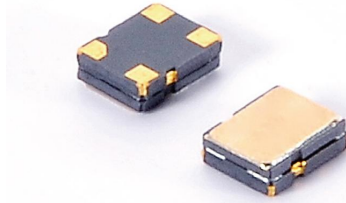


SMD QUARTZ CRYSTAL OSCILLATOR



4 Pad Version 3.2×2.5 mm

- ±20 ppm type available
- Excellent Reliability Performance
- EMI shielding possible by grounded lid
- Reflow soldering temperature: 260℃ max
- Ceramic Seam Weld package



RoHS compliant

★ PARAMETERS

PARAMETERS	SPECIFICATION
Frequency Range	2~80MHz, 32.768KHz
Supply voltage	1.8V、2.5V、2.8V、3.3V、5.0V
Input Current	See Below
Frequency Stability Overall	±20ppm~±50ppm
Operating Temp. Range	-10~+60℃ to -40~+85℃
Storage Temp. Range	-55~+125℃
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			
	±20ppm	±25ppm	±30ppm	±50ppm
-10℃~+60℃	○	●	○	○
-20℃~+70℃		○	●	○
-40℃~+85℃				●

● standard ○ available

★ Rise & Fall TIME MAX.

Frequency	Rise & Fall Time	Note
2.0~9.9 MHz	6nS max	rise time: 0.1 V _{dc} ~ 0.9 V _{dc} fall time: 0.9 V _{dc} ~ 0.1 V _{dc}
10.0~39.9 MHz	5nS max	
40.0~79.9 MHz	4nS max	

★ DIMENSIONS& LAND PATTERN LAYOUT (Unit: mm)

Top view dimensions: 3.2 ± 0.1 , 2.5 ± 0.1 . Pin locations: 1, 2, 3, 4. Side view dimension: 1.1 max .

Bottom view dimensions: 0.9 ± 0.1 , 0.65 ± 0.1 . Pin locations: 1, 2, 3, 4.

Pin	Connection
1	Tri-state or no connect
2	GND
3	Output
4	V_{DC}

Recommended land Pattern dimensions: 2.2 , 1.6 , 1.0 , 1.4 .

★ PART NUMBER GUIDE

e.g. FXO12.000M3.3SM3-50D (*SM2=3.2×2.5 SMD TYPE)

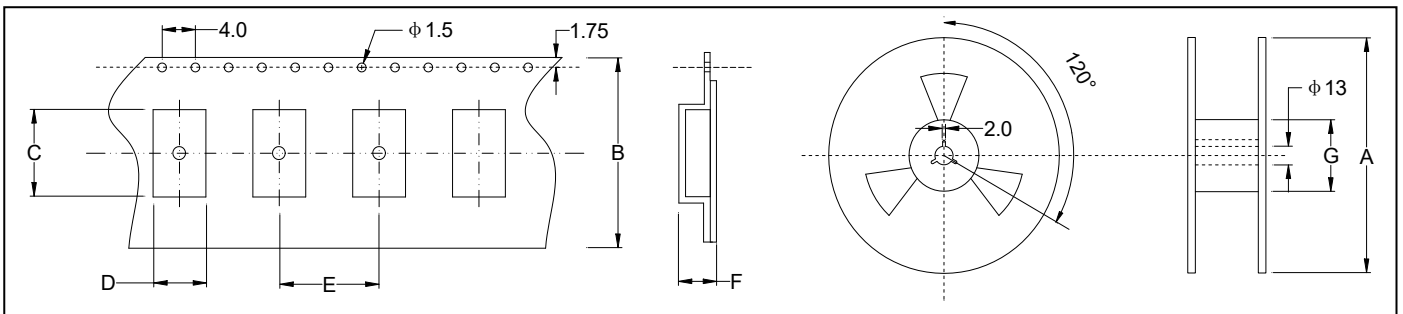
Logo	Quartz Crystal Oscillator	Frequency Hz	Supply voltage V	Package	Frequency Stability ppm	Operating Temp. Range
F	XO	12.000M	3.3	SM3	50	D

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

★ INPUT CURRENT

Vdc=3.3V				Vdc=1.8V			
15pF load		30pF load		15pF load		30pF load	
1.0 ~ 19.9 MHz	4 mA	1.0 ~ 19.9 MHz	6 mA	1.0 ~ 19.9 MHz	2 mA	1.0 ~ 19.9 MHz	6 mA
20.0 ~ 39.9 MHz	7 mA	20.0 ~ 39.9 MHz	13 mA	20.0 ~ 39.9 MHz	3 mA	20.0 ~ 29.9 MHz	10 mA
40.0 ~ 59.9 MHz	19 mA	40.0 ~ 49.9 MHz	24 mA	40.0 ~ 59.9 MHz	10 mA	30.0 ~ 40.0 MHz	12 mA
60.0 ~ 79.9 MHz	24 mA	50.0 ~ 60.0 MHz	35 mA	60.0 ~ 80.0 MHz	12 mA		

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
OSC-SMD3225	178±2.0	8.0±0.3	3.55±0.10	2.80±0.10	4.0±0.1	1.4±0.1	60.5±1.0
3000 pcs per reel							

★ REFLOW SOLDERING PROFILE

