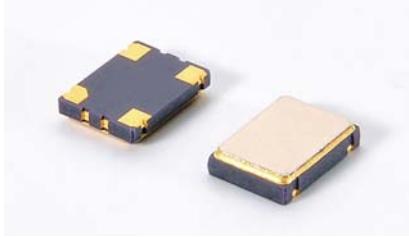


SMD QUARTZ CRYSTAL OSCILLATOR
石英晶体振荡器

4 Pad Version 7.0x5.0 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
技术参数

| PARAMETERS | 参数 | SPECIFICATION 规格 |
|-----------------------------|--------|--|
| Frequency Range | 频率范围 | 1~125MHz |
| Supply voltage | 工作电压 | 1.8V、2.5V、2.8V、3.3V、5.0V |
| Input Current | 输入电流 | See Below |
| Frequency Stability Overall | 频率稳定性 | ± 20 ppm~ ± 50 ppm |
| Operating Temp. Range | 工作温度范围 | -10~+60°C to -40~+85°C |
| Storage Temp. Range | 储存温度范围 | -55~+125°C |
| Output Load | 输出负载 | HCMOS/TTL (15pF~30pF/10TTL) |
| Symmetry | 占空比 | 45% ~ 55% typ. (40% ~ 60% max.) at 0.5xVdc |
| Start-up time | 起振时间 | 10mS max |
| Enable/ Disable Function | 三态控制 | O/E or E/D |

◎ All specification subject change without notice. 规格变化, 恕不另行通知。

★ FREQUENCY STABILITY VS. TEMPERATURE 频率温度特性

| 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. 上升/下降时间

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

★ DIMENSIONS & LAND PATTERN LAYOUT (Unit: mm) 外形尺寸

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

Recommended land Pattern

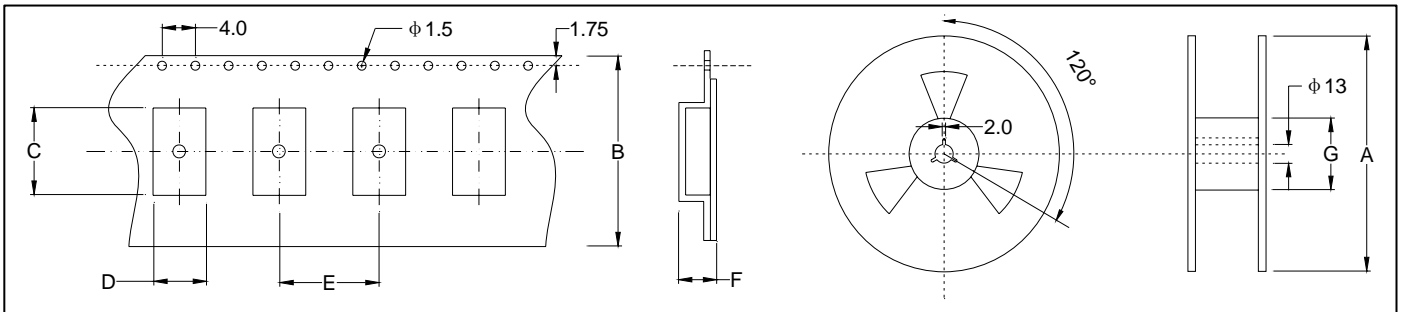
★ PART NUMBER GUIDE 部件号示例 e.g. FXO12.000AA3.3SM3 (*SM3=3.2x2.5 SMD TYPE)

| | Quartz Crystal Oscillator 石英晶体振荡器 | Frequency 频率 | Frequency Stability 频率稳定度 | Operating Temp. 工作温度 | Supply voltage 工作电压 | Package 盒型 |
|---|--------------------------------------|-----------------|------------------------------|-------------------------|------------------------|---------------|
| F | XO | 12.000 | A | A | 3.3 | SM7 |

| Definition | Description | Definition | Description |
|------------------------------|------------------------|-------------------------|---------------------------------|
| Frequency Stability 频率稳定度 | A: $\pm 25\text{ppm}$ | Operating Temp. 工作温度 | 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: $-40\sim+85^{\circ}\text{C}$ |
| | D: Customer specified | | D: Customer specified |

★ INPUT CURRENT 工作电流

| 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) 编带规格


| | 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 回流焊特性
