



YSO110TR

给您一颗快乐的“芯”！



Features

- Package Size: 2.0*1.6 2.5*2.0 3.2*2.5 5.0*3.2 7.0*5.0mm
- Frequency range: 1MHz ~ 50MHz.
- Ultra Small SMD seam sealed clock crystal oscillator units.
- Applications: WLAN, Bluetooth, DSC, DSL and other IT product.
- Tri-state function available

Electrical Specifications

| Item / Type | YSO110TR |
|--|---------------------------------------|
| Output Frequency Range | 1~50MHz or specify |
| Output Type | CMOS |
| Supply Voltage | 1.8V ~ 3.3V |
| Oscillation Mode | Fundamental |
| Frequency Tolerance (at 25) | ±10ppm, ±20ppm, or specify |
| Output Load | 15 pF, or specify |
| Operating Temperature Range | -40~+85 °C , or specify |
| Frequency Versus Temperature Characteristics | ± 20ppm, ± 30ppm, ± 50ppm, or specify |
| Storage Temperature Range | - 55 ~ + 125 °C |
| Voltage Vol (Max.) / Vol (Min.) | 90%Vdd min./10%Vdd max |
| Symmetry | 45~55% |
| Rise (Tr) / Fall (Tf) Time | 4ns Max. |
| Start-up Time | 3 msMax. |
| Supply Current | See Below |
| Frequency Aging (at 25 °C) | ± 3 ppm / year Max. |

Dimensions

| PAD | #1 | #2 | #3 | #4 |
|----------|------------------|-----|--------|-----|
| FUNCTION | Enable / Disable | GND | OUTPUT | VDD |

Notes:

1. To maintain stable operation provide a 0.01uF to 0.1uF by-pass capacitor at a location as near as possible to the power source terminal of the crystal product(between Vcc-GND)

Top View

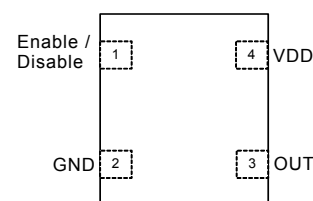


Figure 1. Pin Assignments

| Package Size -- Dimensions(Unit:mm) | Recommended layout Pattern (Unit:mm) |
|-------------------------------------|--------------------------------------|
| 2.0x1.6x0.80mm | |



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| Package Size -- Dimensions(Unit:mm) | Recommended layout Pattern (Unit:mm) |
|-------------------------------------|--------------------------------------|
| <p>2.5x2.0x0.90mm</p> | |
| <p>3.2x2.5x1.00mm</p> | |
| <p>5.0x3.2x1.20mm</p> | |
| <p>7.0x5.0x1.30mm</p> | |



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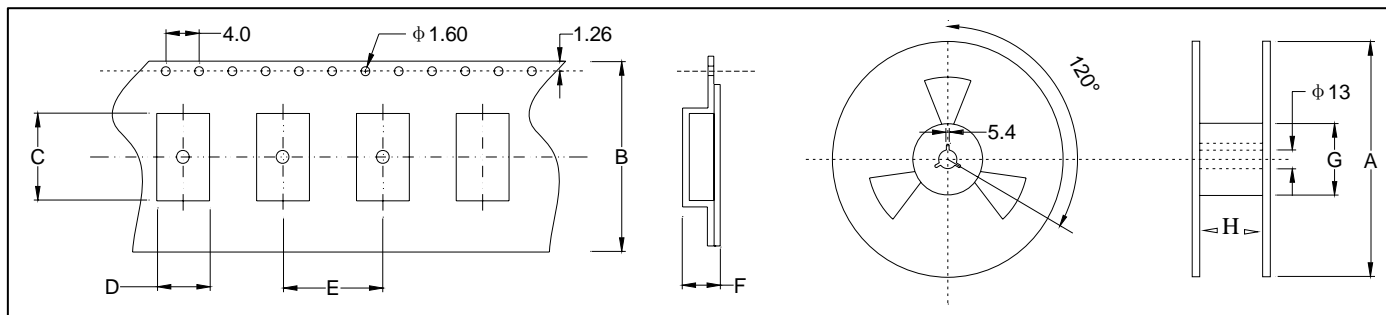
★ PART NUMBER GUIDE 部件号示例 e.g. OT252028.888MJBA4SL YSO110TR=2.5×2.0 SMD SEAM TYPE

| Quartz Crystal Oscillator | Type Code | Package Size | Frequency (Hz) | Supply Voltage (V) | Frequency Stability Overall (ppm) | Output | Pin | Material | Operating Temp. Frequency Temp. |
|---------------------------|-----------|--------------------------------|----------------|--------------------|-----------------------------------|--------|-----|----------|---------------------------------|
| O | T | 2016 2520 3225 5032 7050 | 28.888M | J | B | A | 4 | S | L |

★ INPUT CURRENT 工作电流

| | | Vdc=1.8~3.3V | | 15pF only | |
|---------|----------------|----------------|-----------|---------------------|----------|
| Voltage | Frequency Size | 1~40MHZ | | 41~50MHZ | |
| | | 7050/5032/3225 | 2520/2016 | 7050/5032/3225/2520 | 2016 |
| 1.8V | | 4mA max | 4mA max | 9mA max | 10mA max |
| 2.5V | | 4.5mA max | | 10mA max | |
| 3.3V | | 5mA max | | 12mA max | |

★ TAPING SPECIFICATION (Unit: mm) 编带规格



| Size | A | B | C | D | E | F | G | H |
|----------------------|---------|----------|-----------|-----------|----------|----------|----------|----------|
| OSC-SMD7050 1000 pcs | 180±2.0 | 16.0±0.3 | 7.50±0.10 | 5.50±0.10 | 8.00±0.1 | 2.00±0.1 | 61.0±1.0 | 16.0±1.0 |
| OSC-SMD5032 1000 pcs | 180±2.0 | 12.0±0.3 | 5.40±0.10 | 3.60±0.10 | 8.00±0.3 | 1.70±0.1 | 61.0±1.0 | 12.0±1.0 |
| OSC-SMD3225 3000 pcs | 180±2.0 | 8.0±0.3 | 3.40±0.10 | 2.70±0.10 | 4.00±0.1 | 1.50±0.1 | 61.0±1.0 | 8.0±1.0 |
| OSC-SMD2520 3000 pcs | 180±2.0 | 8.0±0.3 | 2.90±0.10 | 2.40±0.10 | 4.00±0.1 | 1.20±0.1 | 61.0±1.0 | 8.0±1.0 |
| OSC-SMD2016 3000 pcs | 180±2.0 | 8.0±0.3 | 2.30±0.10 | 1.90±0.10 | 3.85±0.1 | 0.95±0.1 | 61.0±1.0 | 8.0±1.0 |

★ REFLOW SOLDERING PROFILE 回流焊特性



| Pb free reflow A | ① | Preheat | 160~180℃ | 120sec. max |
|------------------|---|--------------|----------|-------------|
| | ② | Primary heat | 220℃ | 60sec. max |
| | ③ | Peak | 260℃ | 10sec. max. |

★ Test Circuit 测试电路



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