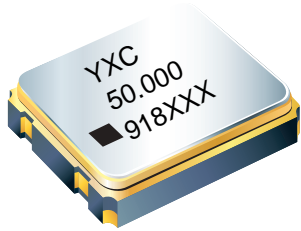




OT705050MJBA4SL
YSO110TR



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 | 50MHz |
| Output Type | CMOS |
| Supply Voltage | 1.8V ~ 3.3V |
| Oscillation Mode | Fundamental |
| Frequency Tolerance (at 25) | ±10ppm |
| Output Load | 15 pF |
| Operating Temperature Range | -40~+85 °C |
| Frequency Versus Temperature Characteristics | ± 20ppm |
| 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)

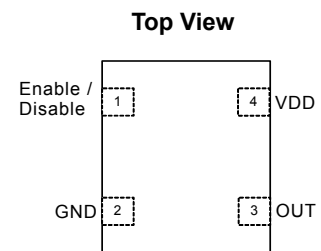


Figure 1. Pin Assignments

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



OT705050MJBA4SL
YS0110TR



| 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> | |



OT705050MJBA4SL
YSO110TR



★ PART NUMBER GUIDE

e.g. OT 705050MJBA4SL

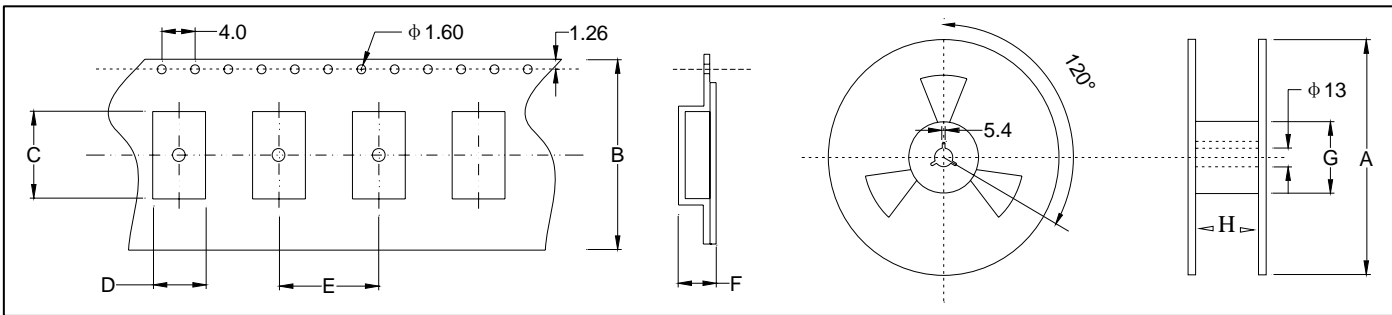
YSO110TR=2.5 × 2.0 SMD SEAM TYPE

| 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 | 7050 | 50M | J | B | A | 4 | S | L |

★ INPUT CURRENT

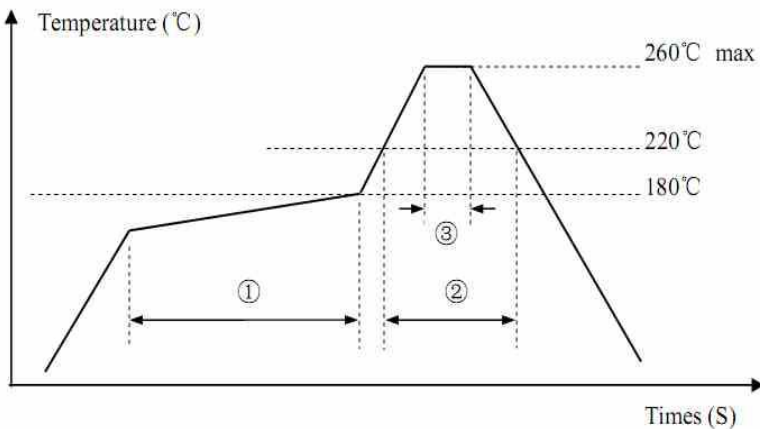
| | | Vdc=1.8-3.3V | | 15pF only | |
|---------|-----------|----------------|-----------|---------------------|----------|
| Voltage | Frequency | 1~40MHZ | | 41~50MHZ | |
| | Size | 7050/5032/3225 | 2520/2016 | 7050/5032/3225/2520 | 2016 |
| 1.8V | | 4mA max | 4mA max | 9mA max | 10mA max |
| 2.5V |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

★ TAPING SPECIFICATION (Unit: mm)



| 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



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

★ Test Circuit

