



承 认 书

SPECIFICATION FOR APPROVAL

客户名称: Customer _____

货 名: Description SMD 2520 XO CMOS 石英晶体可编程振荡器

客户料号: Part No _____

物料编号: Code No O22088001533100

频 率: Frequency 8.8000MHz

日 期: Date 2020-05-26

备 注: RoHS compliance with Directive (EU) 2015/863

| 制作(Prepare by) | 检查(Check by) | 批准 (Approve by) |
|----------------|--------------|-----------------|
| 江丹娜 | 甘瑛 | 张刚 |

| | |
|-----------------------------|--|
| 客户批准 Approve by customer | |
| 批准日期 Approval date | |

Add:广东省深圳市华发北路桑达工业区桑达雅苑 7P

7 P Sangda Yayuan Huafa North Road, Futian District, Shenzhen, Guangdong

Tel: 86-755-83048260 86-755-83048290

Fax: 86-755-83048280

■ ELECTRICAL SPECIFICATIONS

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : 25±5℃

Relative humidity : 40%~70%

If there is any doubt about the results, measurement shall be made within the following limits:

Ambient temperature : 25±3℃

Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by MD 37WX-05M or equivalent.

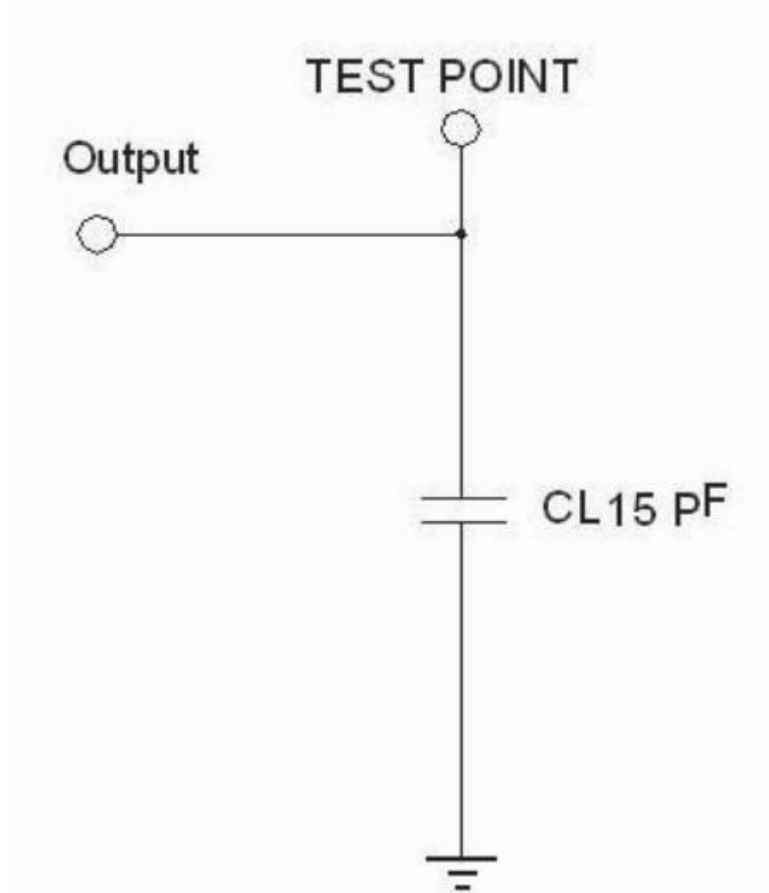
Crystal cutting type

The crystal is using AT CUT (thickness shear mode).

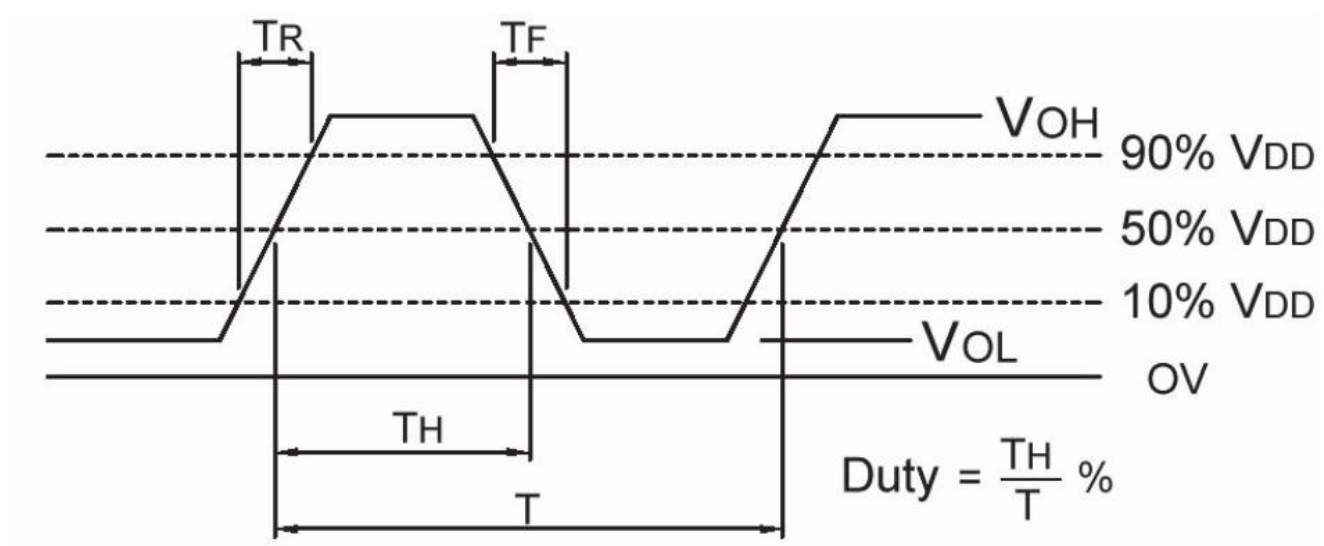
■ Electrical characteristics Frequency

| NO. | Parameters | Symbol | Electrical Spec. | | | | Notes |
|-----|----------------------------------|------------------------|------------------|------|------|-------|--|
| | | | Min. | Typ. | Max. | Units | |
| 1 | Nominal Frequency | - | 8.800 | | | MHz | - |
| 2 | Frequency stability (Overall) | | -50 | | 50 | ppm | Frequency stability includes frequency tolerance@25℃ and frequency stability vs. operating temperature range and voltage variance and first year aging @25℃. |
| 3 | Operating Temperature | Topr | -40 | 25 | 85 | ℃ | The operating temperature range over which the frequency stability is measured. |
| 4 | Storage Temperature | Tstg | -50 | ~ | 125 | ℃ | - |
| 5 | Supply Voltage | VDD | 3.3 ±5% | | | V | - |
| 6 | Input Current | Icc | - | - | 10 | mA | At maximum supply voltage |
| 7 | Power Supply Ramp | | 0.01 | | 500 | mSec | Time for VDD to reach 90%VDD Power ramp must be monotonic. |
| 8 | Output waveform | | CMOS | | | | |
| 11 | Output Load | | 15pF | | | pF | |
| 12 | Duty Cycle | | 45 | 50 | 55 | % | |
| 13 | Start Time | | - | - | 8 | mSec | |
| 14 | Rise Time | Tr | - | - | 3 | ns | |
| 15 | Fall Time | Tf | - | - | 3 | ns | |
| 16 | Output Level | Output High(Logic "1") | 2.97 | | | V | |
| 17 | | Output Low(Logic "0") | | | 0.33 | V | |
| 18 | Aging | | -3 | | 3 | ppm | Frequency drift in first year @ 25℃ |
| 19 | RMS Phase Jitter | | | | 1.5 | pSec | (12KHz - 20MHz) |

■ TEST CIRCUIT (CMOS LOAD)



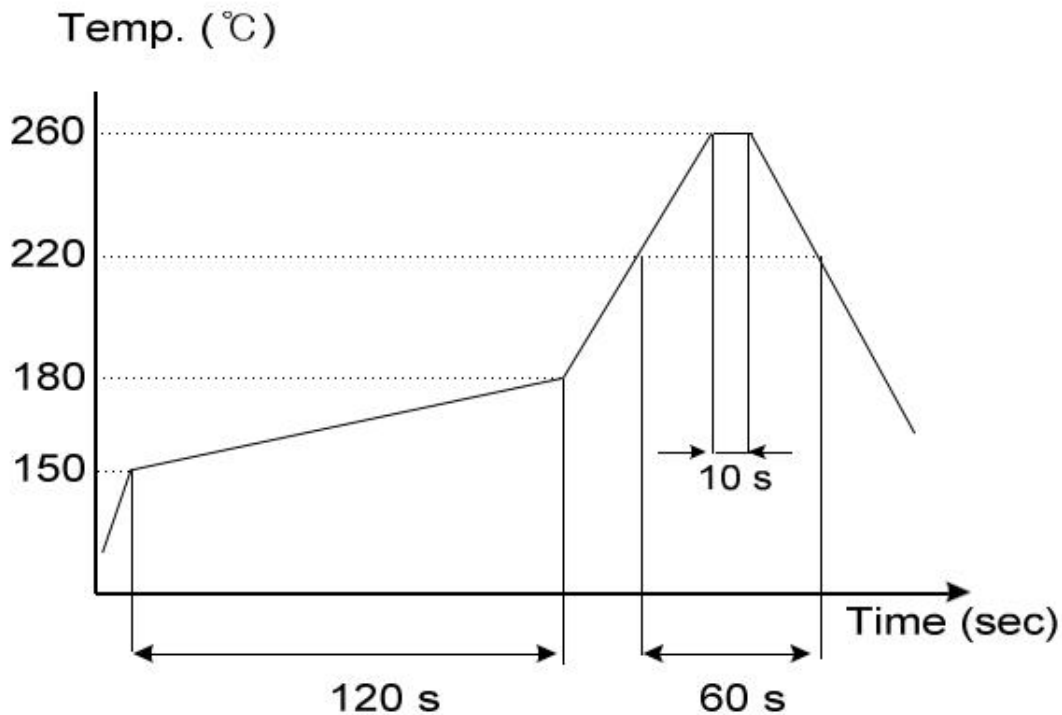
■ OUTPUT WAVEFORM (CMOS LOAD)



■ SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

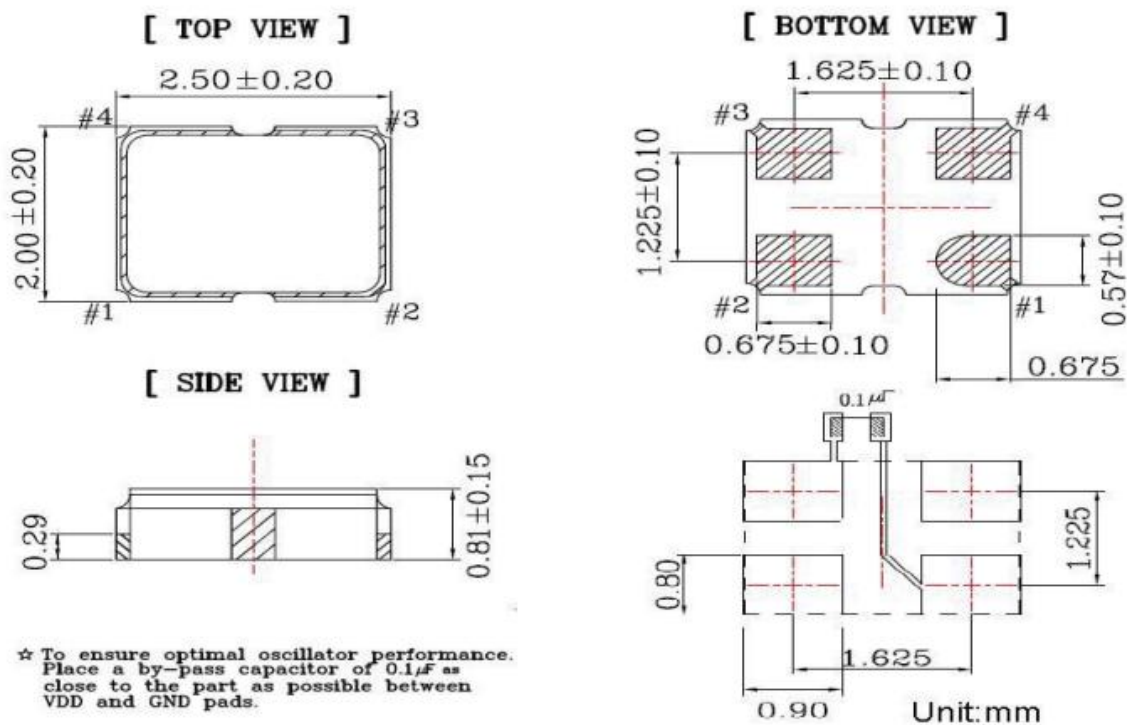
Solder melting point :220 °C



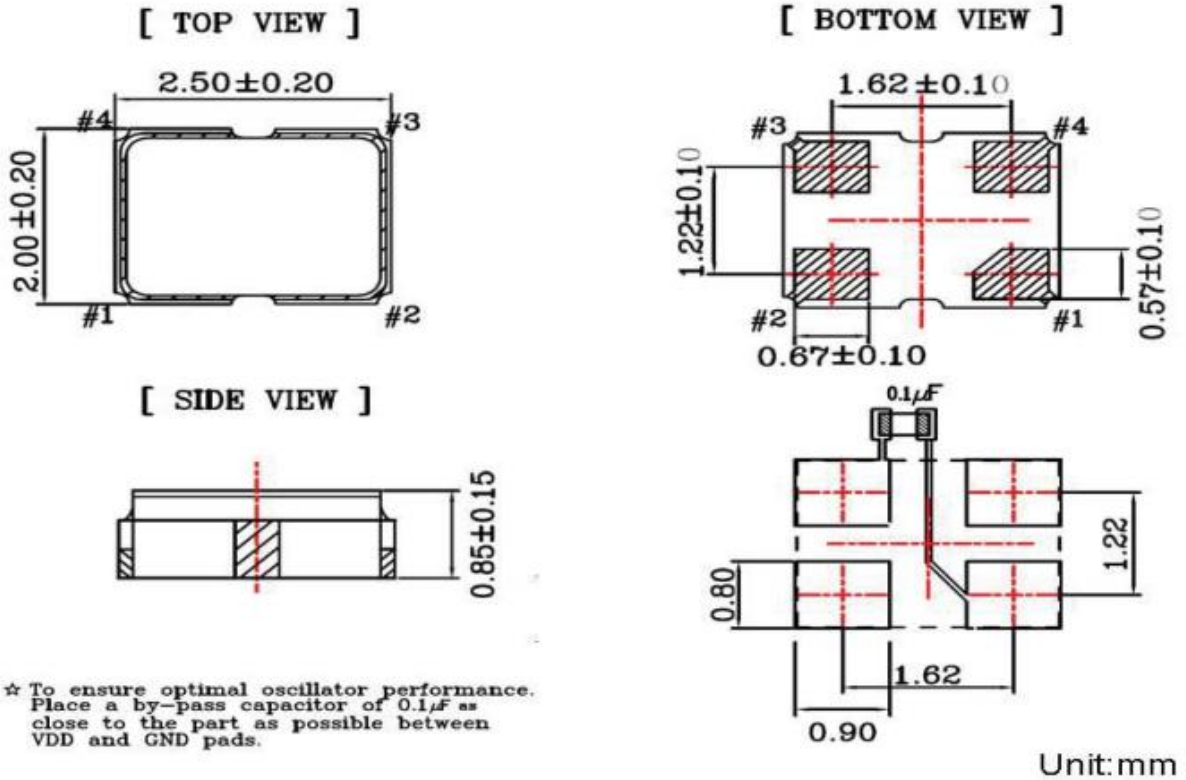
■ PRODUCT DIMENSIONS

DIMain Source

1) MENSIONS



2) Second Source

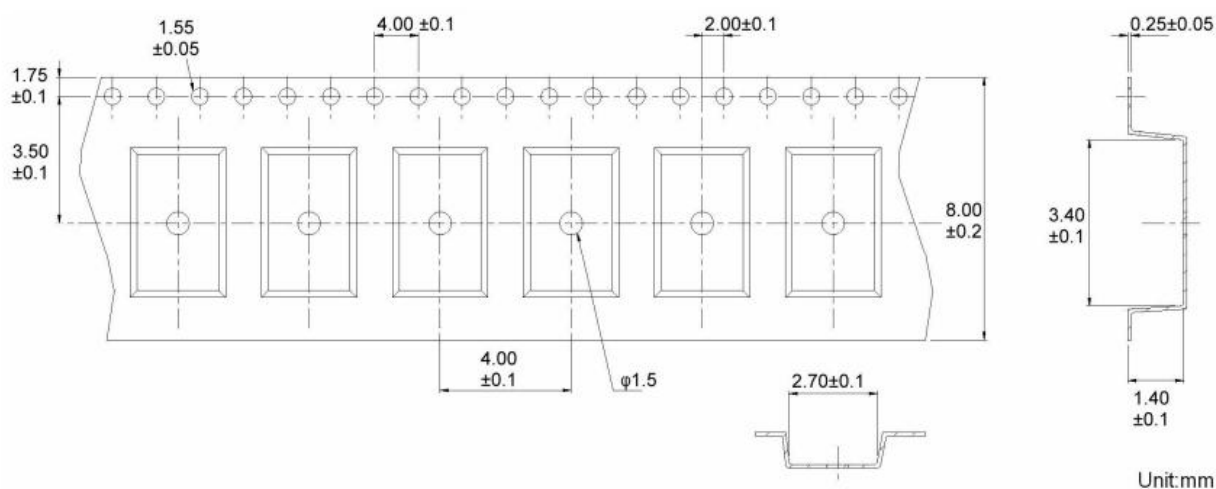


PIN FUNCTIONS

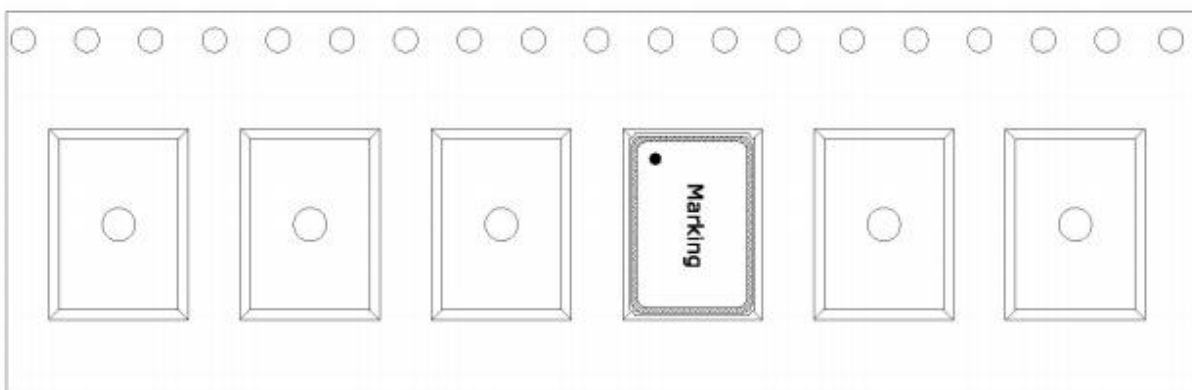
| Pin | Function |
|-----|-----------|
| #1 | Tri-State |
| #2 | GND |
| #3 | Output |
| #4 | VDD |

PACKAGE INFORMATION

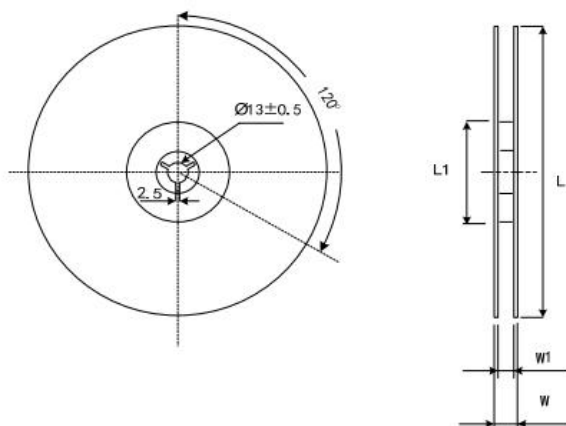
TAPE (CARRIER) DIMENSIONS



THE DIRECTION OF PACKING



REEL DIMENSIONS



| DIMENSIONS | L | L1 | W | W1 | Standard Reel Quantity is 3,000 pcs per reel (UNIT:mm) |
|------------|--------------|---------------|--------------|------------|---|
| | 178 ±1.00 | 60.2 ±0.50 | 11.5 ±0.2 | 8 +1/-0 | |

■ RELIABILITY SPECIFICATIONS

1. Mechanical Endurance

| No. | Test Item | Test Methods | REF. DOC |
|-----|------------------|---|-------------|
| 1 | Drop Test | 75 cm height, 3 times on concrete floor . | JIS C6701 |
| 1 | Mechanical Shock | Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times. 0.5m sec. duration time | MIL-STD-202 |
| 1 | Vibration | Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm/20G Sweep time 20 minutes perpendicular axes each test time 4 Hrs (Total test time 12 Hrs) | MIL-STD-883 |
| 1 | Gross Leak | Standard Sample For Automatic Gross Leak Detector, Test Pressure: 2kg / cm ² | MIL-STD-883 |
| 2 | Fine Leak | Helium Bomging 4.5 kgf / cm ² for 2 Hrs | MIL-STD-883 |
| 2 | Solderability | Temperature 245 °C ± 5°C Immersing depth 0.5 mm minimum Immersion time 5 ± 1 seconds Flux Rosin resin methyl alcohol solvent (1 : 4) | MIL-STD-883 |

2. Environmental Endurance

| No. | Test Item | Test Methods | REF. DOC |
|-----|------------------------------|--|-------------|
| 2 | Resistance To Soldering Heat | Pre-heat temperature 125 °C Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 °C Test time 10 ± 1 sec. | MIL-STD-202 |
| 2 | High Temp. Storage | + 125 °C ± 3 °C for 1000 ± 12 Hrs | MIL-STD-883 |
| 2 | Low Temp. Storage | - 40 °C ± 3 °C for 1000 ± 12 Hrs | |
| 2 | Thermal Shock | Total 100 cycles of the following temperature cycle | MIL-STD-883 |
| 3 | High Temp & Humidity | 85°C ± 3°C, RH 85% , 1000 Hrs | EIA-JESD22 |
| 3 | Pressure Cooker Storage | 121 ± 3°C , RH100% , 2 bar , 240 Hrs | EIA-JESD22 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>JGHC\(晶光华\)](#)