

SHOULDER

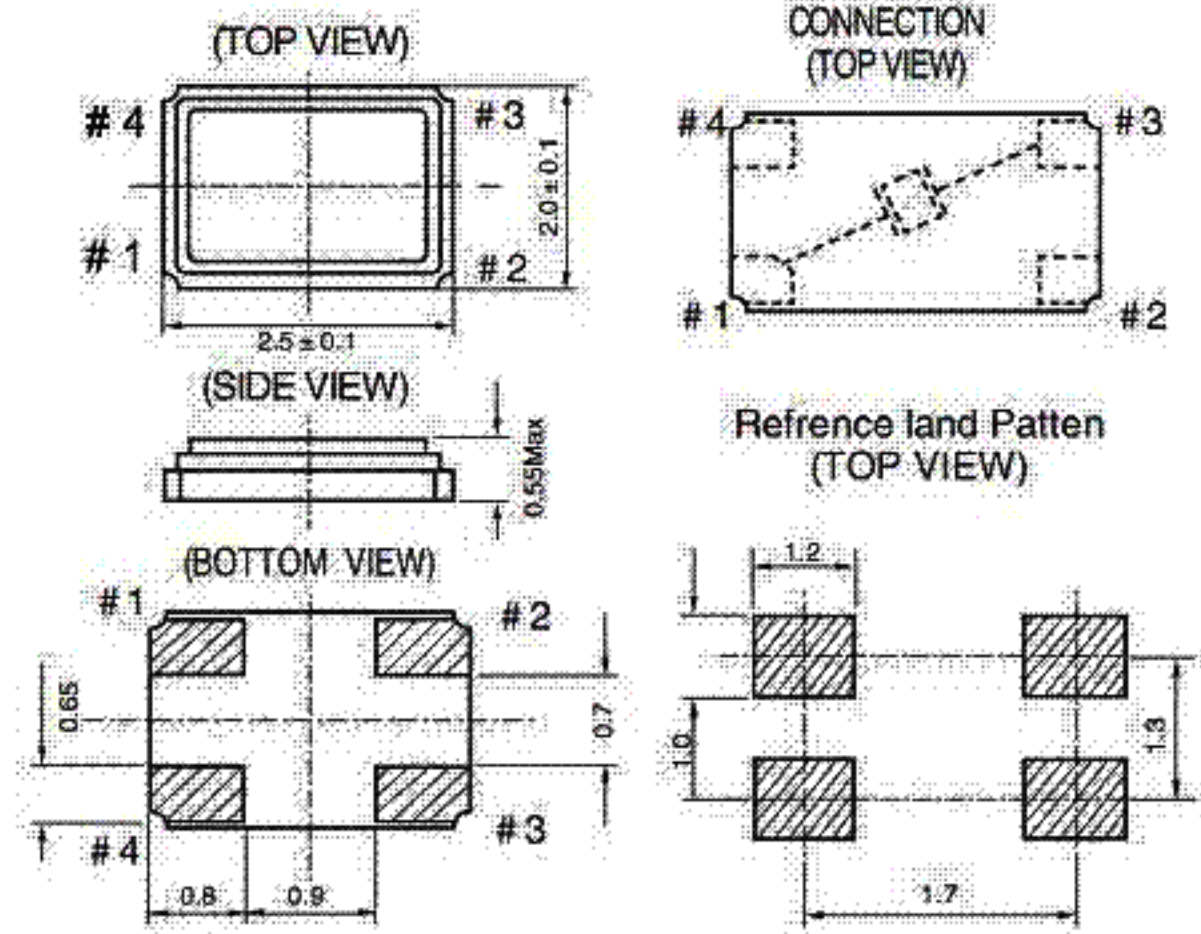
SMD2520 Crystal



ELECTRICAL SPECIFICATION

| | |
|------------------------------------|---|
| Frequency Range | 12.0000 to 50.000 MHz |
| Load Capacitance | 8 pF to 32pF or series |
| Frequency Tolerance (at 25°C) | +/-10,+/-15,+/-20,+/-30,+/-50ppm or specify |
| Oscillation Mode | Fundamental |
| Frequency Stability in Temperature | +/-10,+/-15,+/-20,+/-30,+/-50ppm or specify |
| Operating Temperature Range | -20°C to +70°C Standard (or Optional) |
| Storage Temperature Range | -40°C to +85°C |
| Equivalent Series Resistance (ESR) | See ESR Table |
| Drive Level | 10µW Typical, 100µW Max. |
| Shunt Capacitance | 3pF Maximum |
| Aging (at 25°C) | ±3ppM per year |
| Insulation Resistance | 500 MOhm Minimum |

MECHANICAL DIMENSIONS (all in mm)



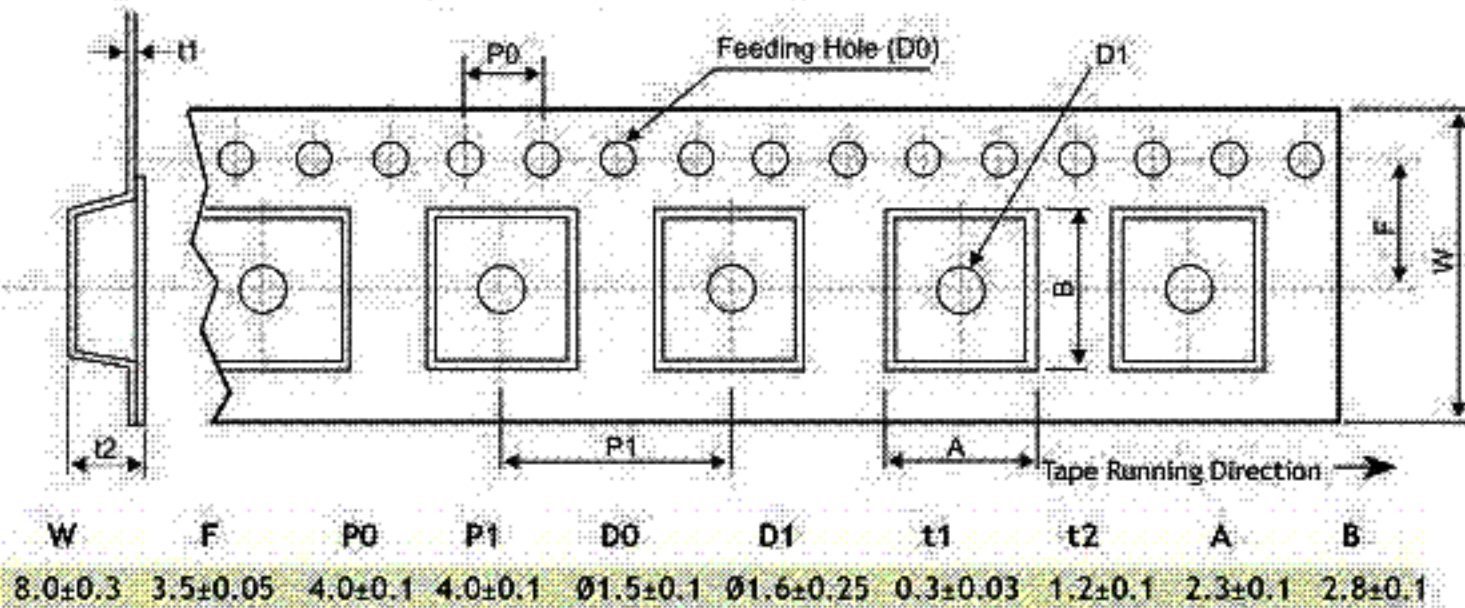
FREQUENCY RANGE AND OSCILLATION MODE

| | |
|-----------------|-----------------------|
| Fundamental (F) | 12.0000 to 50.000 MHz |
|-----------------|-----------------------|

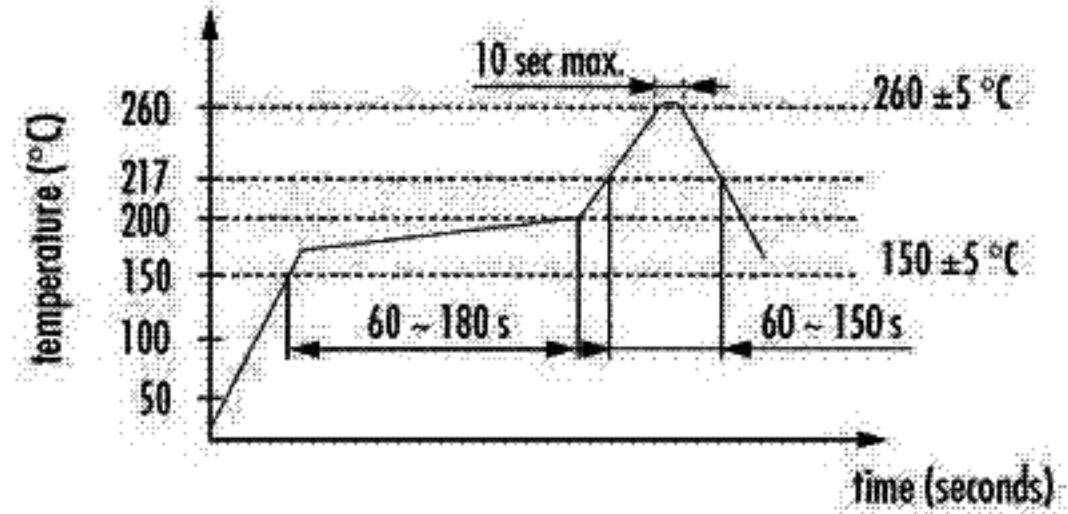
ESR TABLE (Ohms)

| | |
|----------------------|--------|
| 12.0000 to 20.000MHz | 100Max |
| 20.000 to 30.000MHz | 80Max |
| 30.000 to 40.000MHz | 60Max |
| 40.000 to 50.000MHz | 50Max |

TAPE SPECIFICATIONS (all in mm) - Carrier Tape Dimensions



SOLDERING



| Temperature Range | Frequency Stability (ppm) | | | | |
|-------------------|---------------------------|--------|--------|--------|--------|
| | ±10ppm | ±15ppm | ±20ppm | ±30ppm | ±50ppm |
| 0~+50°C | ✓ | ✓ | ✓ | ✓ | ✓ |
| -10~+60°C | ✓ | ✓ | ✓ | ✓ | ✓ |
| -20~+70°C | ✓ | ✓ | ✓ | ✓ | ✓ |
| -30~+80°C | | ✓ | ✓ | ✓ | ✓ |
| -40~+85°C | | | ✓ | ✓ | ✓ |

PART NUMBERING SYSTEM (Example)

SMD2520-22.1184-F-20-30-30-A-T

Hold Type

SMD0705 / SMD3225 / SMD1612 / SMD0503 / SMD0603 / SMD2016 / 495-SMD / 4952-SMD

Nominal Frequency (MHz)

Enter the nominal frequency (3 digits after dot) or up to last significant digit different than zero

Mode of Operation (Vibration Mode)

F= Fundamental
T= 3rd Overtone

Load Capacitance
S= Series Resonant
or enter load capacitance
10 to 32 for parallel

Options (can be blank)
S= Standard
X= Additional Specifications
T= Tape and Reel

Operating Temperature Range (°C)

A= -20°C to 70°C
B= -10°C to 60°C
C= 0°C to 50°C
D= -30°C to 80°C
E= -40°C to 85°C

Frequency Stability (± ppm)

Frequency Tolerance (± ppm)

