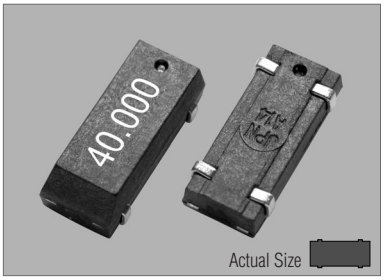
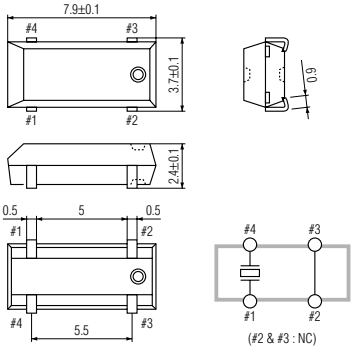
# Quartz Crystal Units

## 95SMX(G) — STANDARD LOW FREQUENCY SMD CRYSTALS

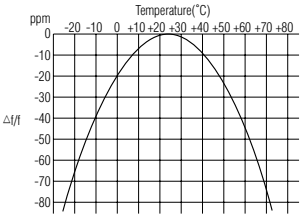
95SMX(G)




95SMX(G)

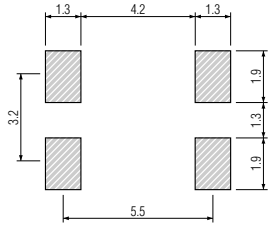



XY-CUT

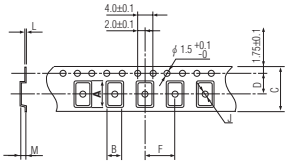



TYPICAL TEMPERATURE CHARACTERISTICS

SOLDERING PATTERN




TAPE SPECIFICATIONS




| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|---|---|---|---|---|---|---|---|---|---|
| 8.3 | 4.0 | 16.0 | 7.5 | 8.0 | 1.6 | 0.3 | 2.7 | 330 | 3000pcs |

## STANDARD SPECIFICATIONS

| Item | Symbol | Specifications |
|---|---|---|
| **Frequency range** | F | 30.000 kHz to 100.000 kHz |
| **Package type** | | 95SMX(G) |
| **Frequency tolerance at +25˚C** | Δ f/F | B : ±20 ppm<br>C : ±30 ppm<br>**D : ±50 ppm standard**<br>E : ±100 ppm |
| **Load capacitance** | CL | 12.5 pF, Typical |
| **Equivalent series resistance** | ESR | 50 kΩ max. |
| **Drive level** | P | 1.0 μW max. |
| **Turnover temperature** | Tt | +25˚C ±5˚C |
| **Temperature coefficient** | β | -0.034 ppm/˚C², Typical |
| **Quality factor** | Q | 50000 min. |
| **Shunt capacitance** | Co | 0.8 to 1.7 pF |
| **Motional capacitance** | C1 | 0.001 to 0.004 pF |
| **Capacitance ratio** | γ | 330 to 800 |
| **Aging (for first year)** | Δ f/F | ±5 ppm max. at +25˚C ±3˚C |
| **Insulation resistance** | Ri | 500MΩ min. at 100V DC ±15V |
| **Cut** | | XY-Cut |
| **Operating temperature range** | To | -40˚C to +85˚C |
| **Storage temperature range** | Ts | -55˚C to +125˚C |
| **Shock resistance** | Δ f/F | ±5 ppm max. |
| **Vibration resistance** | Δ f/F | ±5 ppm max. |
| **IR reflow resistance** | Δ f/F | ±10 ppm max. |
| **Reflow condition** | | 10 seconds max. at +250˚C±10˚C |

## PART NUMBERING GUIDE

**95 M 400 (G)**

Package type — Circuit calibration condition — Package type — Frequency designator

**EXAMPLE**

| SMI PART NO. | Package | Circuit calibration condition | Frequency |
|---|---|---|---|
| 95M400(G) | 95(G) = 95SMX(G) | M = Parallel resonance CL = 12.5 pF | 400 = 40.000 kHz |

## PACKAGE DATA

| Item \ Package | 95SMX(G) |
|---|---|
| **Outer package** | Plastic |
| **Sealing** | Press-fit (2×6mm built-in) |
| **Terminal lead frame** | Copper alloy (CuSn) |
| **Terminal plating** | SnCu |
| **RoHS** | Compliant |

## STANDARD FREQUENCIES

| FREQUENCY MHz | FREQUENCY DESIGNATOR |
|---|---|
| 30.634 | 306 |
| 31.250 | 3125 |
| 32.000 | 320 |
| 36.000 | 360 |
| 38.000 | 380 |
| 38.400 | 384 |
| 40.000 | 400 |
| 60.000 | 600 |
| 65.536 | 655 |
| 75.000 | 750 |
| 76.790 | 767 |
| 76.800 | 768 |
| 76.810 | 7681 |
| 77.500 | 775 |
| 77.503 | 77503 |
| 96.000 | 960 |
| 100.000 | 100.0 |