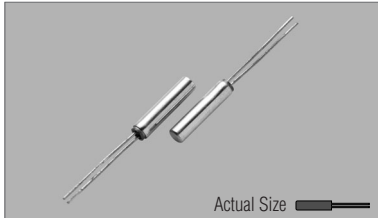
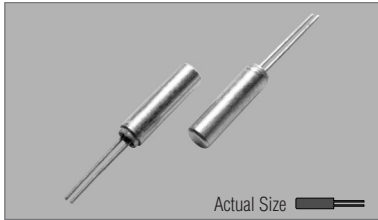


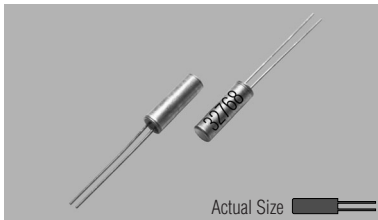
1.2x4.7mm



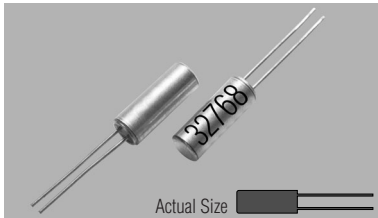
1.4x5mm



2x6mm



3x8mm



STANDARD SPECIFICATIONS

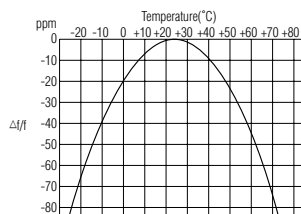
| Item | Symbol | Specifications | | | |
|------------------------------|--------------|--|---|--------------------|----------------|
| Part number | P/N | 1247STF327 | 145STF327 | 26STF327 | 38STF327 |
| Package type | F | 1.2x4.7mm | 1.4x5mm | 2x6mm | 3x8mm |
| Nominal frequency | | 32.768 kHz | | | |
| Frequency tolerance at +25°C | $\Delta f/F$ | AA : ± 10 ppm A : ± 15 ppm B : ± 20 ppm standard C : ± 30 ppm | | | |
| Load capacitance | CL | 8.0 pF, Typ | | 12.5 pF, Typ | |
| Equivalent series resistance | ESR | 50 k Ω max. | 40 k Ω max. | 35 k Ω max. | |
| Drive level | P | 1.0 μ W max. | | | |
| Turnover temperature | Tt | +25°C $\pm 5^\circ$ C | | | |
| Temperature coefficient | β | -0.035 ppm/ $^\circ$ C, Typ | -0.034 ppm/ $^\circ$ C ² , Typ | | |
| Quality factor | Q | 60000, Typ | 85000, Typ | 70000, Typ | 85000, Typ |
| Shunt capacitance | C0 | 0.8 pF, Typ | 1.0 pF, Typ | 1.3 pF, Typ | 1.6 pF, Typ |
| Motional capacitance | C1 | 0.002 pF, Typ | 0.0025 pF, Typ | 0.003 pF, Typ | 0.0035 pF, Typ |
| Capacitance ratio | γ | 400, Typ | 400, Typ | 450, Typ | 460, Typ |
| Aging (for first year) | $\Delta f/F$ | ± 3 ppm max. at +25°C $\pm 3^\circ$ C | | | |
| Insulation resistance | Ri | 500M Ω min. at 100V DC ± 15 V | | | |
| Cut | | XY-Cut | | | |
| Operating temperature range | To | -20°C to +60°C | -20°C to +70°C | | |
| Storage temperature range | Ts | -30°C to +70°C | -40°C to +85°C | | |
| Shock resistance** | $\Delta f/F$ | ± 5 ppm max. | | | |
| Vibration resistance | $\Delta f/F$ | ± 3 ppm max. | | | |

(**) Shock is defined as "three drops from a height of 75cm onto hardwood".

PACKAGE DATA

| Item | Package | 1247STF327 | 145STF327 | 26STF327 | 38STF327 |
|------------------|---------|---------------------|---------------------|---------------------|---------------------|
| Cover | | Metal | Metal | Metal | Metal |
| Base | | Glass | Glass | Glass | Glass |
| Sealing | | Press-fit | Press-fit | Press-fit | Press-fit |
| Terminal lead | | Alloy (FeNiCo) | Alloy (FeNiCo) | Alloy (FeNiCo) | Alloy (FeNiCo) |
| Terminal plating | | SnCu | SnCu | SnCu | SnCu |
| RoHS | | Compliant (Pb-free) | Compliant (Pb-free) | Compliant (Pb-free) | Compliant (Pb-free) |

XY-CUT



TYPICAL TEMPERATURE CHARACTERISTICS

