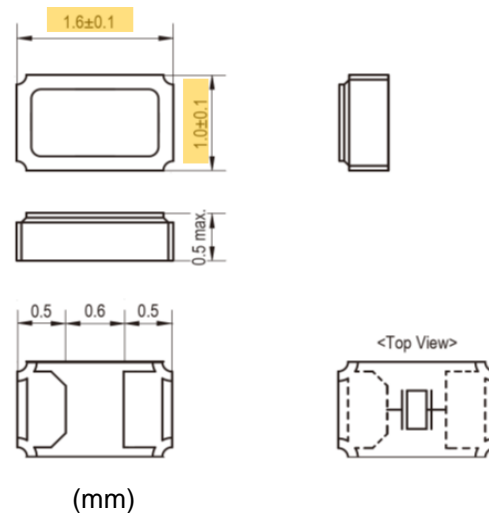
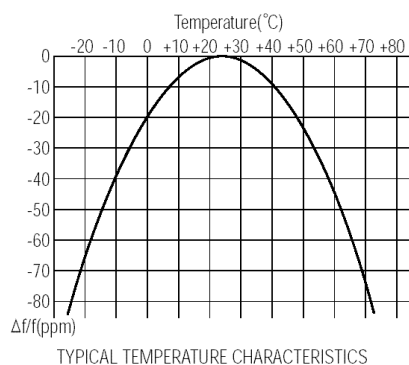


1. Part No. :	110M327BRR, 110M327-6BRR, 110M327-9BRR
2. Nominal frequency (F) :	32.768 kHz
3. Package type :	110SMX
4. Frequency tolerance (df/F) :	±20 ppm (±0.002%) at +25°C ±3°C
5. Load capacitance (CL) :	12.5pF ±1.0pF ... 110M327BRR 6.0 pF ±1.0 pF ... 110M327-6BRR 9.0 pF ±1.0 pF ... 110M327-9BRR
6. Series resistance (Rs) :	60 k ohms max. (50K ohms, Typ.)
7. Drive level (P) :	0.1μW, Typical (0.5 μW max.)
8. Quality factor (Q) :	10000, Typical
9. Turnover temperature (TT) :	+25°C ±5°C
10. Parabolic curvature constant (K) :	-0.035 ppm/°C <sup>2</sup> , Typical (-0.04ppm/°C <sup>2</sup> max.)
11. Shunt capacitance (C0) :	1.55 pF, Typical(1.85pF max.)
12. Capacitance ratio (C0/C1) :	230, Typical
13. Motional capacitance (C1) :	0.0068 pF, Typical
14. Aging (df/F) :	First year : ±3ppm max. at 25°C ±3°C
15. Operating temperature range (TO) :	-40°C to +85°C
16. Storage temperature range (TS) :	-40°C to +85°C
17. Insulation resistance:	500M ohms at 100V DC
18. Reflow soldering condition :	10 seconds at +260°C ±10°C (2 times max)
19. Shock (df/F) :	±5 ppm max.
20. Vibration (df/F) :	±5 ppm max.
21. Crystal test equipment :	140B (Saunders, U. S. A)
22. Outline dimentions :	See below



110SMX  
Directive 2002/95/EC  
Pb-free



Supporting Document

Data sheet No. SX-6472A for test data at room and over temperatures

**SMI**

ITEM.

**QUARTZ CRYSTAL UNITS**  
**110SMX 32.768 kHz**

No.

**SX-6471A**