

Features

Frequency range : 32.768 kHz
 SMD : Ceramic package
 External dimensions (mm)
 L : 3.2 x W : 1.5 x H : 0.9
 RoHS compliant & Pb free

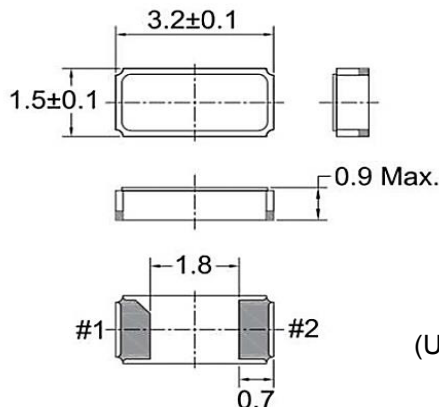
Applications

Small mobile devices
 Communication devices
 Consumer products
 Smart meters
 Commercial & industrial applications

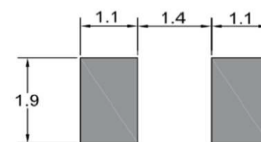
Electrical Characteristics

| Item | Symbol | 9HT10D | Conditions |
|-----------------------------|----------------|---|-------------------------------|
| Nominal Frequency | f_0 | 32.768 kHz | |
| Frequency Tolerance | $\Delta f/f_0$ | $\pm 5\text{ppm}, \pm 10\text{ppm}, \pm 20\text{ppm}$ | at 25°C |
| Load Capacitance | C_L | 6pF, 7pF, 9pF, 12.5pF | |
| Operating Temperature Range | T_{OTR} | -40°C ~ +85°C | |
| Storage Temperature Range | T_{STR} | -55°C ~ +125°C | |
| Turnover Temperature | T_M | 25°C \pm 5°C | |
| Temperature Coefficient | β | -0.034 \pm 0.006ppm/°C ² | |
| Motional Resistance (ESR) | R_1 | 70 k Ω Max. | at 25°C |
| Drive Level | D_L | 1 μ W Max. | |
| Aging | $\Delta f/f_0$ | ± 3 ppm Max. | at 25°C \pm 3°C, first year |
| Shunt Capacitance | C_0 | 0.95 pF Typ. | |

Dimensions



Recommended Pad Layout



Internal Connection

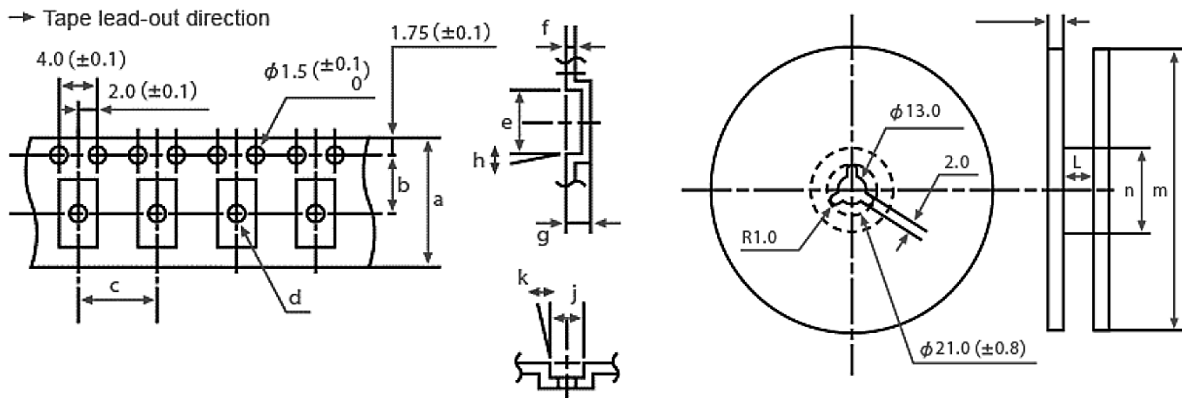


Ordering Information

9HT10D - 32.768K D Z F - T

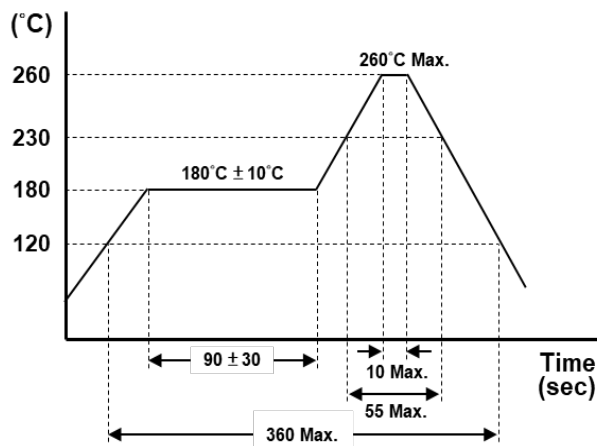
| | | | |
|---|---|--|--|
| Frequency Tolerance (at 25°C) D ± 20 ppm E ± 10 ppm H ± 5 ppm | Frequency Stability (over Temp.) Z Standard for kHz | Package Method T Tape & Reel | Load Capacitance B 6 pF Y 7 pF C 9 pF F 12.5 pF |
|---|---|--|--|

Packing



| a | b | c | d (φ) | e | f | g | h | j | k | l | m (φ) | n (φ) |
|------|-----|-----|-------|-----|-----|-----|----|-----|----|------|-------|-------|
| 12.0 | 5.5 | 4.0 | 1.0 | 3.6 | 0.3 | 1.0 | 5° | 1.9 | 5° | 13.0 | 180 | 60 |

Reflow Profile



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