



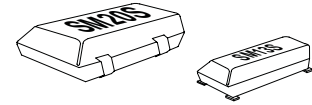
Pletronics, Inc.

19013 36th Ave. W., Lynnwood, WA 98036 USA

Manufacturer of High Quality Frequency Control Products

SM Watch Crystals

- 4 Lead Surface Mount Tuning Fork Watch Crystals
- SM13S:** 1.5x7x1.4mm, **SM20S:** 3.8x8.5x2.5mm

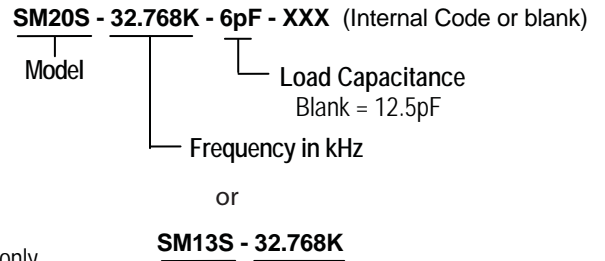


32.768 kHz

Standard Specifications

| | |
|------------------------------------|--|
| Calibration Frequency Tolerance | ± 20 PPM at 25°C std, SM20SD = ± 10 PPM |
| Operating Temperature Range (OTR) | -40 to +85°C |
| Frequency Stability over OTR | Calculate as: Frequency shift from 25°C to T°C in PPM = - 0.038 x (T - 25) ² ± 10% |
| Load Capacitance | 12.5 pF std, 6 pF avail. for SM20S only |
| Equivalent Series Resistance (ESR) | SM20S: 50 k ohm max, SM13S: 65 k ohm max |
| Drive Level | 1 μW maximum |
| Aging at 25°C for the 1st year | ± 5 PPM maximum |
| Shunt Capacitance | 1.0 pF to 1.45 pF typical |

Part Numbering Guide



Consult factory for available specifications.
A special part number may be assigned.

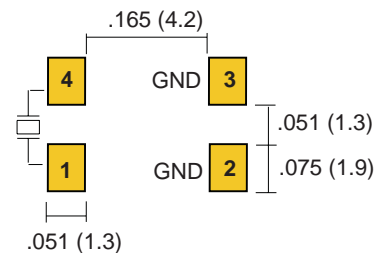
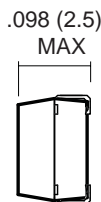
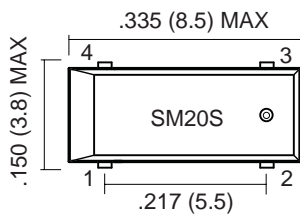
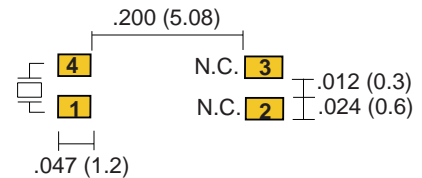
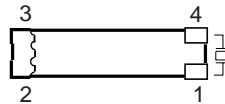
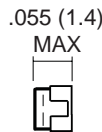
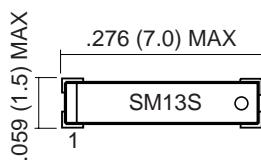
Mechanical: inches (mm)

not to scale

Solder Pads

Due to part size and factory abilities, part marking may vary from lot to lot and may contain our part number or an internal code.

Packaging
16mm tape
8mm pitch



Apr 2008



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Contacting Pletronics Inc.

Pletronics Inc.
19013 36th Ave. West
Lynnwood, WA 98036-5761 USA

Tel: 425-776-1880
Fax: 425-776-2760
E-mail: ple-sales@pletronics.com
URL: www.pletronics.com

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