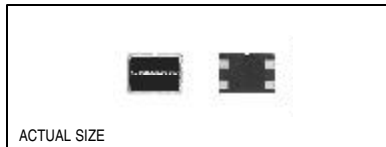


### Technical Data

### NKS7Series



#### Description

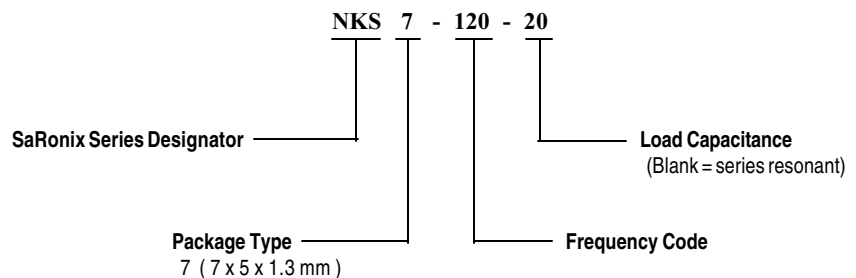
The NKS7 Series incorporates a sub-miniature AT-cut strip crystal resonator housed in a standard 5x7 mm ceramic package. These compact crystals are ideal for surface mount, densely-populated PCB applications.

#### Applications & Features

- Rugged AT-cut crystal construction
- Extremely small SMD package
- Ideally suited for disc drives, PCMCIA, PC's and hand-held products
- Available on tape & reel

|                                         |                                                                                                                           |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Frequency Range:</b>                 | 8 MHz to 30 MHz (Fundamental)<br>30 MHz to 83 MHz (3rd Overtone)                                                          |
| <b>Temperature Range:</b>               | Operating: -20 to +70°C, -40 to +85°C available, contact SaRonix<br>Storage: -40 to +85°C                                 |
| <b>Temperature Stability Tolerance:</b> | ±50ppm over -20 to +70°C (for tighter tolerances contact Saronix)                                                         |
| <b>Characteristics @ 25°C ±2°C:</b>     |                                                                                                                           |
| Frequency Calibration Tolerance:        | ±50ppm (for tighter tolerances contact Saronix)                                                                           |
| Load Capacitance:                       | 8 to 32pF, or Series Resonant                                                                                             |
| Effective Series Resistance:            | 60Ω max, 8 to 16 MHz<br>30Ω max, 16+ to 30MHz<br>80Ω max, 30+ to 40MHz<br>70Ω max, 40+ to 83MHz                           |
| Drive Level:                            | 100μW correlation, 500μW max                                                                                              |
| Shunt Capacitance:                      | 7pF max                                                                                                                   |
| <b>Mechanical:</b>                      |                                                                                                                           |
| Shock:                                  | ±5ppm max after 3 drops from 75cm onto a hard wooden board                                                                |
| Solderability:                          | MIL-STD-883, Method 2003                                                                                                  |
| Vibration:                              | ±5ppm max sine vibration 10-55Hz, sweep period 1-2 minutes, amplitude 1.5mm, 3 mutually perpendicular planes each 1 hour. |
| Solvent Resistance:                     | MIL-STD-202, Method 215                                                                                                   |
| Resistance to Soldering Heat:           | MIL-STD 202, Method 210, Condition I or J                                                                                 |
| <b>Environmental:</b>                   |                                                                                                                           |
| Gross Leak Test:                        | MIL-STD-883, Method 1014, Condition C                                                                                     |
| Fine Leak Test:                         | MIL-STD-883, Method 1014, Condition A2                                                                                    |
| Thermal Shock:                          | MIL-STD-883, Method 1011, Condition A                                                                                     |
| Moisture Resistance:                    | MIL-STD-883, Method 1004                                                                                                  |

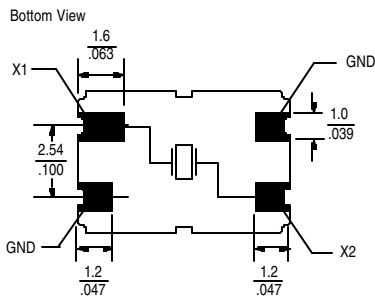
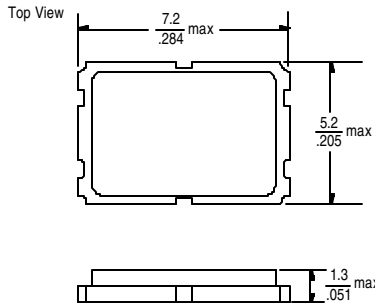
#### Part Numbering Guide



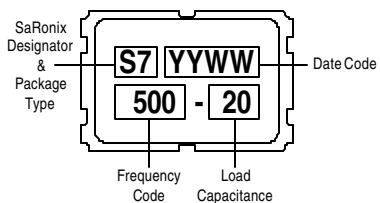
### Technical Data

### NKS7Series

#### Package Details

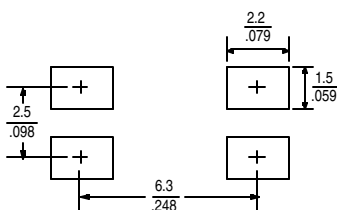


#### Marking Format \*\*

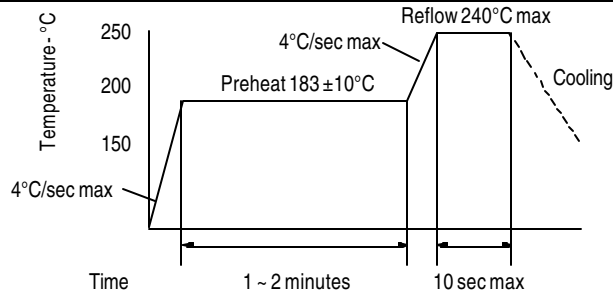


\*\* Exact location of items may vary

#### Recommended Land Pattern



#### Solder Reflow Guide



#### Common Frequencies

| Frequency (MHz) | SaRonix Part Number | Frequency (MHz) | SaRonix Part Number |
|-----------------|---------------------|-----------------|---------------------|
| 8.000000        | NKS7-080-20         | 20.000000       | NKS7-200-20         |
| 8.000156        | NKS7-081-20         | 20.275200       | NKS7-202-20         |
| 8.192000        | NKS7-082-20         | 20.480000       | NKS7-204-20         |
| 9.392000        | NKS7-093-20         | 20.833000       | NKS7-208-20         |
| 9.830400        | NKS7-098-20         | 20.945000       | NKS7-209-20         |
| 10.000000       | NKS7-100-20         | 22.118400       | NKS7-221-20         |
| 10.108800       | NKS7-101-20         | 23.040000       | NKS7-230-20         |
| 10.360000       | NKS7-103-20         | 24.000000       | NKS7-240-20         |
| 11.000000       | NKS7-110-20         | 24.000140       | NKS7-241-20         |
| 11.059200       | NKS7-111-20         | 24.192000       | NKS7-242-20         |
| 11.428000       | NKS7-114-20         | 24.576000       | NKS7-245-20         |
| 12.000000       | NKS7-120-20         | 25.000000       | NKS7-250-20         |
| 12.352000       | NKS7-123-20         | 26.800000       | NKS7-268-20         |
| 12.500000       | NKS7-125-20         | 27.000000       | NKS7-270-20         |
| 12.800000       | NKS7-128-20         | 28.636360       | NKS7-286-20         |
| 12.900000       | NKS7-129-20         | 30.000000       | NKS7-300-20         |
| 13.000000       | NKS7-130-20         | 30.000000       | NKS7-301-20 *       |
| 13.062500       | NKS7-131-20         | 31.334400       | NKS7-313-20         |
| 13.333333       | NKS7-133-20         | 32.000000       | NKS7-320-20         |
| 13.824000       | NKS7-138-20         | 33.000000       | NKS7-330-20         |
| 14.318180       | NKS7-143-20         | 33.870000       | NKS7-338-20         |
| 14.745600       | NKS7-147-20         | 35.000000       | NKS7-350-20         |
| 15.000000       | NKS7-150-20         | 35.251200       | NKS7-352-20         |
| 15.360000       | NKS7-153-20         | 35.468000       | NKS7-354-20         |
| 15.974400       | NKS7-159-20         | 36.288000       | NKS7-362-20         |
| 16.000000       | NKS7-160-20         | 36.864000       | NKS7-368-20         |
| 16.000312       | NKS7-161-20         | 38.880000       | NKS7-388-20         |
| 16.384000       | NKS7-163-20         | 39.168000       | NKS7-391-20         |
| 16.488000       | NKS7-164-20         | 40.000000       | NKS7-400-20         |
| 16.588800       | NKS7-165-20         | 40.320000       | NKS7-403-20         |
| 16.667000       | NKS7-166-20         | 40.550400       | NKS7-405-20         |
| 16.934400       | NKS7-169-20         | 44.236800       | NKS7-442-20         |
| 17.000000       | NKS7-170-20         | 44.545000       | NKS7-445-20         |
| 17.333333       | NKS7-173-20         | 44.695000       | NKS7-446-20         |
| 17.500000       | NKS7-175-20         | 44.736000       | NKS7-447-20         |
| 17.708333       | NKS7-176-20         | 48.000000       | NKS7-480-20         |
| 17.734400       | NKS7-177-20         | 50.000000       | NKS7-500-20         |
| 18.000000       | NKS7-180-20         | 52.416000       | NKS7-524-20         |
| 18.432000       | NKS7-184-20         | 56.488000       | NKS7-564-20         |
| 18.750000       | NKS7-187-20         | 57.000000       | NKS7-570-20         |
| 18.869600       | NKS7-188-20         | 57.645000       | NKS7-576-20         |
| 19.136000       | NKS7-191-20         | 60.000000       | NKS7-600-20         |
| 19.200000       | NKS7-192-20         | 72.208333       | NKS7-722-20         |
| 19.660800       | NKS7-196-20         | 82.705000       | NKS7-827-20         |

All specifications are subject to change without notice.

\* Above the line parts are fundamental, below they are 3rd OT.

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