DATA SHEET

7300 Series: Temperature-Stable Dielectric Material

Applications
- TM rods
- Specialty TE mode filters
- Ceramic antennas

Features
- Temperature stable
- Wide range of $\tau_f$
- Small size
- High Q for 700 MHz to 4 GHz range
- Low insertion loss for dielectric constant
- Linear temperature coefficient

Description
Skyworks, through its wholly owned subsidiary, Trans-Tech, offers the 7300 series of temperature-stable dielectric material designed for frequency applications from 700 MHz to 4 GHz. The high dielectric constant of this material allows for dramatic reductions in the cavity size for lower frequency operations while maintaining acceptable Q values. Custom temperature coefficients are available.

Material Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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<tbody>
<tr>
<td>Dielectric constant</td>
<td>72 to 75 (depending on $\tau_f$ selected)</td>
</tr>
<tr>
<td>Temperature coefficient of resonant frequency</td>
<td>$-12$ to $+12$ (± 2 ppm)</td>
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<tr>
<td>Q</td>
<td>$9500 @ 1$ GHz, $3800 @ 3$ GHz</td>
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