Microspherical Silica
for Low Dk and Low Df Dielectric Performance

AGC has developed two types of silica fillers providing superior low Dk and low Df performance for films, molded plastics and PCB boards.

With the continual need for smaller and thinner electronics, superior transmission performance is needed at high frequencies. RESIFA silica is ideal in providing low Dk and low Df performance because they help minimize electric power loss and signal loss.

Advantages of RESIFA silica

- Low transmission loss
- Stable along a wide temperature range
- Signal stability

Property and Data Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>AGC Hollow Silica HS-200</th>
<th>Low-Df Silica HNP-20B</th>
</tr>
</thead>
<tbody>
<tr>
<td>d50</td>
<td>μm</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>dmax</td>
<td>μm</td>
<td>≤10</td>
<td>10</td>
</tr>
<tr>
<td>Density</td>
<td>g/cm³</td>
<td>0.5–0.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Dielectric Constant (Dk) @10GHz SPDR</td>
<td>-</td>
<td>1.5–1.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Dielectric Tangent (Df) @10GHz SPDR</td>
<td>-</td>
<td>0.001</td>
<td>0.0004–5</td>
</tr>
</tbody>
</table>

Dielectric Property of Silica Fillers @ 1GHz

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