

DTT44-s

5G mmWave Thermal Conductive Gel Pad

LiPOLY DTT44-s is a soft thermal-conductive gel pad specifically designed for network ing communication applications.DTT44-s is designed to focus on D_k and D_f to reduce interference in RF modules. DTT44-s has a thermal conductivity of $3.0 \text{ W/m}^2\text{K}$. This product can be supplied as standard sheets, custom die-cuts or custom molded parts making it suitable for a wide range of applications.

FEATURES

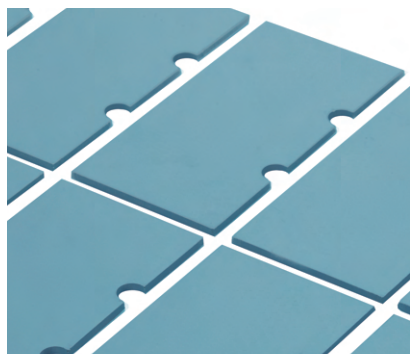
- / Lightweight, Low Density
- Thermal conductivity: $3.0 \text{ W/m}^2\text{K}$
- / Hardness: Shore OO/50
- / Low dielectric constant
- / For high frequency applications
- / Available in a range of thicknesses

TYPICAL APPLICATION

- / Communications satellite
- / Satellite positioning devices
- / IoT devices
- / Telecommunication hardware
- / 5G base station & infrastructure
- / EV electric vehicle

SPECIFICATIONS

- / Sheet form
- / Die-cut parts



TYPICAL PROPERTIES

| PROPERTY | DTT44-s | TEST METHOD | UNIT |
|---------------------------------|------------|-------------------|----------------------------------|
| Color | Blue | Visual | - |
| Surface tack 2-side/1-side | 2 | - | - |
| Thickness | Customized | ASTM D374 | mm |
| Density | 2.2 | ASTM D792 | g/cm^3 |
| Hardness | 50 | ASTM D2240 | Shore OO |
| Water absorption | 0.02 | ASTM D570 | % |
| Application temperature | -60~180 | - | $^{\circ}\text{C}$ |
| ROHS & REACH | Compliant | - | - |
| COMPRESSION@1.0mm | | | |
| Deflection @10 psi | 13 | ASTM D5470 modify | % |
| Deflection @20 psi | 16 | ASTM D5470 modify | % |
| Deflection @30 psi | 20 | ASTM D5470 modify | % |
| Deflection @40 psi | 23 | ASTM D5470 modify | % |
| Deflection @50 psi | 26 | ASTM D5470 modify | % |
| ELECTRICAL | | | |
| Dielectric breakdown | 11 | ASTM D149 | KV/mm |
| Surface resistivity | $>10^{10}$ | ASTM D257 | Ohm |
| Volume resistivity | $>10^{10}$ | ASTM D257 | Ohm-m |
| Dielectric constant@2GHz D_k | 4.115 | ASTM D150 | - |
| Dielectric constant@6GHz D_k | 4.214 | ASTM D150 | - |
| Dielectric constant@10GHz D_k | 3.983 | ASTM D150 | - |
| Dissipation factor@2GHz D_f | 0.00486 | ASTM D150 | - |
| Dissipation factor@6GHz D_f | 0.00704 | ASTM D150 | - |
| Dissipation factor@10GHz D_f | 0.00940 | ASTM D150 | - |
| THERMAL | | | |
| Thermal conductivity | 3.0 | ASTM D5470 | $\text{W/m}^2\text{K}$ |
| Thermal impedance@10 psi | 0.652 | ASTM D5470 | $^{\circ}\text{C-in}^2/\text{W}$ |
| Thermal impedance@20 psi | 0.630 | ASTM D5470 | $^{\circ}\text{C-in}^2/\text{W}$ |
| Thermal impedance@30 psi | 0.591 | ASTM D5470 | $^{\circ}\text{C-in}^2/\text{W}$ |
| Thermal impedance@40 psi | 0.574 | ASTM D5470 | $^{\circ}\text{C-in}^2/\text{W}$ |
| Thermal impedance@50 psi | 0.562 | ASTM D5470 | $^{\circ}\text{C-in}^2/\text{W}$ |

Thermal Resistance vs. Pressure vs. Deflection

