

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 Impedance vs. Pressure vs. Deflection

