

# DTT44-s

## 5G mmWave Thermal Conductive Gel Pad

LiPOLY DTT44-s is a soft thermal-conductive gel pad specifically designed for networking 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 W/m\*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

- / Thermal conductivity: 3.0 W/m\*K
- / Hardness: Shore OO/50
- / Low dielectric constant
- / For high frequency applications
- / Available in a range of thicknesses

### TYPICAL APPLICATION

- / 5G system devices
- / Communications satellite
- / Satellite positioning devices
- / IoT devices
- / Telecommunication hardware

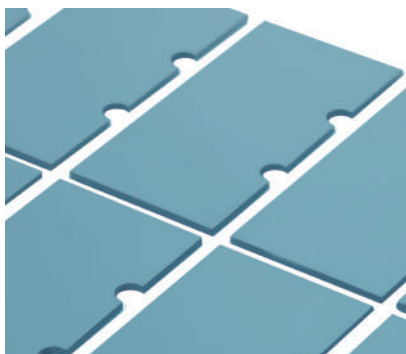
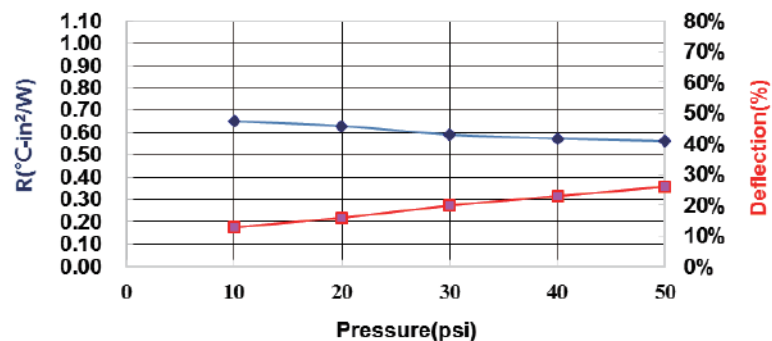
### SPECIFICATIONS

- / 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 <sup>3</sup>
Hardness	50	ASTM D2240	Shore OO
Water absorption	0.02	ASTM D570	%
Application temperature	-60~180	-	°C
ROHS & REACH	Compliant	-	-
<b>COMPRESSION@1.0mm</b>			
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	%
<b>ELECTRICAL</b>			
Dielectric breakdown	8	ASTM D149	KV/mm
Surface resistivity	>10 <sup>10</sup>	ASTM D257	Ohm
Volume resistivity	>10 <sup>10</sup>	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	-
Dielectric loss@2GHz $D_f$	0.00486	ASTM D150	-
Dielectric loss@6GHz $D_f$	0.00704	ASTM D150	-
Dielectric loss@10GHz $D_f$	0.00940	ASTM D150	-
<b>THERMAL</b>			
Thermal conductivity	3.0	ASTM D5470	W/m*K
Thermal impedance@10 psi	0.652	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@20 psi	0.630	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@30 psi	0.591	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@40 psi	0.574	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@50 psi	0.562	ASTM D5470	°C-in <sup>2</sup> / W

### Thermal Resistance vs. Pressure vs. Deflection



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