

# DTT65-s

## 5G mmWave Thermal Conductive Gel Pad

LiPOLY DTT65-s is a soft thermal-conductive gel pad specifically designed for networking communication applications. DTT65 is designed to focus on  $D_k$  and  $D_f$  to reduce interference in RF modules. DTT65-s has a thermal conductivity of 5.0 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

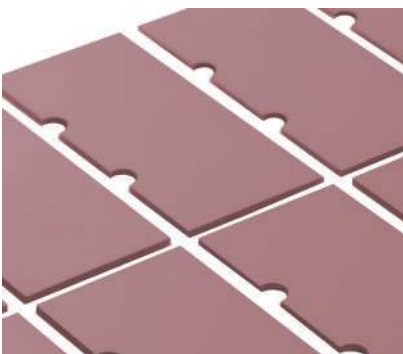
- / Thermal conductivity: 5.0 W/m\*K
- / Hardness: Shore OO/55
- / Low dielectric constant
- / For high frequency applications
- / Available in a range of thicknesses

### TYPICAL APPLICATION

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

### SPECIFICATIONS

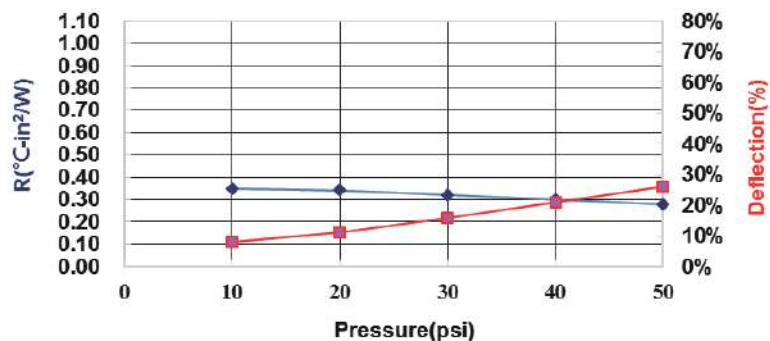
- / Sheet form
- / Die-cut parts



### TYPICAL PROPERTIES

PROPERTY	DTT65-s	TEST METHOD	UNIT
Color	Red	Visual	-
Surface tack 2-side/1-side	2	-	-
Thickness	Customized	ASTM D374	mm
Density	2.1	ASTM D792	g/cm <sup>3</sup>
Hardness	55	ASTM D2240	Shore OO
Water absorption	0.005	ASTM D570	%
Application temperature	-60~180	-	°C
ROHS & REACH	Compliant	-	-
<b>COMPRESSION@1.0mm</b>			
Deflection @10 psi	8	ASTM D5470 modify	%
Deflection @20 psi	11	ASTM D5470 modify	%
Deflection @30 psi	16	ASTM D5470 modify	%
Deflection @40 psi	21	ASTM D5470 modify	%
Deflection @50 psi	26	ASTM D5470 modify	%
<b>ELECTRICAL</b>			
Dielectric breakdown	10	ASTM D149	KV/mm
Surface resistivity	>10 <sup>12</sup>	ASTM D257	Ohm
Volume resistivity	>10 <sup>13</sup>	ASTM D257	Ohm-m
Dielectric constant@2GHz $D_k$	4.131	ASTM D150	-
Dielectric constant@6GHz $D_k$	4.058	ASTM D150	-
Dielectric constant@10GHz $D_k$	4.013	ASTM D150	-
Dielectric loss@2GHz $D_f$	0.00509	ASTM D150	-
Dielectric loss@6GHz $D_f$	0.00658	ASTM D150	-
Dielectric loss@10GHz $D_f$	0.00780	ASTM D150	-
<b>THERMAL</b>			
Thermal conductivity	5.0	ASTM D5470	W/m*K
Thermal impedance@10 psi	0.350	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@20 psi	0.342	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@30 psi	0.323	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@40 psi	0.302	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@50 psi	0.281	ASTM D5470	°C-in <sup>2</sup> / W

### Thermal Resistance vs. Pressure vs. Deflection



Note: All specifications provided by LiPOLY are subject to change without notice. The test methods used by LiPOLY are based on the TIM Tester method and ASTM D5470 test method. These test methods are used as the definition standards for LiPOLY. Property values provided in this document are not for product specifications or guaranteed. This document does not guarantee the performance and quality required for the purchaser's specific purpose. The purchaser needs to evaluate and verify the safety before using the material. We strongly recommend the purchaser pre-test the product and verify the performance of the product under the purchaser's specific conditions. Liability and use of the product are the responsibility of the end user. LiPOLY makes no warranty as to the suitability, merchantability, or non-infringement of any LiPOLY material or product for any specific or general uses. LiPOLY shall not be liable for incidental or consequential damages of any kind. All LiPOLY products are sold in accordance with the LiPOLY Terms and Conditions in effect at the time of purchase and a copy of which will be furnished upon request. All rights reserved, including LiPOLY trademarks or registered trademarks of LiPOLY or its affiliates. Statements concerning possible or suggested uses made herein shall not be relied upon or be construed as a guaranty of patent infringement. Copyright 2022 LiPOLY.