

N-TEM52

Non-Silicone Thermal Conductive RF Absorber Pad

LiPOLY N-TEM52 is a thermally conductive absorber based upon soft magnetic materials dispersed in a non-silicone resin. It has a thermal conductivity of 2.0 W/m*K and dissipates electromagnetic radiation rapidly to mitigate against EMI issues.

■ FEATURES

- / Thermal conductivity: 2.0 W/m*K
- / Excellent absorption characteristics
- / Naturally tacky
- / Reworkable

■ TYPICAL APPLICATION

- / IC, CPU, MOS, LED, M/B, Heat sink
- / LCD-TV, Notebook PC, PC, Telecom device, Wireless hub
- / DDR II module, DVD applications, Hand-set applications
- / 5G base station & infrastructure
- / EV electric vehicle

■ SPECIFICATIONS

- / Sheet form
- / Die-cut parts

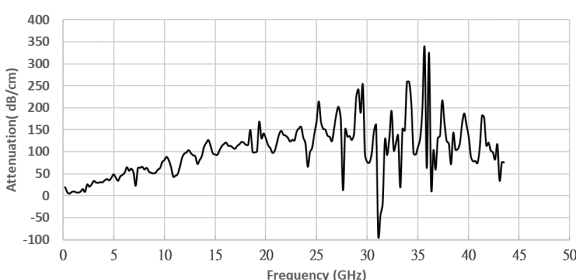
■ FREQUENCY APPLICATION

- 2.4 GHz Wi-Fi Router , Bluetooth
- 3.5 GHz 5G Mobile Networks
- 5.0 GHz Wi-Fi Router
- 6.0 GHz Wi-Fi Router
- 12~18 GHz Low Earth Orbit (LEO) System
- 28 GHz 5G Mobile Networks
- 39 GHz 5G Mobile Networks

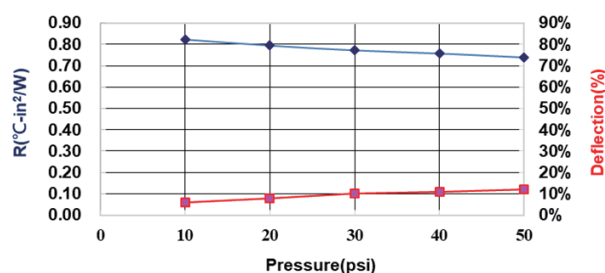
■ TYPICAL PROPERTIES

PROPERTY	N-TEM52	TEST METHOD	UNIT
Color	Dark Gray	Visual	-
Surface tack 2-side/1-side	2	-	-
Thickness	Customized	ASTM D374	mm
Density	4.4	ASTM D792	g/cm ³
Hardness	60	ASTM D2240	Shore OO
TML	<0.8	By LiPOLY	%
Application temperature	-60~130	-	°C
ROHS & REACH	Compliant	-	-
COMPRESSION@1.0mm			
Deflection @10 psi	6	ASTM D5470 modify	%
Deflection @20 psi	8	ASTM D5470 modify	%
Deflection @30 psi	10	ASTM D5470 modify	%
Deflection @40 psi	11	ASTM D5470 modify	%
Deflection @50 psi	12	ASTM D5470 modify	%
EMI Attenuation @1.0mm			
EMI attenuation@ 2.4 GHz	26	ASTM D4935 modify	dB/cm
EMI attenuation@ 3.5 GHz	30	ASTM D4935 modify	dB/cm
EMI attenuation@ 5.0 GHz	49	ASTM D4935 modify	dB/cm
EMI attenuation@ 6.0 GHz	50	ASTM D4935 modify	dB/cm
EMI attenuation@ 12 GHz	96	ASTM D4935 modify	dB/cm
EMI attenuation@ 18 GHz	116	ASTM D4935 modify	dB/cm
EMI attenuation@ 28 GHz	135	ASTM D4935 modify	dB/cm
EMI attenuation@ 39 GHz	113	ASTM D4935 modify	dB/cm
ELECTRICAL			
Surface resistivity	>10 ¹¹	ASTM D257	Ohm
Volume resistivity	>10 ¹⁰	ASTM D257	Ohm-m
THERMAL			
Thermal Conductivity	2.0	ASTM D5470	W/m*K
Thermal impedance@10 psi	0.823	ASTM D5470	°C-in ² / W
Thermal impedance@20 psi	0.794	ASTM D5470	°C-in ² / W
Thermal impedance@30 psi	0.771	ASTM D5470	°C-in ² / W
Thermal impedance@40 psi	0.756	ASTM D5470	°C-in ² / W
Thermal impedance@50 psi	0.737	ASTM D5470	°C-in ² / W

Attenuation



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 constructed as a guaranty of patent infringement. Copyright 2023 LiPOLY.