



GORE® SMT EMI Gaskets and Grounding Pads

NEW

Supersoft Series 6101

Ensure Consistent Electrical Performance with Highly Compressible Construction in SMT Compatible Format

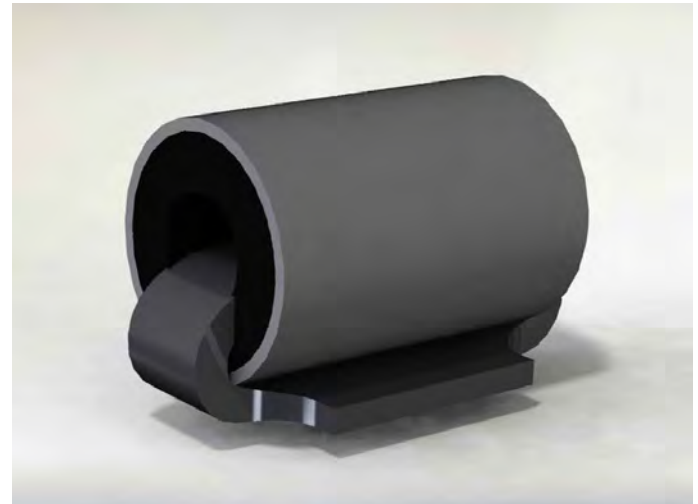
The Supersoft Series of GORE® SMT EMI Gaskets and Grounding Pads are standard components that enable designers to create EMI shields in non-linear 2-D or 3-D shapes, reduce device thickness where EMI cans are used, and create grounding points as needed in a very small footprint on the circuit board. These components are highly conductive on contact, easily compressed with minimal force, and resilient after compression. These features ensure consistent electrical performance and makes Gore's Supersoft Series an excellent choice for EMI shielding or grounding for systems such as LCDs, flexible circuits, antennas, and cameras and devices such as smart phones, tablets, and laptops. The highly compressible construction, requiring low closure forces, makes it suitable for devices with plastic housings and also provides consistent contact in housings that have surface variations such as aluminum as-cast enclosures.

TARGETED APPLICATIONS

- Mobile phones
- Tablets
- Laptops
- Camera modules
- Flex circuits



Gore's Supersoft Series 6101 packed in reel tape



Benefits of GORE® SMT EMI Gaskets and Grounding Pads

- Excellent shielding effectiveness, with low DC resistance in small standard component and minimal force required
- Offers more design flexibility with standard component, and speeds time to market due to eliminating the need for custom parts
- Supports fast, high volume production due to SMT compatibility
- Reduces circuit board area due to small component size
- Reliable electrical and mechanical performance due to conformable material that maintains consistent contact without compromising the integrity of the mating surface



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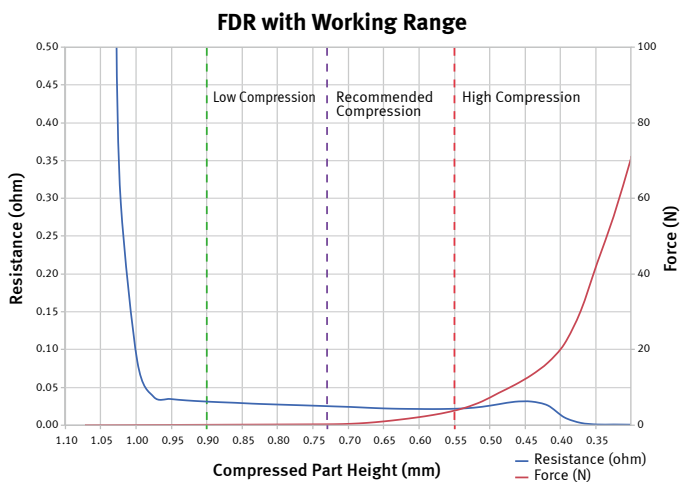
FORCE DISPLACEMENT RESISTANCE

The Supersoft Series provides conductivity on contact; however, the amount of force and DC resistance changes as the part is compressed as shown in Table 1 and Figure 1.

TABLE 1: SUPERSOFT SERIES SPECIFICATIONS

Gore P/N	Height (mm)	Width (mm)	Length (mm)	Typical Weight (grams)	Low Compression			Recommended Compression			High Compression		
					Stop Height (mm)	DCR (ohms)	Compression Force (N)	Stop Height (mm)	DCR (ohms)	Compression Force (N)	Stop Height (mm)	DCR (ohms)	Compression Force (N)
25SMT-6101-01	1.12	1.02	1.85	0.0053	0.90	0.04	0.12	0.73	0.025	0.25	0.55	0.023	4.0

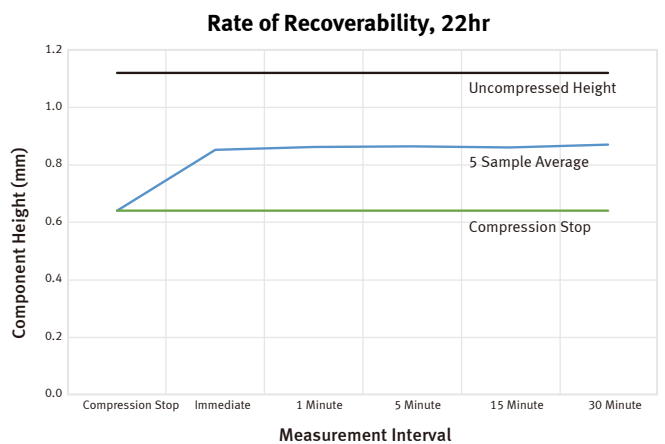
FIGURE 1: FORCE DISPLACEMENT RESISTANCE FOR 25SMT-6101-01



RECOVERABILITY

Recoverability is the inverse of compression set. If a device will be opened for hardware upgrades, field repairs, or modifications during initial production, the shielding materials must be able to rebound and create a consistent connection after the device is closed. Recoverability measures the gasket's ability to maintain some level of gap-filling following a release of a compression load. Using *ASTM D395 B, Standard Test Methods for Rubber Property, Test Method B: Compression Set under Constant Deflection in Air*, the Supersoft Series of GORE® SMT EMI Gaskets and Grounding Pads have demonstrated high levels of recoverability immediately following release of the compressive load (Figure 2). This high level of recoverability ensures that the electrical path is maintained when compression is removed and then reestablished.

FIGURE 2: RECOVERABILITY OF 25SMT-6101-01



ENVIRONMENTAL TESTING FOR SUPERSOFT SERIES

A crucial factor in assessing the performance of gasket or grounding materials is their performance over a wide range of environmental conditions. Gore has performed a number of tests on the Supersoft Series of the GORE® SMT EMI Gaskets and Grounding Pads (Table 2). These products were compressed

to 0.83 mm and tested in 9 different scenarios. The change in DC resistance was less than + 0.015 ohms and in many cases the resistance decreased. The minimal amount of change in DC resistance for the Supersoft Series demonstrates their consistent and reliable performance in demanding environments.

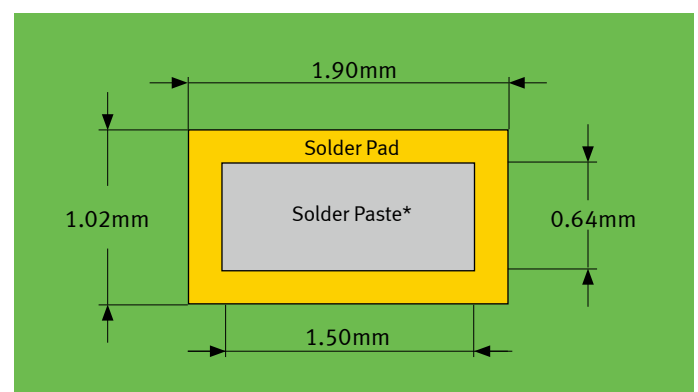
TABLE 2: ENVIRONMENTAL TESTING RESULTS

Test	Standard	Test Conditions
Cold	IEC 60068-2-1	-65°C, 96 hours
Dry Heat	IEC 60068-2-2	85°C, 96 hours
Vibration	IEC 60068-2-6	Sinusoidal 5 Hz to 100 Hz, 5g max. acceleration, 90 minutes on each of the 3 axes
Salt Mist	IEC 60068-2-11	35°C, 5 parts by weight NaCl and 95 parts by weight H2O, 24 hours
Temperature Change	IEC 60068-2-14	-40°C to +125°C, 30 minutes at extremes, 15 minutes at 25°C, 90 minutes per cycle, 25 cycles
Mixed Flowing Gas	IEC 60068-2-60	Hydrogen sulfide (H2S) at 100 PPB, sulfur dioxide (SO2) at 500 PPB, 96 hours
Damp Heat	IEC 60068-2-78	65°C, 100% humidity, 96 hours
Accelerated Life Test	Gore test	5 days at 85°C and 85% relative humidity
Multiple Reflow	Gore test	5 reflow cycles at 255°C max for 30 seconds (liquidus). 7 stage reflow oven, convected air

MANUFACTURING CONSIDERATIONS

The 25SMT-6101-01 is an addition to the Supersoft Series of GORE® SMT EMI Gaskets and Grounding Pads. This part is of similar material composition as the other components in this series and are intended to be used in traditional PCB packaging and manufacturing operations. When choosing a nozzle for component placement, a standard nozzle suitable for 0603 SMD packages should provide the best results. This product is suitable for typical pick and place operations and lead free reflow conditions of 250°C for 30 seconds and 5 passes through the oven.

RECOMMENDED SOLDER MASK OPENINGS AND SOLDER PASTE LAYDOWN DIMENSIONS



*Recommended solder paste thickness: 125 microns.



GORE® SMT EMI Gaskets and Grounding Pads

Supersoft Series 6101

GORE® SMT EMI Gaskets and Grounding Pads are covered by patent No. US 6,255,581 B1 and US 6,210,789 B1. Corresponding foreign patents issued.

GORE® SMT EMI Gaskets and Grounding Pads - SMT Supersoft Series is covered by patent No. US 6,255,581 B1 and US 7,129,421 B2. Corresponding foreign patents issued.

NOTICE — USE RESTRICTIONS APPLY
Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.



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