



# GORE® SNAPSHOT®

EMI Shields

*Innovative Board-Level Shielding*

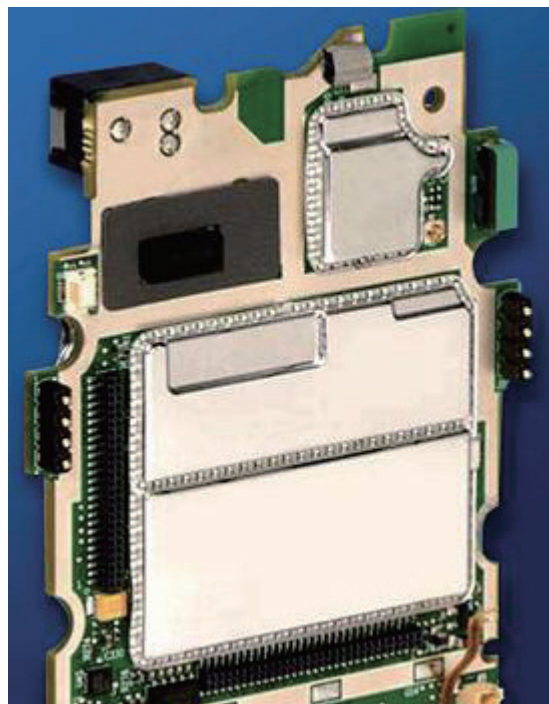
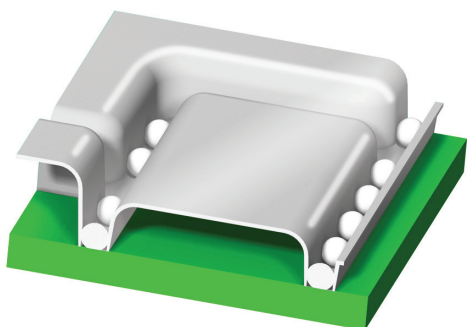
## Technical Summary

GORE® SNAPSHOT® EMI Shields are revolutionary, multi-cavity shields that solve many of the problems associated with today's existing shielding technologies.

The shields consist of a lightweight, metallized plastic material that is thermoformed to virtually any design. The shields are attached to your PCB via a patented attachment mechanism utilizing individual BGA solder spheres. The shields are metallized with tin on the outside surface only, resulting in narrower ground traces, reduced space between components, and reduced shield heights when compared to existing shielding solutions (no air gap needed).

The product installs after the SMT reflow process, allowing for easy component inspection or rework, and is readily removed by hand without damaging the board or resoldering.

In addition to custom contoured design and manufacturing flexibility, GORE® SNAPSHOT® EMI Shields have superior shielding performance when compared to perforated, soldered metal cans.



GORE® SNAPSHOT® EMI Shields are multi-cavity, board-level EMI shielding solution.

### Features and Benefits

- Superior shielding performance
- Lightweight, metallized plastic material
- Easy BGA attachment mechanism
- Installs after SMT reflow and inspection processes
- Complete design flexibility
- Easily removable by hand

### TYPICAL APPLICATIONS

- Broadband data center routers
- Commercial communication devices
- Military handheld radios
- Industrial barcode scanners
- Mobile consumer electronics

### ROHS STATUS

RoHS Material*	Pass/Fail
Lead (Pb) Content	Pass
Cadmium (Cd) Content	Pass
Hexavalent Chromium (Cr6) Content	Pass
Mercury (Hg) Content	Pass
Bromine Compounds	Pass

\* W. L. Gore & Associates declares that we do not intentionally add substances listed in EU Directive 2011/65/EU (RoHS Recast).

### GORE® SNAPSHOT® EMI SHIELDS TYPICAL PROPERTIES<sup>1</sup>

Shield Material Property	Value	Method
Thickness	0.125 mm	—
Shielding Effectiveness	75 dB	ASTM D4935
Surface Resistivity	0.025 Ohms/square	ASTM F390
Metallization Adhesion	5B	ASTM D3359
Metallization Thickness	5 microns	SEM
Dielectric Strength	80 kV/mm	ASTM D149
Vicat Softening Temp. B	215°C	ASTM D1525
Solder Sphere Property	Value	Method
Sphere Diameter	0.89 mm	—
Sphere-to-Sphere Spacing	~2.00 mm	—
Ground Pad Diameter	0.60 mm	—

<sup>1</sup> Values are for reference only and are not intended for specification purposes.



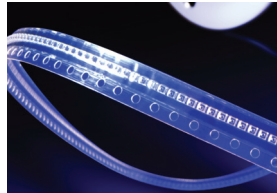
# GORE® SNAPSHOT®

EMI Shields

## SOLDER SPHERE INSTALLATION

There are different methods of installation currently available.

Solder spheres can be supplied in accordance with the current ANSI/EIA-481 standard compliant tape-and-reel format to work seamlessly with existing SMT equipment.



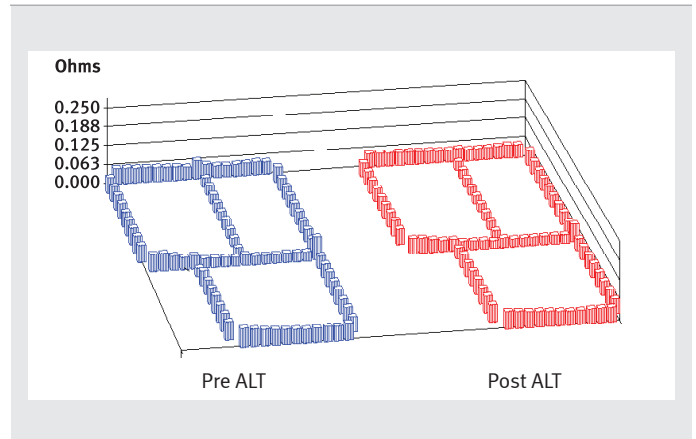
An alternative to tape-and-reel is to use a bulk feeder with your SMT equipment. This solution is less expensive than tape-and-reel.

## RELIABILITY TESTING

The DC resistance across each individual solder sphere joint has been extensively tested, meeting stringent Gore requirements across the following methods and standards:

- Mechanical Shock (JEDEC JESD 22-B104-B)
- Bump (IEC 60068-2-29)
- Vibration (IEC 60068-2-64)
- Thermal Shock (MIL-STD-883CA)
- Dry Heat Aging
- Moist Heat Aging

## DC RESISTANCE BETWEEN SOLDER SPHERE AND SHIELD PRE VS POST 5 DAY ALT AT 85°C, 85% RH

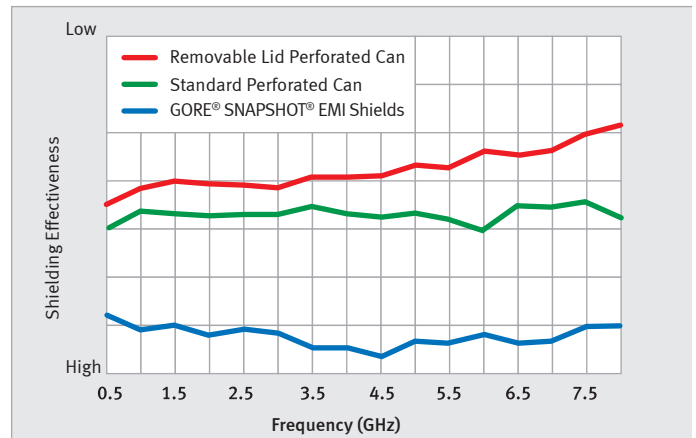


## RELATIVE SHIELDING EFFECTIVENESS VS. METAL CANS

The shielding effectiveness of GORE® SNAPSHOT® EMI Shields have also been evaluated in side-by-side testing with soldered metal cans, with positive results.

At cellular and ultra high frequencies, testing shows that the performance of GORE® SNAPSHOT® EMI Shields exceeds that of many commonly used cans with perforated holes or snap-on lids.

## RELATIVE SHIELDING EFFECTIVENESS OF GORE® SNAPSHOT® EMI SHIELDS VERSUS TRADITIONAL METAL CANS (10 dB PER DIVISION)



GORE® SNAPSHOT® EMI Shields are covered by US Patent No: 6,377,475 and 6,744,640. Corresponding foreign patents issued.

### NOTICE — USE RESTRICTIONS APPLY

Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.