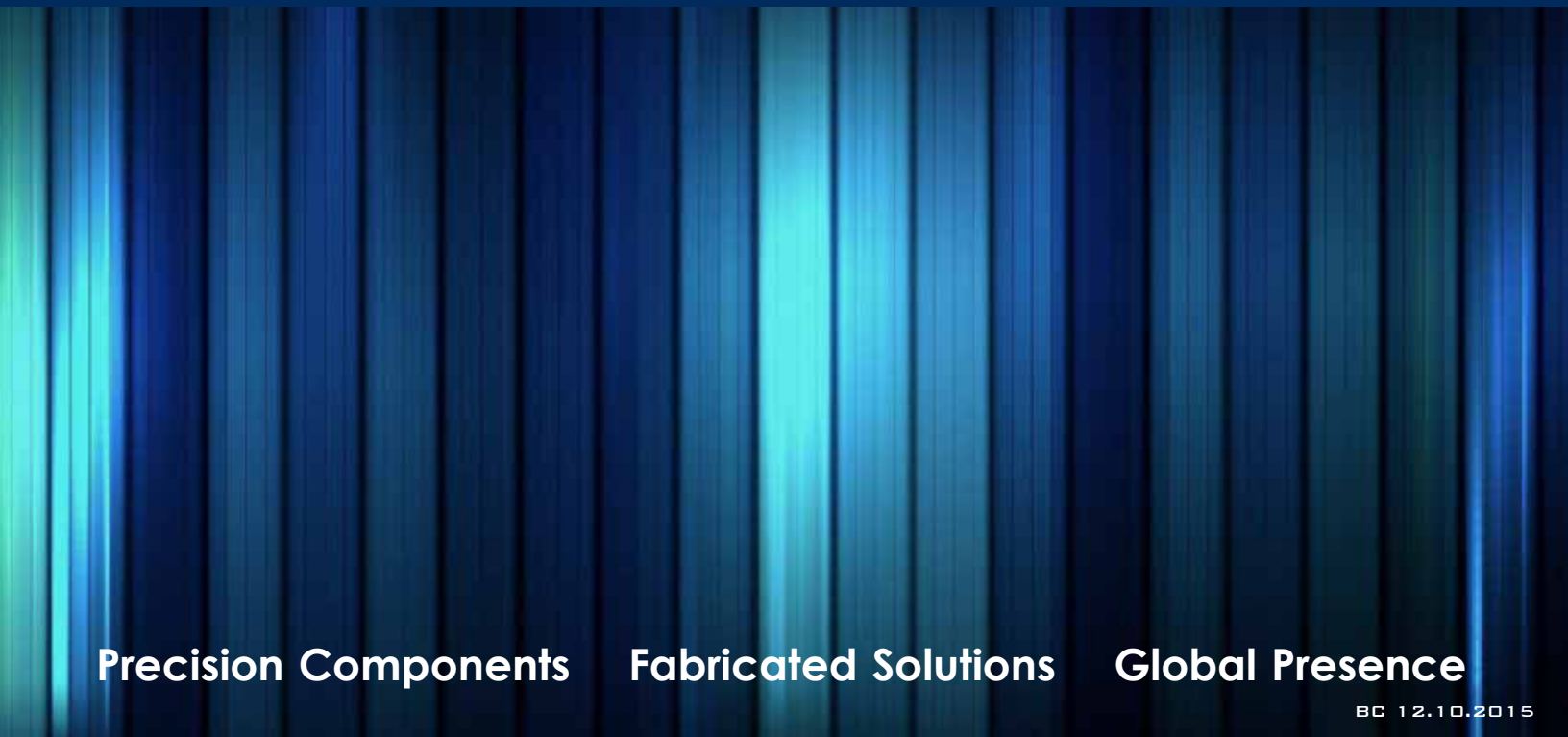
BOYD
CORPORATION

LectroShield
Conductive Foams

One Company, Many Solutions



Precision Components Fabricated Solutions Global Presence

BC 12.10.2015

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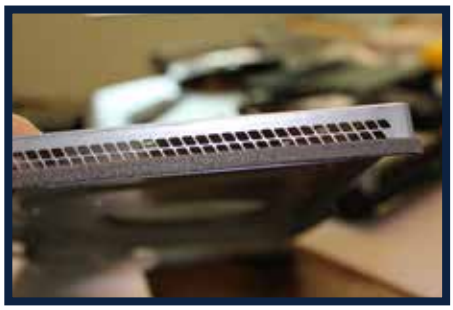
Seams and openings in electronic devices provide avenues for rogue energy waves to enter or exit a device, causing erratic performance. This is known as EMI (electromagnetic interference). Boyd's LectroShield conductive foams, elastomers, adhesives, and metal foils are designed to manage interference energy, improving reliability and efficiency in device performance.

Boyd's LectroShield Conductive Foams are ideal for applications requiring excellent shielding performance as well as high conformability, compressibility, cushioning and tight contact. These are designed for electronic devices that need soft cushion and tight contact with the conductive function.

For more than 30 years, Boyd has provided EMI shielding, conducting and absorbing solutions for market segments and applications including:

- Servers & server cabinets
- Routers
- Gaming devices
- Mobile computing devices
- Computers
- Tablets
- Power supplies
- Power cables
- Mobile phones
- Input / Output (I/O) gaskets
- Cable ferrites / wraps
- Grounding pads
- Display shields
- Antenna shielding
- Camera & speaker contacts
- Wall grounding
- Displays
- LCD monitors & screens
- Hinge conductivity
- Power supply shields
- Back plane gaskets



Boyd provides best-cost, engineered, specialty material-based energy management and sealing solutions through comprehensive technical materials and design expertise, world-class manufacturing quality, service reliability, and unparalleled supply chain management. Use Boyd's years of experience and engineering support in concert with your engineering / technical expertise to ensure your EMI challenges are solved in a cost effective, leading edge way.

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Properties	Units	Product Type: Conductive Polyurethane Foam			Test Method
		BOYD Part Number			
		BCEMI-321-1001	BCEMI-321-1002	BCEMI-321-1003	
Carrier		Conductive Foam			
Color		Silver Gray			
Thickness	mm	0.3 ± 0.1	0.5 ± 0.1	0.6 ± .01	
180° Peel Adhesion	kgf/25mm	≥ 0.6	≥ 0.8	≥ 1.3	GB/T2792
Holding Power	hrs	≥ 24	≥ 24	≥ 24	GB/T7754
Salt Spray Test	Ohm/sq	< 0.5	< 0.5	< 0.5	
Breaking Strength	Mpa	90	90	90	ASTM D1000
Vertical Resistivity	Ohm/in²	≤ 0.10	≤ 0.10	≤ 0.10	ASTM F390
Shielding Effectiveness	dB	≥ 70	≥ 70	≥ 70	ASTM D4935
Halogen Test	ppm	Pass	Pass	Pass	
RoHS Test	ppm	Pass	Pass	Pass	
Shelf Life	Months	6	6	6	26°C, 40 - 70 RH

Properties	Units	Product Type: Conductive Polyurethane Foam			Test Method
		BOYD Part Number			
		BCEMI-321-1004	BCEMI-321-1005	BCEMI-321-1006	
Carrier		Conductive Foam			
Color		Silver Gray			
Thickness	mm	0.8 ± 0.1	1.0 ± 0.1	1.5 ± 0.1	
180° Peel Adhesion	kgf/25mm	≥ 1.3	≥ 1.5	≥ 1.5	GB/T2792
Holding Power	hrs	≥ 24	≥ 24	≥ 24	GB/T7754
Salt Spray Test	Ohm/sq	< 0.5	< 0.5	< 0.5	
Breaking Strength	Mpa	90	90	90	ASTM D1000
Vertical Resistivity	Ohm/in²	≤ 0.10	≤ 0.10	≤ 0.10	ASTM F390
Shielding Effectiveness	dB	≥ 70	≥ 70	≥ 70	ASTM D4935
Halogen Test	ppm	Pass	Pass	Pass	
RoHS Test	ppm	Pass	Pass	Pass	
Shelf Life	Months	6	6	6	26°C, 40 - 70 RH

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Properties	Units	Product Type: Conductive Polyurethane Foam			Test Method
		BOYD Part Number			
		BCEMI-321-1007	BCEMI-321-1008	BCEMI-321-1009	
Carrier		Conductive Foam			
Color		Silver Gray			
Thickness	mm	2.0 ± .02	2.2 ± 0.2	3.0 ± 0.3	
180° Peel Adhesion	kgf/25mm	≥ 1.5	≥ 1.5	≥ 1.8	GB/T2792
Holding Power	hrs	≥ 24	≥ 24	≥ 24	GB/T7754
Salt Spray Test	Ohm/sq	< 0.5	< 0.5	< 0.5	
Breaking Strength	Mpa	90	90	90	ASTM D1000
Vertical Resistivity	Ohm/in²	≤ 0.10	≤ 0.10	≤ 0.10	ASTM F390
Shielding Effectiveness	dB	≥ 70	≥ 70	≥ 70	ASTM D4935
Halogen Test	ppm	Pass	Pass	Pass	
RoHS Test	ppm	Pass	Pass	Pass	
Shelf Life	Months	6	6	6	26°C, 40 - 70 RH

Properties	Units	Product Type: Conductive Polyurethane Foam			Test Method
		BOYD Part Number			
		BCEMI-321-1010	BCEMI-321-1011	BCEMI-321-1012	
Carrier		Conductive Foam			
Color		Silver Gray			
Thickness	mm	3.5 ± .03	6.35 ± 0.2	4.0 ± 0.4	
180° Peel Adhesion	kgf/25mm	≥ 1.5	≥ 1.5	≥ 1.5	GB/T2792
Holding Power	hrs	≥ 24	≥ 24	≥ 24	GB/T7754
Salt Spray Test	Ohm/sq	< 0.5	< 0.5	< 0.5	
Breaking Strength	Mpa	90	90	90	ASTM D1000
Vertical Resistivity	Ohm/in²	≤ 0.10	≤ 0.10	≤ 0.10	ASTM F390
Shielding Effectiveness	dB	≥ 70	≥ 70	≥ 70	ASTM D4935
Halogen Test	ppm	Pass	Pass	Pass	
RoHS Test	ppm	Pass	Pass	Pass	
Shelf Life	Months	6	6	6	26°C, 40 - 70 RH

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Properties	Units	Product Type: Conductive Polyurethane Foam BOYD Part Number BCEMI-321-1013
Carrier		Conductive Foam
Color		Silver Gray
Thickness	mm	5.0 ± 0.5
180° Peel Adhesion	kgf/25mm	≥ 1.5
Holding Power	hrs	≥ 24
Salt Spray Test	Ohm/sq	< 0.5
Breaking Strength	Mpa	90
Vertical Resistivity	Ohm/in²	≤ 0.10
Shielding Effectiveness	dB	≥ 70
Halogen Test	ppm	Pass
RoHS Test	ppm	Pass
Shelf Life	Months	6

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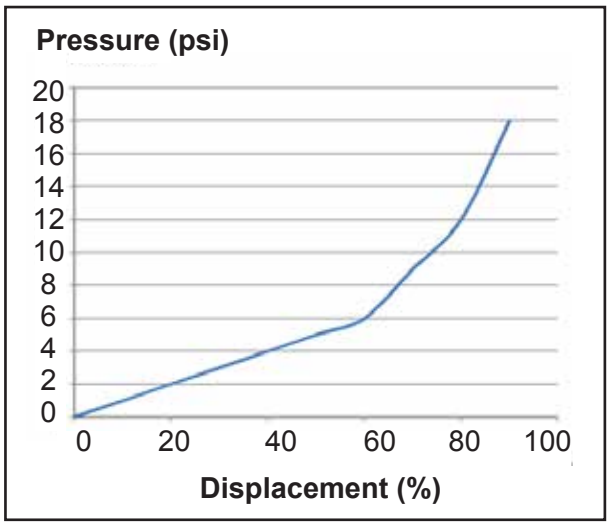
Representative Compression & Resistance Curves

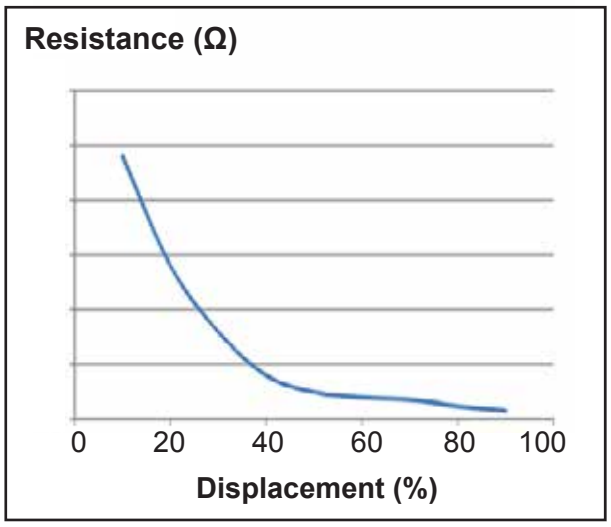
Compression Curve

Thickness, 0.8mm

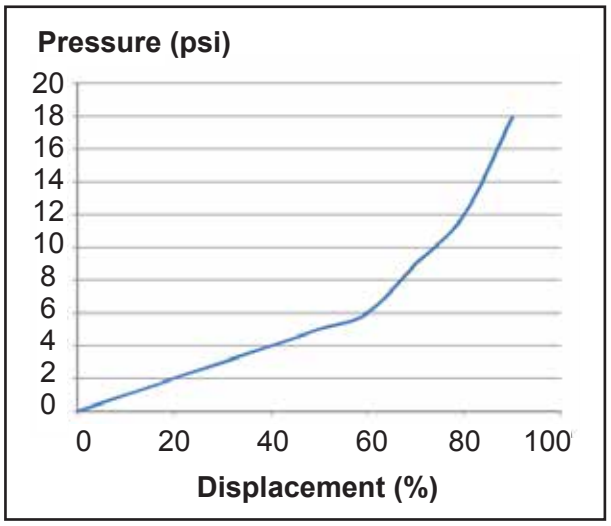


Resistance Curve

Thickness, 0.8mm



Thickness, 1.0mm



Thickness, 1.0mm