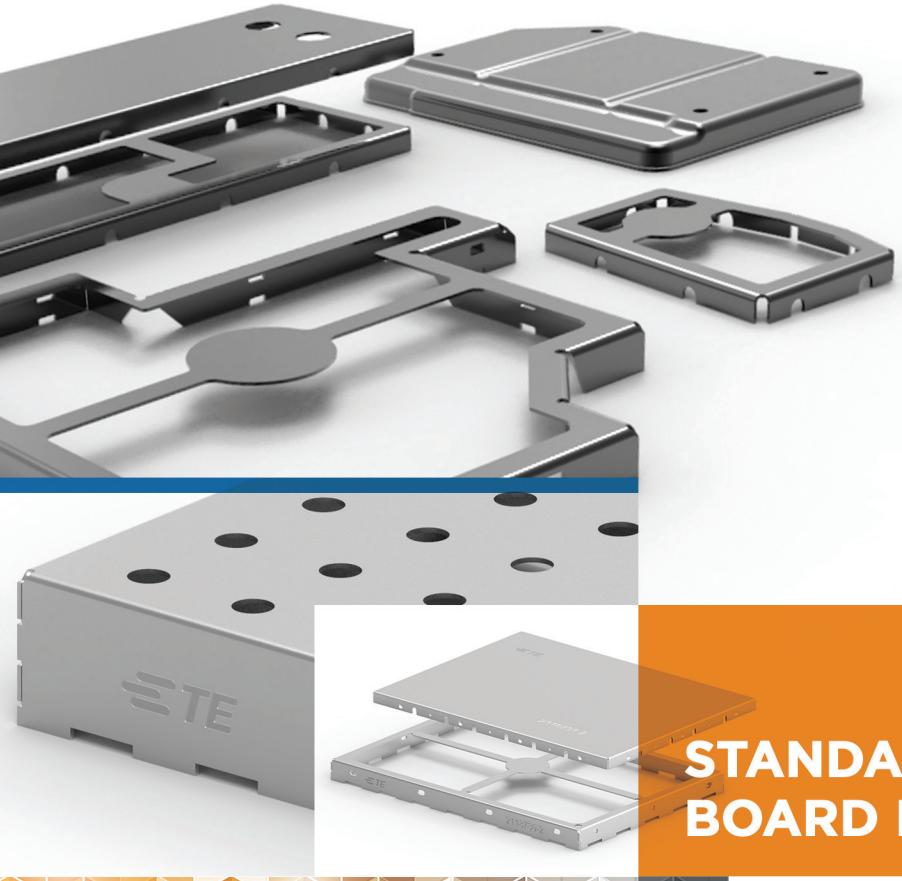


STANDARD AND CUSTOM BOARD LEVEL SHIELDING (BLS)

As complexity and functionality increases, there is a growing need for thinner devices with multiple antennas, higher data rates and increased operating frequencies. EMI (Electromagnetic Interference) shields from TE Connectivity (TE) are stamped one and two-piece metal cages that help provide isolation of board level components, minimize crosstalk and reduce EMI susceptibility without impacting system speed.

ON DEMAND OR AT YOUR COMMAND

Whether you need a custom design or an off-the-shelf solution that is immediately available, we've got you covered. Our new standard BLS portfolio is available in both industry-standard cold rolled steel (CRS) and aluminum material. Aluminum offers enhanced benefits which include:



Weight Savings
– Aluminum is 1/3 the density of CRS material while still offering similar EMI suppression



Improved Thermal Conductivity
– Aluminum can provide up to 5 times better thermal conductivity than CRS

TE CONNECTIVITY BLS ADVANTAGE

- NEW standard portfolio on-demand in CRS and aluminum material
- Proven designed-in features
- Core competencies of stamping, plating and automation for more than 50 years
- Rapid turn tooling/prototyping within each region (3-5 day)
- Streamlined, automated and continuous production line
- Local FAE support
- Complex custom high volume support
- In house EMI expertise
- One of the largest suppliers of connectivity solutions addressing a range of industries
- Global scale and low cost manufacturing
- Broad portfolio enables vendor reduction for your project

APPLICATIONS:

Anywhere board level EMI suppression is needed, including:

- Mobile phones & Tablets
- 2-in-1 notebooks
- Game consoles
- Routers (commercial & enterprise)
- Point of Sale (POS) equipment
- Wireless meters
- Wireless speakers
- Wearables & IoT
- Drones
- Virtual Reality (VR) headsets
- Femto cell
- Servers

DESIGN DIMENSIONS *

- Minimum size: 5mm(L) x 5mm(W) x 0.80mm(H)
- Maximum size: 100mm(L) x 100mm(W) x 5mm(H)

* Contact TE for other size requirements.

PACKAGING

- Tape & reel
- Vacuum formed tray

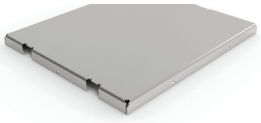
CUSTOMIZED SOLUTIONS

SHARED FEATURES OF TWO PIECE AND ONE PIECE SHIELDS

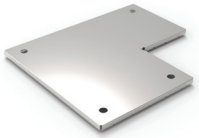
Basic shapes have been defined to enable 24-hour generation of 2D and 3D drawings, as well as efficient, rapid prototyping within 72 hours.



Rectangle



Pentagon



L-Shape

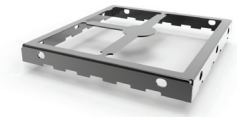
- 2 Piece solution, (min 0.90mm height)
- 1 Piece solution, (min 0.50mm height)
- Common materials and thicknesses
- Use of common, proven design features
  - locking holes
  - SMT (castellations)
  - thru holes
  - corner shape
  - bending radii
  - pins/tab
  - carrier attachment
  - pick and place features



Pick and place



Locking holes

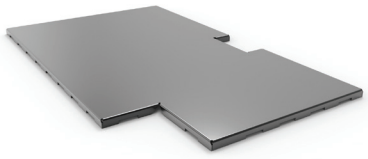


SMT castellations

ONE PIECE PRODUCT FEATURES:

One Piece: Formed

- Pitch of solder barriers: 3.0mm min
- Material: Nickel silver, galvanized & pre-plated CRS *
- Material thickness: 0.10mm min
- Inner bending radius: 0.10mm min
- Co-planarity: 0.08mm, size dependent
- Height: min 0.50mm



One Piece: Deep Drawn

- Material: Nickel silver, galvanized steel *
- Material thickness: 0.15mm min
- Co-planarity: 0.1mm, size dependent
- Height: max 3.00mm



* Other material may be available, please consult with your TE representative.

STANDARD BLS OFFERING

ONE PIECE SHIELDS				PACKAGING		
CRS	**Aluminum**	**Thickness (mm)**	**Size (L x W x H) (mm)**	**Diameter (mm)**	**Pcs/Reel**	**Pcs/Box**
2118706-2	2118706-4	0.20	13.66 x 12.70 x 2.54	330	900	3600
2118707-2	2118707-4	0.20	16.50 x 16.50 x 3.60	330	550	1650
2118708-2	2118708-4	0.20	26.21 x 26.21 x 5.08	380	280	840
2118709-2	2118709-4	0.20	32.00 x 32.00 x 6.00	380	166	498
2118710-2	2118710-4	0.20	38.10 x 25.40 x 6.00	380	216	648
2118711-2	2118711-4	0.20	36.83 x 33.68 x 5.08	380	186	558
2118712-2	2118712-4	0.20	44.37 x 44.37 x 9.75	380	90	180



One Piece Shields



Two Piece Shields

TWO PIECE SHIELDS - COVER				PACKAGING	
CRS	**Aluminum**	**Thickness (mm)**	**Size (L x W X H) (mm)**	**Type**	**Pcs/Box**
2118713-2	2118713-4	0.15	14.06 x 13.10 x 2.00	Bulk/Bag	3000
2118715-2	2118715-4	0.15	16.90 x 16.90 x 2.00	Bulk/Bag	3000
2118717-2	2118717-4	0.15	26.71 x 26.71 x 2.00	Bulk/Bag	3000
2118719-2	2118719-4	0.15	32.50 x 32.50 x 2.00	Bulk/Bag	3000
2118721-2	2118721-4	0.15	38.60 x 25.90 x 2.00	Bulk/Bag	3000
2118723-2	2118723-4	0.15	37.33 x 34.18 x 2.00	Bulk/Bag	1800
2118725-2	2118725-4	0.20	44.97 x 44.97 x 2.00	Bulk/Bag	1800
2118727-2	2118727-4	0.20	29.96 x 19.10 x 2.00	Bulk/Bag	3000
2118729-2	2118729-4	0.20	44.60 x 31.10 x 2.00	Bulk/Bag	1800
2118731-2	2118731-4	0.15	51.30 x 38.60 x 2.00	Bulk/Bag	1200

TWO PIECE SHIELDS - FRAME			PACKAGING		
CRS	**Thickness (mm)**	**Size (L x W x H) (mm)**	**Diameter (mm)**	**Pcs/Reel**	**Pcs/Box**
2118714-2	0.20	13.66 x 12.70 x 2.54	330	900	3600
2118716-2	0.20	16.50 x 16.50 x 3.60	330	550	1650
2118718-2	0.20	26.21 x 26.21 x 5.08	380	280	840
2118720-2	0.20	32.00 x 32.00 x 6.00	380	166	498
2118722-2	0.20	38.10 x 25.40 x 6.00	380	216	648
2118724-2	0.20	36.83 x 33.68 x 5.08	380	186	558
2118726-2	0.20	44.37 x 44.37 x 9.75	380	90	180
2118728-2	0.20	29.36 x 18.50 x 7.00	380	280	840
2118730-2	0.20	44.00 x 30.50 x 3.00	380	340	1020
2118732-2	0.20	50.80x 38.10 x 5.08	380	170	340

PRODUCT TYPE: TWO PIECE

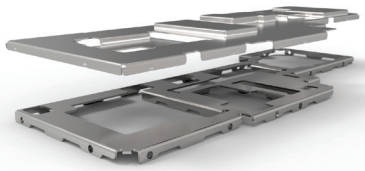
Frame Component

- Pitch of castellation: 3mm min
- Pitch of locking holes: 3mm min
- Material: Nickel silver, galvanized & pre-plated CRS *
- Material thickness: 0.10mm min
- Inner bending radius: 0.10mm min
- Co-planarity: 0.08mm, size dependent



Cover Component

- Pitch of dimples: 3mm min
- Material: Stainless steel, galvanized steel, pre-plated CRS & aluminum
- Material thickness: 0.08mm min
- Inner bending radius: 0.10mm min



* Other material may be available, please consult with your TE representative.

CUSTOM BLS DESIGN SPECIFICATIONS

We offer a wide array of customized solutions for various applications, so we have created this form to help you gather the requirements we need to better understand your customized project(s).

Prototype schedule and quantity:	Desired material, plating and thickness:
Mass production schedule and projected quantity:	Drawings needed: ☐ 3D model ☐ 2D print ☐ Both
Program Life:	
Size requirements:	Co-planarity requirement:
Length:	Frequency to be shielded:
Width:	Engineering Point of Contact:
Height:	Name:
Access needed beneath shield? ☐ Yes ☐ No	Email:

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