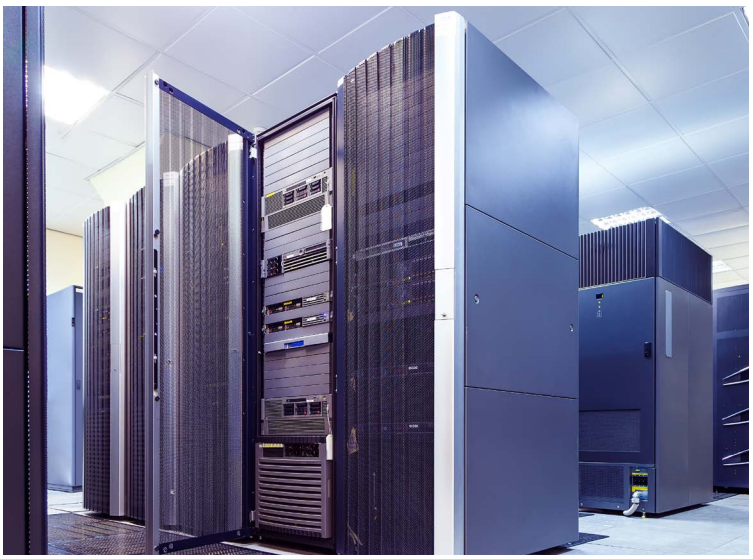
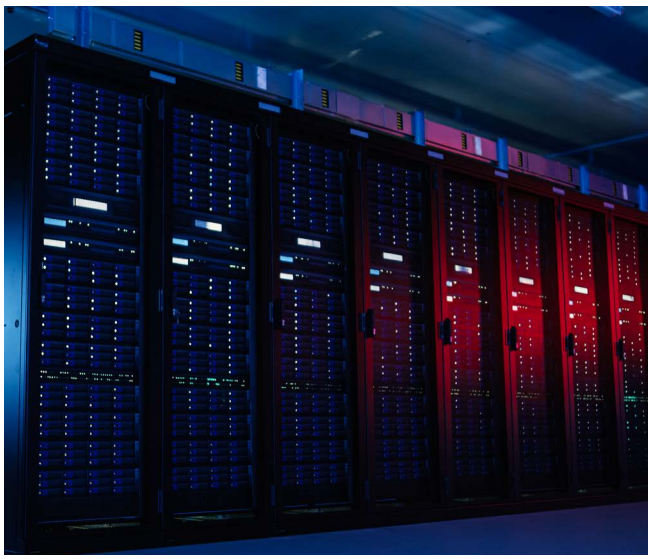
Kemtron
Proven EMC Shielding Solutions
Kemtron Ltd. is now part of

TE connectivity

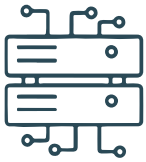




EMI SHIELDING SOLUTIONS FOR DATA CENTER AND SERVER APPLICATIONS

In today's environment, data centers are gaining importance due to the trend of outsourcing data access through the Cloud, while supporting bandwidth-intensive applications. Data center managers want to squeeze every bit of performance out of the data center architecture. Network equipment manufacturers need to consider Electromagnetic Compatibility as a potential inhibitor to maximize speed and efficiency in data centers.

Increases in data speed lead to commensurate increases in noise and heat. Greater connectivity supporting more wireless devices results in more signals and increased connector heat. All of these changes related to 5G place greater emphasis on appropriate EMI shielding, and as 5G evolves, engineers will need to meet the challenges of designing for faster data speeds, increased connectivity, and higher frequencies.

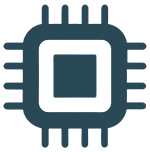


SYSTEM ARCHITECTURE

More complexity with multiple electronics sub-systems, ensuring overall system performance requires that these sub-systems do not interfere with each other.

CONNECTIVITY

Proliferating wireless devices augmenting # of signals and increasing connector heat



POWER DENSITY

Slowing of Moore's Law increases density creating more heat and signal noise

DATA SPEEDS

Increasing speeds create more noise and heat

EMC REGULATION

Growing regulation for electromagnetic compliance making EMC more important

Electromagnetic interference shielding refers to the attenuation, in reflection and/or absorption, of electromagnetic radiation through the use of a material that acts as a "shield" against it.

For radiated emissions, this can be achieved by using materials and components that will create a Faraday cage from the enclosure, or by creating a smaller Faraday cage within the enclosure.

WHY IS EMI SHIELDING IMPORTANT?

As shielding is your best protection against EMI, you need to anticipate electromagnetic energy for your application and never underestimate the importance of shielding.

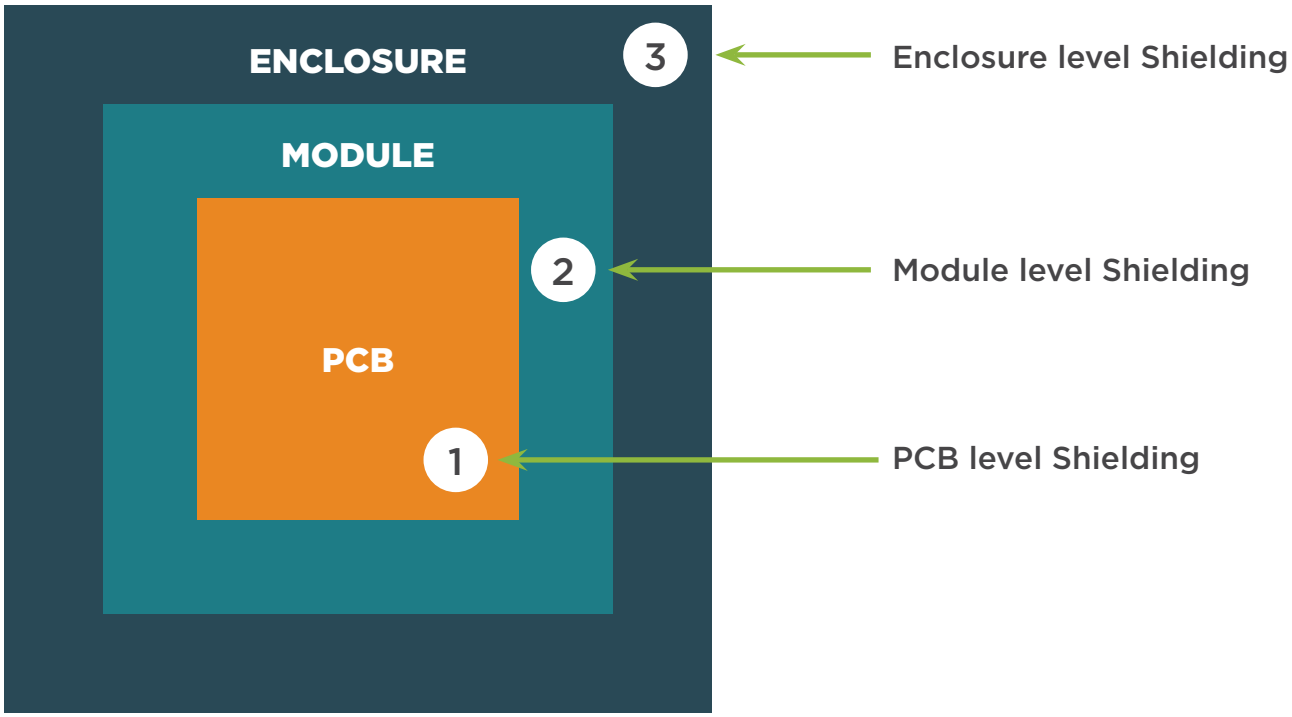
Please contact our sales department to discuss your custom requirements. We will need a drawing or specification giving overall dimensions, type of material, plating, through hole/surface mount configurations, quantity, tolerances, packaging and any special requirements.

- EMC compliance required by law/performance specifications
- EMC non-compliance causes system level redesign late in product development process

WHERE IS EMI SHIELDING USED?

EMI shielding gaskets are applied at the seams of an enclosure to establish a low resistance conductive path to block radiated emissions into and out of the enclosure.

- Conductive gaskets/windows/vents at enclosure assembly level
- Conductive gaskets for module assembly
- Conductive gasket at board level cans at PCB level



HOW WE ADDRESS ELECTROMAGNETIC COMPATIBILITY (EMC)

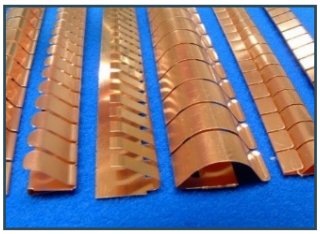
Electromagnetic compatibility enables a device, equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbance to anything in that environment.

Request free samples for our EMI Shielding Portfolio to test in your design

TEST YOUR PRODUCT TODAY

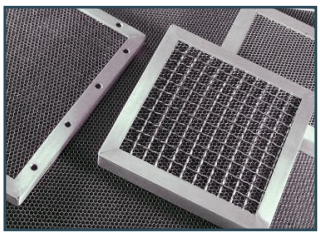
DATA CENTRE RACKS

1. Gaskets fill gaps in enclosure seams and joins forming a conductive path.
2. Soft & flexible gaskets for poor tolerances with fabric over foam material
3. Vent panels allow air/cooling while maintaining the faraday cage.

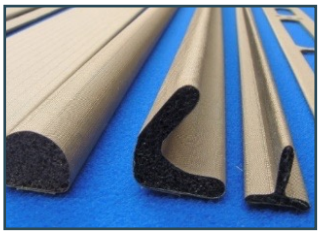


BeCu Spring Fingers

Knitted Mesh



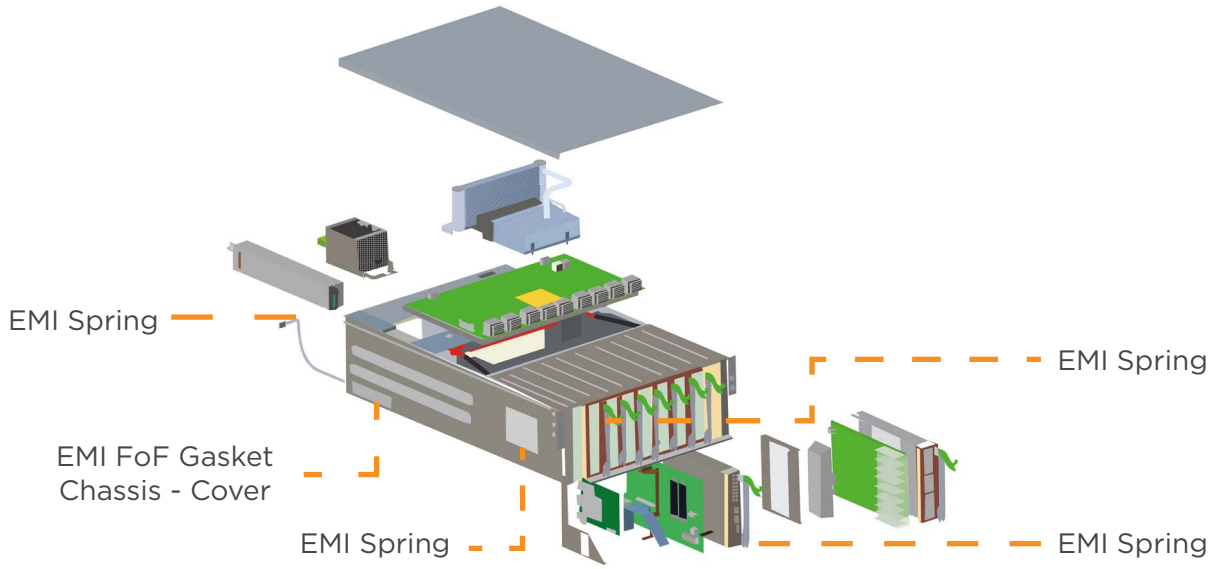
EMI Honeycomb Vents



Conductive Fabric-over-Foam

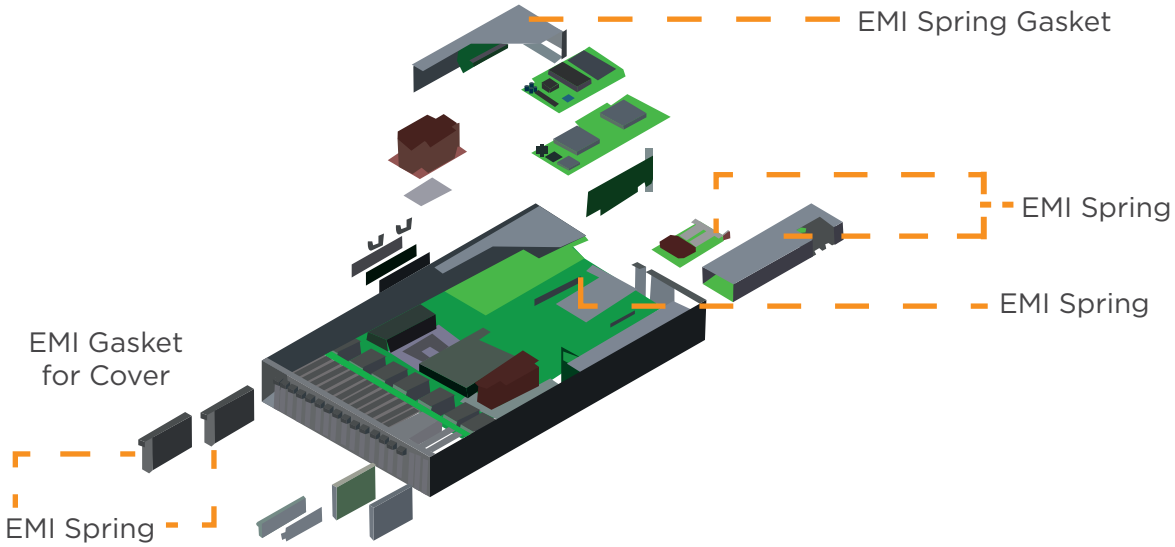
Product type	Application	Key Product features	Benefits
Spring Fingers	Strips for rack grounding	Suitable for repeated insertions	Reliable grounding of racks to enclosure
Knitted Wire Mesh	Door gasket	Available with a soft core	Robust gasket
EMI Honeycomb vent	Shielding over air inlet/outlet apertures	Allows good airflow and provides high level of EMI shielding	Improved EMI shielding over air inlet/outlet apertures
Conductive Fabric over foam	Door gasket Strips for rack grounding	Very soft and conformable high wear resistance	Reliable grounding of racks Provides door seal with a low closure force

NETWORK SWITCH – EMI SHIELDING SOLUTIONS



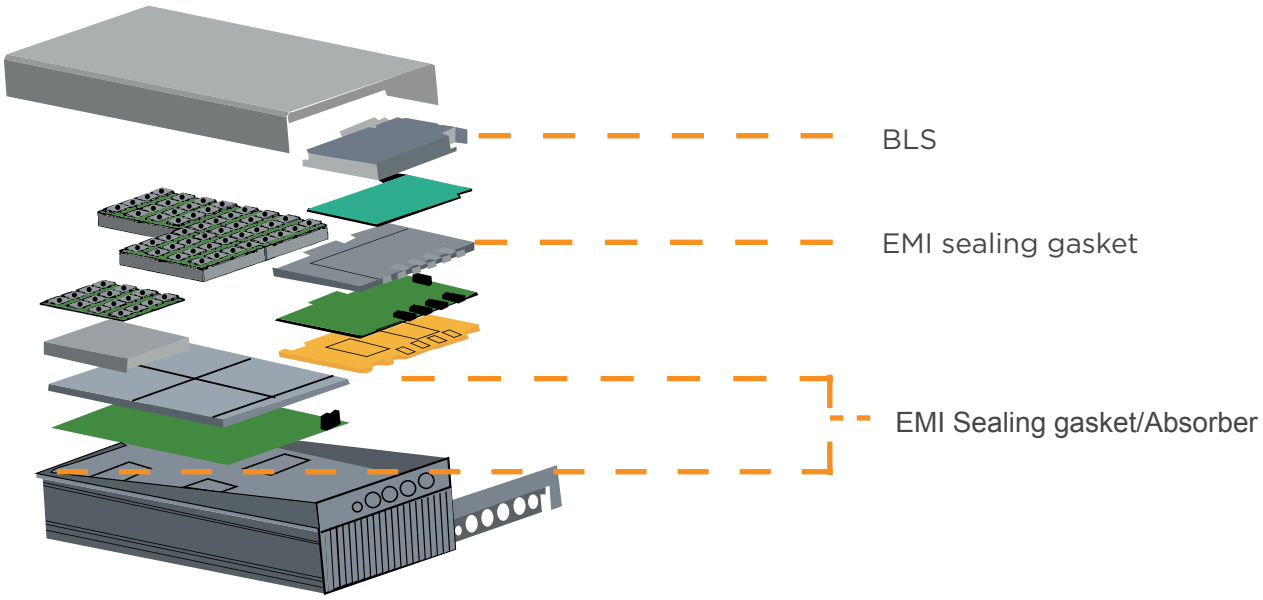
Product type	Application	Key Product features	Benefits
Conductive fabric over foam	Chassis cover gasket	Soft and conformable	Provides EMI shielding on cover with low closure force
Metal spring fingers	Grounding to chassis	Suitable for repeated insertions	Reliable grounding
Metal spring fingers	Grounding of chassis to enclosure	Suitable for repeated insertions	Reliable grounding

2U RACK MOUNT SERVER – EMI SHIELDING SOLUTIONS



Product type	Application	Key Product features	Benefits
Conductive fabric over foam	Chassis cover gasket	Soft and conformable	Provides EMI shielding on cover with low closure force
Metal spring fingers	Grounding to chassis	Suitable for repeated insertions	Reliable grounding
Metal spring fingers	Grounding of chassis to enclosure	Suitable for repeated insertions	Reliable grounding

5G ACTIVE ANTENNA UNIT (AAU) – EMI SHIELDING



Product type	Application	Key Product features	Benefits
Conductive fabric over foam	Cover gasket	Soft and conformable	Provides EMI shielding on cover with low closure force
Form-in-place	Gaskets on internal shields	Small footprint Low closure force	Provides an EMI gasket on a small land area
Conductive elastomer	- Flat I/O gaskets -Cover gasket -Gasket on internal shields	High level of EMI shielding Hollow profiles can offer low closure force	Can provide flat I/O gasket with adhesive backing

Notice

Information supplied in these data sheets is based on independent and laboratory tests which Kemtron believes to be reliable. Kemtron has no control over the design of customer's product which incorporates Kemtron's products, therefore it is the responsibility of the user to determine the suitability for his particular application and we recommend that the user make his own test to determine suitability.

The product described in this data sheet shall be of standard quality, however the products are sold without warranty of fitness for a particular purpose, either expressed or implied, except to the extent expressly stated on Kemtron's invoice, quotation or order acknowledgement. Kemtron does not warrant that products described in this data sheet will be free of conflict with existing or future patents of third parties. All risks of lack of fitness, patent infringement and the like are assumed by the user.

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