Masach™

Setting the **Standard** for **Shielding**.™
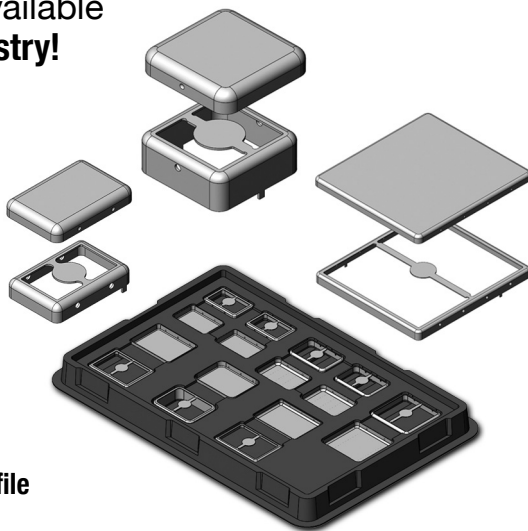
MS On-Board / Standard Drawn EMI/RFI Shields

MS-ENG-KIT21 / Engineering Kit

Seamless Protective Cages!

Save Time & Costs
with largest selection available
in the Electronics Industry!

☑ SMD

[Rev / May 23, 2019 10:55 AM]

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RoHS compliant

www.masach.com

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Setting the Standard for Shielding.™

Masach™ brings twenty five years of know-how and expertise into every standard shield produced. Our ever-growing selection of standard EMI/RFI shields is the largest in the industry, saving our customers precious time and money while catering to the electronic industry's growing high frequency and RF applications. With emphasis on technology and design, Masach™ drawn EMI/RFI shields boast top performance across the metrics, featuring a seamless protective cage, robust construction, optimal planarity and two-piece shield design.
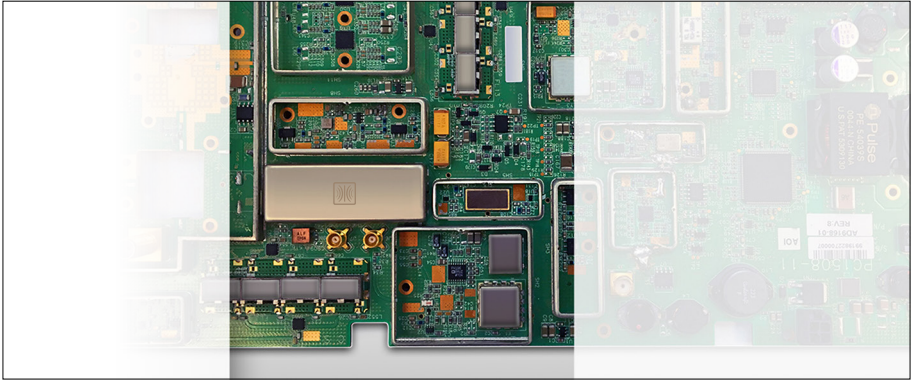
〤 Masach™

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Whatever your EMI/RFI challenge..

Introduction

Masach™ specializes in board level EMI/RFI shielding design and production for small, medium and large scale runs. Founded in 1994, Masach™ is a globally recognized and leading supplier of some of the world's largest electronic companies, driven by highest quality customer service with uncompromised product performance.

Every step of the production cycle, from raw materials and design to packaging and shipping, is meticulously executed under one roof leveraging dedicated hydraulic presses, cutting-edge tool room assemblies, forming operations and more.

Masach™ utilizes the latest laser technology to deliver most advanced 3D cutting of formed or bent shields made of thin gage materials, CNC punching and more. We remain committed to meet the needs of every industry – from telecommunications and network equipment to military and medical – with the right board level EMI/RFI shielding solution for every challenge.

Hermetically Sealed EMI/RFI Shields

High Performance EMI/RFI Shields

Exclusive, Seamless EMI/RFI shields for a higher level of protection

LEARN MORE

A higher level of protection

EMI/RFI engineers prefer hermetically sealed shields at high frequencies due their superior performance over time. Designed for highest shielding performance leveraging a unique hermetic design and fabrication process, Masach™ seamless protective cages are in a class of their own.

Most conventional shields are produced by bending the frames and covers, leaving slits for dust and interference. Masach™ unique fabrication process utilizes drawn frames and snap on covers to produce a seamless, more hermetic shield that is as durable as it is effective.

Featuring a convenient two-piece design, our shields enable to inspect and repair shielded components without having to remove the entire shield. Masach™ shields are known for their planarity, offering optimal yield of reflow soldering for even better overall performance.
Our ever-growing selection of EMI/RFI hermetically sealed shields are suitable to small, medium and large-scale runs.

Seamless Protective Cage!

Features & Benefits

- Seamless Protective Cage for higher shielding effectiveness
- Optimal Planarity for higher yield on reflow soldering
- Solid Construction to resist dents and warps
- Two-piece Shield Design enables to repair components without removing the shield, saving time and reducing repair damage
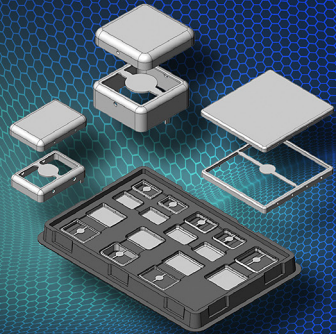
Largest Selection in the Industry

Largest Library of 2-piece EMI/RFI Shields

Extensive range of Drawn EMI/RFI shields from Masach, boosts flexibility

LEARN MORE

Enjoy our extensive range of drawn shields for utmost flexibility in design

Masach™ offers the largest selection of standard drawn EMI/RFI shields in the electronics industry. Our ever-growing range of sizes delivers more flexibility in surface mount configurations where interference may occur or is identified during the board design phase. The highly reliable two-piece design (frame and cover) accommodates virtually any surface mount application.

Fast and Economical Approach

Fast and Economical EMI/RFI Shields

Off-the shelf, Fully SMD Compatible
suitable for all stages of production

LEARN MORE
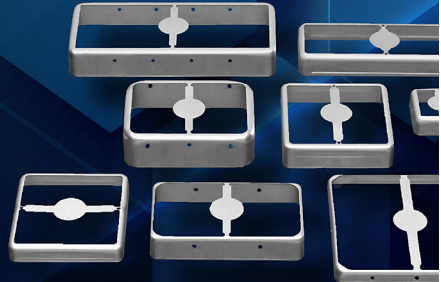
Shorter engineering design time, lower product cost and quicker time to market
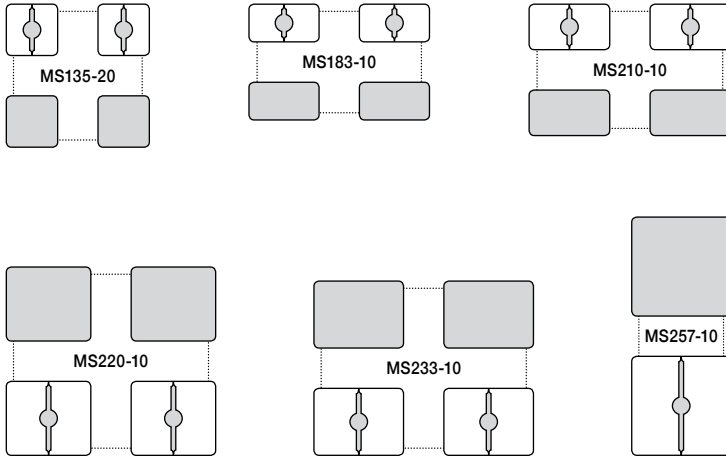
+ BOM | **PDF**

BUY NOW

Masach™ standard shields saves on custom design costs, doing away with the need to produce expensive prototypes for evaluation, as well as significantly reduces delivery times. Our standard drawn EMI/RFI shields consist of tin-plated steel alloys, commonly used for board-level shielding due to their exceptional mechanical formability, environmental compliance, and relative low cost.

Engineers taking part in the board design phase can take advantage of the information concerning all mechanical aspects of Masach™ shields, conveniently available for download (PDF datasheets and CAD files), from the website product page.
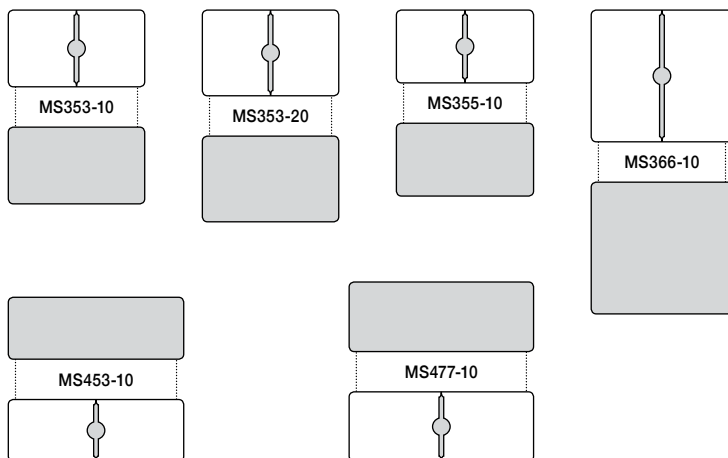
MS-ENG-KIT21 Diagram / Trays A-B

A
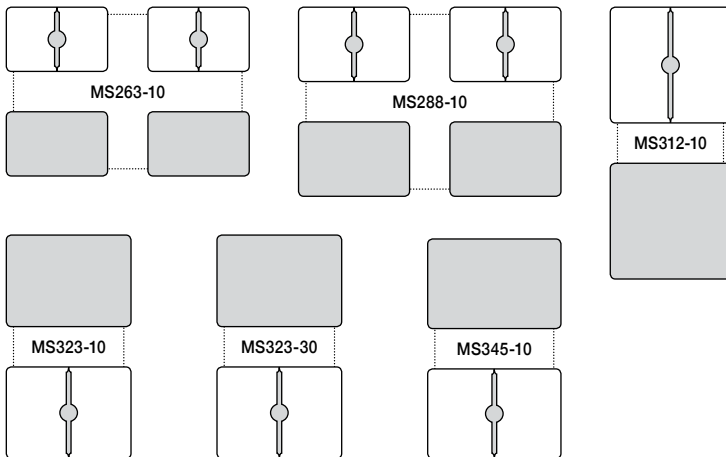
MS135-20

MS183-10

MS210-10

MS220-10

MS233-10

MS257-10

B

MS263-10

MS288-10

MS312-10

MS323-10

MS323-30

MS345-10

ATTENTION! Do not attempt to assemble snap cover on frame prior to PCB assembly.
Covers are difficult to remove from non-soldered frames.

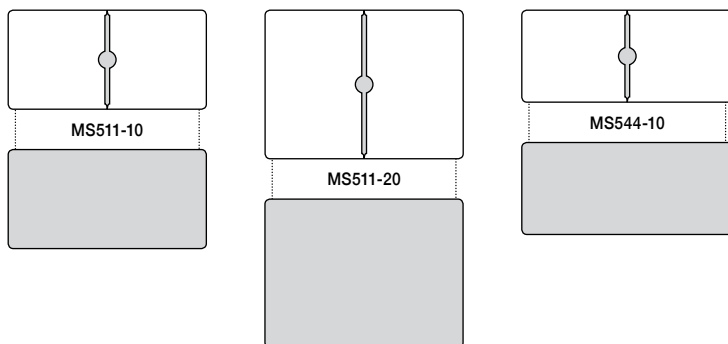© 2019 Masach Tech Ltd.   www.masach.com

MS-ENG-KIT21 Diagram / Trays C-D

C

MS353-10

MS353-20

MS355-10

MS366-10

MS453-10

MS477-10

D

MS511-10

MS511-20

MS544-10
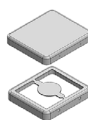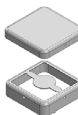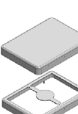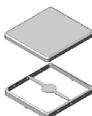
ATTENTION! Do not attempt to assemble snap cover on frame prior to PCB assembly.
Covers are difficult to remove from non-soldered frames.

MS Set PN.	MS Item PN.	Description	Ext. Dimensions (mm)		
			L ▼	W	H

MS135-20	MS135-20F	EMI/RFI Frame	13.5	13.5	5.1
	MS135-20C	EMI/RFI Cover	14.1	14.1	3
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS183-10	MS183-10F	EMI/RFI Frame	18.3	10.5	3
	MS183-10C	EMI/RFI Cover	18.9	11.1	3
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

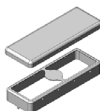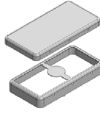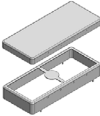| MS210-10	MS210-10F	EMI/RFI Frame	21	12	5
	MS210-10C	EMI/RFI Cover	21.6	12.6	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS220-10	MS220-10F	EMI/RFI Frame	22	19.3	3.3
	MS220-10C	EMI/RFI Cover	22.6	19.9	3
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☑ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS233-10	MS233-10F	EMI/RFI Frame	23.3	17.5	5
	MS233-10C	EMI/RFI Cover	23.7	17.9	2.8
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS Set PN.	MS Item PN.	Description	Ext. Dimensions (mm)		
			L ▾	W	H
MS257-10	MS257-10F	EMI/RFI Frame	25.7	25.7	6.5
	MS257-10C	EMI/RFI Cover	26.3	26.3	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS263-10	MS263-10F	EMI/RFI Frame	26.3	16.8	4.5
	MS263-10C	EMI/RFI Cover	26.9	17.4	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☑ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS288-10	MS288-10F	EMI/RFI Frame	28.8	19.4	5
	MS288-10C	EMI/RFI Cover	29.4	20	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS312-10	MS312-10F	EMI/RFI Frame	31.2	30	5
	MS312-10C	EMI/RFI Cover	31.8	30.6	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS323-10	MS323-10F	EMI/RFI Frame	32.3	23.8	3.7
	MS323-10C	EMI/RFI Cover	32.9	24.4	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☑ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS Set PN.	MS Item PN.	Description	Ext. Dimensions (mm)		
			L ▼	W	H
MS323-30	MS323-30F	EMI/RFI Frame	32.3	23.8	9
	MS323-30C	EMI/RFI Cover	32.9	24.4	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☑ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS345-10	MS345-10F	EMI/RFI Frame	34.5	23.3	3.5
	MS345-10C	EMI/RFI Cover	35.1	23.9	3.3
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☑ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS353-10	MS353-10F	EMI/RFI Frame	35.3	20	6.4
	MS353-10C	EMI/RFI Cover	35.7	20.4	3.5
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS353-20	MS353-20F	EMI/RFI Frame	35.3	22.3	6.4
	MS353-20C	EMI/RFI Cover	35.7	22.7	3.5
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		
MS355-10	MS355-10F	EMI/RFI Frame	35.5	19	5.5
	MS355-10C	EMI/RFI Cover	36.1	19.6	3.8
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS Set PN.	MS Item PN.	Description	Ext. Dimensions (mm)		
			L ▼	W	H

MS366-10	MS366-10F	EMI/RFI Frame	36.6	34.1	3.3
	MS366-10C	EMI/RFI Cover	37	34.5	2.8
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS453-10	MS453-10F	EMI/RFI Frame	45.3	16.2	6
	MS453-10C	EMI/RFI Cover	45.9	16.8	2.9
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS477-10	MS477-10F	EMI/RFI Frame	47.7	18.2	4
	MS477-10C	EMI/RFI Cover	48.3	18.8	3
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS511-10	MS511-10F	EMI/RFI Frame	51.1	25.7	6.5
	MS511-10C	EMI/RFI Cover	51.7	26.3	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS511-20	MS511-20F	EMI/RFI Frame	51.1	38.4	6.5
	MS511-20C	EMI/RFI Cover	51.7	39	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

MS Set PN.	MS Item PN.	Description	Ext. Dimensions (mm)		
			L ▼	W	H
MS544-10	MS544-10F	EMI/RFI Frame	54.4	23.9	7.5
	MS544-10C	EMI/RFI Cover	55	24.5	4
	2-Piece Shield	Seamless Protective Cage	Tin-Steel		
	Optional Configurations:				
	☑ 2-Piece ☑ 1-Piece	☑ Hermetic ☐ Perforated	☑ Tin-Steel ☑ Nickel Silver		

We offer the largest selection of standard EMI/RFI shields in the industry.

Stay updated. View our Online Catalog:
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NOTE: (1) All Items in this category are according to our **Tinplate Standard Steel –** CRS Electrolytic Tinplate
(2) General Tolerance (+/-) 0.2mm

If you cannot find a standard shield according to your requirements, please contact us at:
info@masach.com and we will make the adjustments or find a suitable solution for your specific needs.

Typical PCB Shielding Effectiveness.
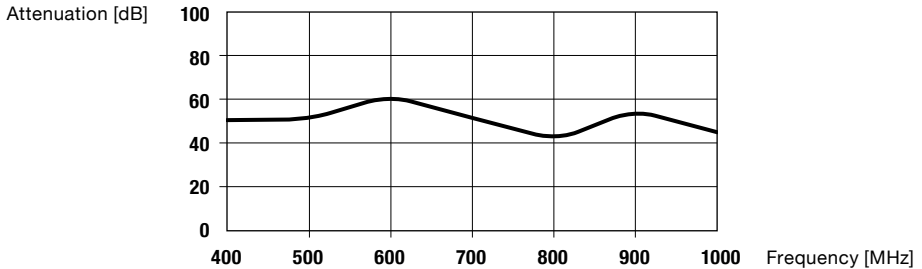
[Typical performance of 51.1mm x 38.4mm EMI/RFI shield as reference]

Tinplate Steel Stock Storage & Handling

Materials Specification: Cold Reduced Electrolytic Tinplate Steel
Tinplate Standard: TS275E8.4/8.4 EN 10202:2001

The materials used to fabricate these shields are based on mild steel with less than 0.12% Carbon and no more than 1% alloying elements and naturally occurring impurities. Major shielding elements are thus ferrous and tin. The thin resultant layer of tin enables shields to be easily soldered to PC boards as well as to resist corrosion during the assembly process. Tin plate shields offer the most cost effective shielding protection provided the following care is taken during storage and handling:

1. Do not pass these components through a salt bath test, they are not designed for such severe treatment. Alternate materials (albeit more expensive) are available.
2. Frames should be left in the package trays until assembly to preserve shield planarity.
3. Store in a cool dry place and avoid water or other liquids from coming into contact with shields.
4. Mild scratching and scuffs are natural for processed shields from pre-plated material.
   Protective films can be ordered especially for unblemished finish of covers.
5. Extremely thin film of oil may cover some shields. This does affect soldering and need not be removed.

Tinplate shields constitute over 85% of the materials used in the Masach production program and have been proven effective in their respective applications.

Masach

Tray No.	MS Set PN.	Description	Ext. Dimensions (mm)		
			L ▼	W	H
A	MS135-20	2-Piece Shield	13.5	13.5	5.3
	MS183-10	2-Piece Shield	18.3	10.5	3
	MS210-10	2-Piece Shield	21	12	5
	MS220-10	2-Piece Shield	22	19.3	3.3
	MS233-10	2-Piece Shield	23.3	17.5	3.3
	MS257-10	2-Piece Shield	25.7	25.7	6.5
B	MS263-10	2-Piece Shield	26.3	16.8	4.5
	MS288-10	2-Piece Shield	28.8	19.4	5
	MS312-10	2-Piece Shield	31.2	30	5
	MS323-10	2-Piece Shield	32.3	23.8	3.7
	MS323-30	2-Piece Shield	32.3	23.8	9
	MS345-10	2-Piece Shield	34.5	23.3	3.5
C	MS353-10	2-Piece Shield	35.3	20	6.4
	MS353-20	2-Piece Shield	35.3	22.3	6.4
	MS355-10	2-Piece Shield	35.5	19	5.5
	MS366-10	2-Piece Shield	36.6	34.1	3.3
	MS453-10	2-Piece Shield	45.3	16.2	6
	MS477-10	2-Piece Shield	47.7	18.2	4
D	MS511-10	2-Piece Shield	51.1	25.7	6.5
	MS511-20	2-Piece Shield	51.1	38.4	6.5
	MS544-10	2-Piece Shield	54.4	23.9	7.5

Stay updated. View our Online Catalog ›

Pick-out your next EMI/RFI Shield ›

RoHS compliant

www.masach.com