Masach Technologies

ENG

Board Level Shielding
Design & Fabrication

Masach's Drawn EMI/RFI Standard Shields

Hermetically Sealed!

new

OnlineOrdering

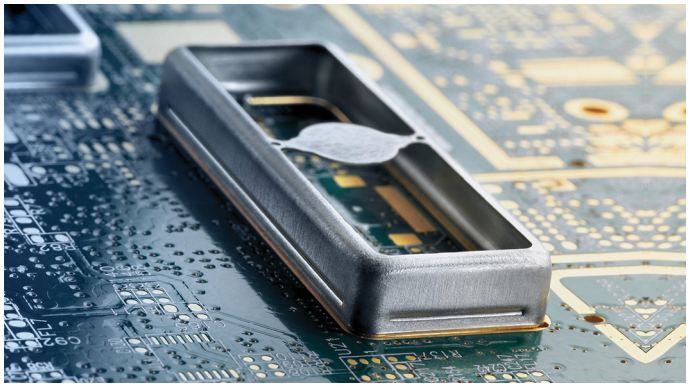
Complimentary CAD files downloads @ www.masach.com

“Whatever your EMI/RFI challenge..”

Global Distributors /

Masach Technologies

Board Level Shielding
Design & Fabrication



» Introduction

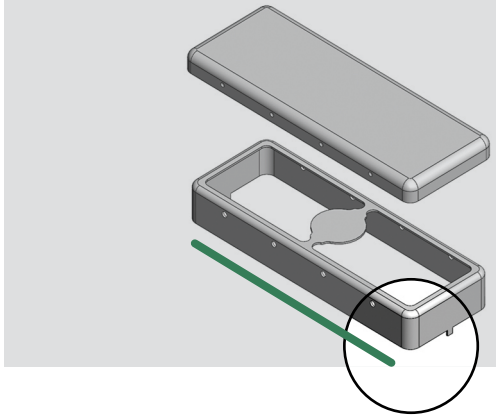
Masach Technologies specializes in the design and production of both customized and standard Board Level EMI/RFI Shields for small, medium and large scale runs. Founded in 1994, the company is a leading provider in the electronics industry and has earned global recognition as a reliable supplier for some of the world’s leading electronic corporations.

All aspects of design and manufacturing are carried out under one roof, beginning from raw material inventory of over 40 tons, Advanced Laser Technology with special Laser capabilities offers 3D cutting of formed or bent shields made of thin gage materials, CNC punching, forming and final operations, tool room assemblies, press work on dedicated hydraulic presses to final inspection and packaging.

Whatever your EMI/RFI challenge – Whether, in automotive, computer, military, data communications, general electronics, medical equipment, network equipment, telecommunications or any high-tech industry – Masach Technologies has the right board level EMI/RFI shielding solution for you.

Continue ↘

Hermetically Sealed Shields!

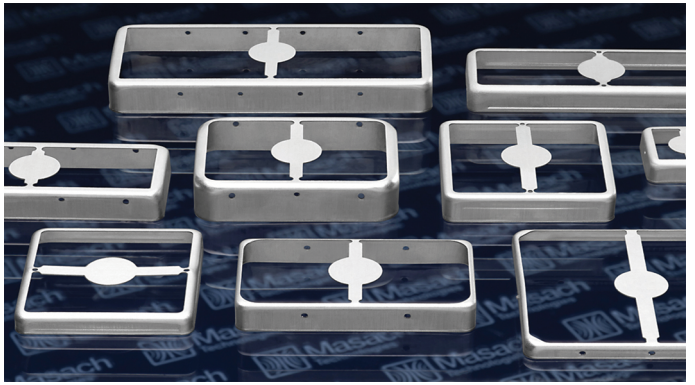


» Why Drawn EMI/RFI Shields?

At higher frequencies the preference of EMI/RFI engineers turns to more hermetically sealed shields. Drawn EMI/RFI shields provide a seamless protective cage.
These shields are fabricated as drawn frames with drawn snap on covers. As opposed to bent frames & covers which can be manufactured in single units by manual process, these shields must be tooled.

Main Advantages

- **Seamless protective cage** – Promotes high shielding effectiveness
- **Robust & Solid Construction** – Resists warping during transit and handling
- **Optimal Planarity** – Promotes high yield on reflow soldering
- **Two-piece shield Design (frame & cover)** – Enables the flexibility to inspect or repair shielded components without having to risk board damage by removing the entire shield or incur any tooling costs

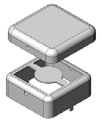
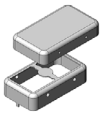


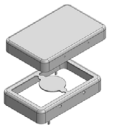
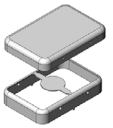
» Why to use Standards?

Throughout the years Masach has built a wide variety of Drawn EMI/RFI Standard Shields, unique in the board level shields field. The Drawn Standards are all tooled items which are optimized for small, medium & large-scale runs. The nature of Masach's activity is to constantly add more standards (Monthly) and significantly enhancing the attraction of "Off the shelf" products of this kind.

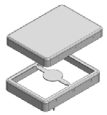
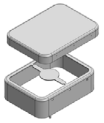
Masach's Drawn EMI/RFI Standard Shields maximize flexibility of design for surface mount configurations in situations where engineers are aware of potential interference during the board design phase. Ordering a standard product eliminates the design of the shield and the production of prototypes for evaluation.
Added advantages are translated into relatively low cost and short delivery times.
In addition, complimentary CAD files are available for download on Masach's website for immediate use: www.masach.com

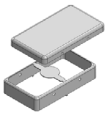
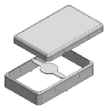
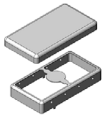
Specifications ↘

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS129-10	MS129-10C	RF Cover	13.5	0.531	13.5	0.531	3	0.118
	MS129-10F	RF Frame	12.9	0.508	12.9	0.508	5	0.197
	Two-piece shield							
MS135-20	MS135-20C	RF Cover	14.1	0.555	14.1	0.555	3	0.118
	MS135-20F	RF Frame	13.5	0.531	13.5	0.531	5.1	0.201
	Two-piece shield							
MS156-10	MS156-10C	RF Cover	16	0.629	11	0.433	2.6	0.102
	MS156-10F	RF Frame	15.6	0.614	10.6	0.417	3	0.118
	Two-piece shield							
MS183-10	MS183-10C	RF Cover	18.9	0.744	11.1	0.437	3	0.118
	MS183-10F	RF Frame	18.3	0.720	10.5	0.413	3	0.118
	Two-piece shield							
MS210-10	MS210-10C	RF Cover	21.6	0.850	12.6	0.496	4	0.157
	MS210-10F	RF Frame	21	0.827	12	0.472	5	0.197
	Two-piece shield							

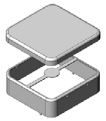
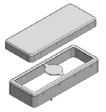
MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS220-10	MS220-10C	RF Cover	22.6	0.890	19.9	0.783	3	0.118
	MS220-10F	RF Frame	22	0.866	19.3	0.760	3.3	0.130
	Two-piece shield							
MS233-10	MS233-10C	RF Cover	23.7	0.933	17.9	0.704	2.8	0.110
	MS233-10F	RF Frame	23.3	0.917	17.5	0.689	3.3	0.130
	Two-piece shield							
MS257-10	MS257-10C	RF Cover	26.3	1.035	26.3	1.035	4	0.157
	MS257-10F	RF Frame	25.7	1.012	25.7	1.012	6.5	0.256
	Two-piece shield							
MS263-10	MS263-10C	RF Cover	26.9	1.059	17.4	0.685	4	0.157
	MS263-10F	RF Frame	26.3	1.035	16.8	0.661	4.5	0.177
	Two-piece shield							
MS288-10	MS288-10C	RF Cover	29.4	1.157	20	0.787	4	0.157
	MS288-10F	RF Frame	28.8	1.134	19.4	0.764	5	0.197
	Two-piece shield							

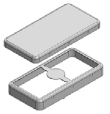
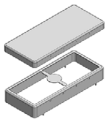
Specifications ↘

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS293-10	MS293-10C	RF Cover	29.9	1.177	25.9	1.020	5	0.197
	MS293-10F	RF Frame	29.3	1.154	25.3	0.996	6.4	0.252
	Two-piece shield							
MS312-10	MS312-10C	RF Cover	31.8	1.252	30.6	1.205	4	0.157
	MS312-10F	RF Frame	31.2	1.228	30	1.181	5	0.197
	Two-piece shield							
MS323-10	MS323-10C	RF Cover	32.9	1.295	24.4	0.961	4	0.157
	MS323-10F	RF Frame	32.3	1.272	23.8	0.937	3.7	0.146
	Two-piece shield							
MS323-20	MS323-20C	RF Cover	32.9	1.295	24.4	0.961	4	0.157
	MS323-20F	RF Frame	32.3	1.272	23.8	0.937	4.7	0.185
	Two-piece shield							
MS323-30	MS323-30C	RF Cover	32.9	1.295	24.4	0.961	4	0.157
	MS323-30F	RF Frame	32.3	1.272	23.8	0.937	9	0.354
	Two-piece shield							

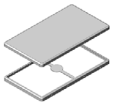
MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS345-10	MS345-10C	RF Cover	35.1	1.382	23.9	0.941	3.3	0.130
	MS345-10F	RF Frame	34.5	1.358	23.3	0.917	3.5	0.138
	Two-piece shield							
MS353-10	MS353-10C	RF Cover	35.7	1.405	20.4	0.803	3.5	0.138
	MS353-10F	RF Frame	35.3	1.390	20	0.787	6.4	0.252
	Two-piece shield							
MS353-20	MS353-20C	RF Cover	35.7	1.405	22.7	0.893	3.5	0.138
	MS353-20F	RF Frame	35.3	1.390	22.3	0.878	6.4	0.252
	Two-piece shield							
MS355-10	MS355-10C	RF Cover	36.1	1.421	19.6	0.772	3.8	0.150
	MS355-10F	RF Frame	35.5	1.398	19	0.748	5.5	0.217
	Two-piece shield							
MS366-10	MS366-10C	RF Cover	37	1.456	34.5	1.358	2.8	0.110
	MS366-10F	RF Frame	36.6	1.441	34.1	1.343	3.3	0.130
	Two-piece shield							

Specifications ↘

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS384-10	MS384-10C	RF Cover	39	1.535	38.2	1.504	4	0.157
	MS384-10F	RF Frame	38.4	1.512	37.6	1.480	11	0.433
	Two-piece shield							
MS400-10	MS400-10C	RF Cover	40.6	1.598	18.9	0.744	3	0.118
	MS400-10F	RF Frame	40	1.575	18.3	0.720	4	0.157
	Two-piece shield							
MS415-10	MS415-10C	RF Cover	42.1	1.657	17.4	0.685	4	0.157
	MS415-10F	RF Frame	41.5	1.634	16.8	0.661	6.8	0.268
	Two-piece shield							
MS415-20	MS415-20C	RF Cover	42.1	1.657	27.1	1.066	5	0.196
	MS415-20F	RF Frame	41.5	1.634	26.5	1.043	9.5	0.374
	Two-piece shield							
MS453-10	MS453-10C	RF Cover	45.9	1.807	16.8	0.661	3.2	0.126
	MS453-10F	RF Frame	45.3	1.783	16.2	0.638	6	0.236
	Two-piece shield							

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS477-10	MS477-10C	RF Cover	48.3	1.902	18.8	0.740	2.8	0.110
	MS477-10F	RF Frame	47.7	1.878	18.2	0.717	4	0.157
	Two-piece shield							
MS483-10	MS483-10C	RF Cover	48.9	1.925	44.9	1.768	2.8	0.110
	MS483-10F	RF Frame	48.3	1.902	44.3	1.744	3.3	0.130
	Two-piece shield							
MS511-10	MS511-10C	RF Cover	51.7	2.035	26.3	1.035	4	0.157
	MS511-10F	RF Frame	51.1	2.012	25.7	1.012	6.5	0.256
	Two-piece shield							
MS511-20	MS511-20C	RF Cover	51.7	2.035	39	1.535	4	0.157
	MS511-20F	RF Frame	51.1	2.012	38.4	1.512	6.5	0.256
	Two-piece shield							
MS544-10	MS544-10C	RF Cover	55	2.165	24.5	0.965	5	0.197
	MS544-10F	RF Frame	54.4	2.142	23.9	0.941	7.5	0.295
	Two-piece shield							

Specifications ↘

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
MS593-10	MS593-10C	RF Cover	59.9	2.358	21.2	0.835	3	0.118
	MS593-10F	RF Frame	59.3	2.335	20.6	0.811	3	0.118
	Two-piece shield							
MS593-20	MS593-20C	RF Cover	59.9	2.358	21.2	0.835	3	0.118
	MS593-20F	RF Frame	59.3	2.335	20.6	0.811	5.7	0.224
	Two-piece shield							
MS631-10	MS631-10C	RF Cover	63.5	2.5	35.9	1.413	2.5	0.098
	MS631-10F	RF Frame	63.1	2.484	35.5	1.398	2.8	0.110
	Two-piece shield							
MS737-10	MS737-10C	RF Cover	74.3	2.925	28.7	1.129	3	0.118
	MS737-10F	RF Frame	73.7	2.902	28.1	1.106	2.9	0.114
	Two-piece shield							

NOTE. All Items in this category are according to our Tinplate Standard Steel: (1) TS275E 8.4/8.4 (2) Electrolytic Tin Plate As Per En 10202:2001 Min Tin Thickness 3.5 um (3) General tolerance (+/-) 0.2mm unless otherwise specified, Non Dimensioned items remain Masach Technologies Ltd. property.

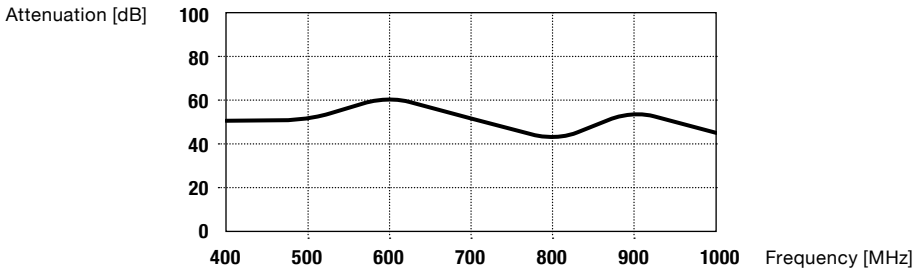
If you cannot find a standard shield according to your requirements, you are welcome to contact us at: **info@masach.com** and we will make the adjustments or find a suitable solution for your specific needs.

MS Cat No.	MS Part No.	Description	Ext. Length		Ext. Width		Ext. Height	
			mm	inch	mm	inch	mm	inch
	And more to come..							

Complimentary CAD files downloads @ www.masach.com

Continue ↘

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 material used to fabricate these shields are based on a 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 soldered easily to pc boards as well as providing a corrosion resistant protection during the assembly process. Tin plate shields are the most cost effective materials in the shielding screen family 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 package trays until assembly, the trays preserve the planarity of the shields.
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 specially for unblemished finish of covers.
5. Extremely thin film of oil may cover some shields, this does not have any effect on solder ability and does not have to be removed.

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

Masach Technologies

INTRODUCING

Board Level Shielding
Design & Fabrication

MS-ENG-KIT21

PROFESSIONAL ENGINEERING KIT

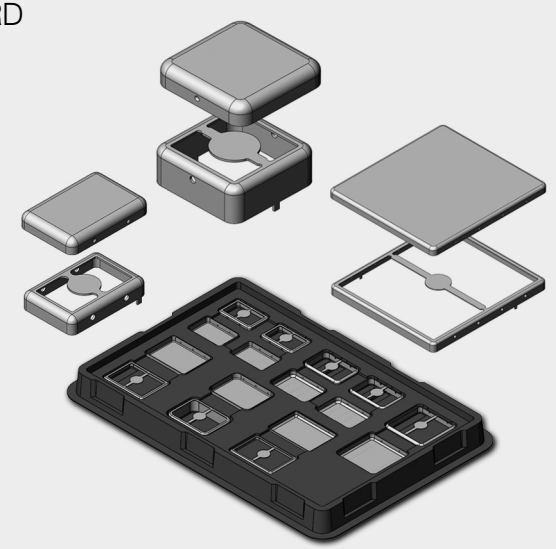
21 Sizes of Drawn EMI/RFI Standard Shields

SAVE TIME & COSTS

CHECK OUT OUR WIDE RANGE OF DRAWN EMI/RFI STANDARD SHIELDS **TODAY!**

SMT compatible

RoHS



new

OnlineOrdering

Complimentary CAD files downloads @ www.masach.com

MS Cat No.	Description	Ext. Length		Ext. Width		Ext. Height	
		mm	inch	mm	inch	mm	inch
MS129-10	Two-piece shield	12.9	0.508	12.9	0.508	5	0.197
MS135-20	Two-piece shield	13.5	0.531	13.5	0.531	5.1	0.201
MS156-10	Two-piece shield	15.6	0.614	10.6	0.417	3	0.118
MS183-10	Two-piece shield	18.3	0.720	10.5	0.413	3	0.118
MS210-10	Two-piece shield	21	0.827	12	0.472	5	0.197
MS220-10	Two-piece shield	22	0.866	19.3	0.760	3.3	0.130
MS233-10	Two-piece shield	23.3	0.917	17.5	0.689	3.3	0.130
MS257-10	Two-piece shield	25.7	1.012	25.7	1.012	6.5	0.256
MS263-10	Two-piece shield	26.3	1.035	16.8	0.661	4.5	0.177
MS288-10	Two-piece shield	28.8	1.134	19.4	0.764	5	0.197
MS293-10	Two-piece shield	29.3	1.154	25.3	0.996	6.4	0.252
MS312-10	Two-piece shield	31.2	1.228	30	1.181	5	0.197
MS323-10	Two-piece shield	32.3	1.272	23.8	0.937	3.7	0.146
MS323-20	Two-piece shield	32.3	1.272	23.8	0.937	4.7	0.185
MS323-30	Two-piece shield	32.3	1.272	23.8	0.937	9	0.354
MS345-10	Two-piece shield	34.5	1.358	23.3	0.917	3.5	0.138
MS353-10	Two-piece shield	35.3	1.390	20	0.787	6.4	0.252
MS353-20	Two-piece shield	35.3	1.390	22.3	0.878	6.4	0.252
MS355-10	Two-piece shield	35.5	1.398	19	0.748	5.5	0.217
MS366-10	Two-piece shield	36.6	1.441	34.1	1.343	3.3	0.130
MS384-10	Two-piece shield	38.4	1.512	37.6	1.480	11	0.433
MS400-10	Two-piece shield	40	1.575	18.3	0.720	4	0.157
MS415-10	Two-piece shield	41.5	1.634	16.8	0.661	6.8	0.268
MS415-20	Two-piece shield	41.5	1.634	26.5	1.043	9.5	0.374
MS453-10	Two-piece shield	45.3	1.783	16.2	0.638	6	0.236
MS477-10	Two-piece shield	47.7	1.878	18.2	0.717	4	0.157
MS483-10	Two-piece shield	48.3	1.902	44.3	1.744	3.3	0.130
MS511-10	Two-piece shield	51.1	2.012	25.7	1.012	6.5	0.256
MS511-20	Two-piece shield	51.1	2.012	38.4	1.512	6.5	0.256
MS544-10	Two-piece shield	54.4	2.142	23.9	0.941	7.5	0.295
MS593-10	Two-piece shield	59.3	2.335	20.6	0.811	3	0.118
MS593-20	Two-piece shield	59.3	2.335	20.6	0.811	5.7	0.224
MS631-10	Two-piece shield	63.1	2.484	35.5	1.398	2.8	0.110
MS737-10	Two-piece shield	73.7	2.902	28.1	1.106	2.9	0.114

MASACH TECHNOLOGIES LTD. | T: 972.8.9754681 | F: 972.8.9754682 | info@masach.com

RoHS

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