

## Technical information : SHIELDING COVERS AND BELTS

### Description:

Shielding covers for printed circuit boards (PCBs) ensure an **insulation** of components on the PCBs. The cover and the frame are assembled using clips thus creating a form of protection based on the Faraday principal. The clips are placed above one or several components to provide an excellent electromagnetic **shielding**. We also offer a large range of standard covers or set of covers/frames. We can also **customize** parts to meet your specifications (material, dimensions, form and surface treatment).

### Material

Tin-plated steel, Nickel Silver, Copper, Stainless steel

### Manufacturing processes

Cutting and folding using press, etching, and stamping processes

### Packaging

Thermoformed tray or rolls for pick and place

### Options

Multi-walls shielding, perforated sheets for aerations, assembly with a thermal interface, an absorber...

### Prototyping

With soft tooling for the validation stage

	Deep drawing (stamping process)	Classic (bending process)	Custom
<b>PCB Design properties</b>			
Land Width (foot print)	1.5 mm (nominal)	1.5 mm (nominal)	1.5 mm (nominal)
Corner radius	1.3 – 4.0 mm	None	None
Nominal Tab Hole Dimensions	0.6 – 1.3 mm	0.6 – 1.3 mm	1 – 1.3 mm
Recommended Tin Paste Mask Layer	0.5 mm	0.5 mm	0.5 mm
<b>Cover properties</b>			
Dimple	Yes	Yes	Yes
Spring	No	Yes	Yes
<b>Frame properties</b>			
Planarity	0.05 mm	0.1 mm	0.2 mm
Corner Seams	Closed	Open	Open
Multi cavity	No	Yes	Yes (in classic)

## MS – COMPELMA PRODUCT DATA (STANDARDS)

For all these products:

- **Manufacturer:** Masach Tech
- **Mounting:** Surface Mount
- **Material:** Tin Plated Steel
- **Product Category:** Board Mount EMI/RFI Shielding
- **Shield Type:** Seamless Protective EMI/RFI Cage
- **Package:** SMD Packing Trey
- **Series:** MS Drawn
- **Number of pieces:** 2
- **Life Cycle:** Active

Manufacturer Part Number	Description	Length (mm)	Depth (mm)	Height	RoHS Compliant	SMT Compatible	HTS Code	Minimum Order Quantity
MS087-10	RF shield 8.7 x 6.3 x 3mm Two-piece EMI shield can for PCB RF cage	8,7	6,3	3	Y	Y	732690995	50
MS093-10	RF shield 9.3 x 9.3 x 5mm Two-piece EMI shield can for PCB RF cage	9,3	9,3	5	Y	Y	732690995	50
MS110-10	RF shield 11 x 11 x 2.8mm Two-piece EMI shield can for PCB RF cage	11	11	2,8	Y	Y	732690996	48
MS110-20	RF shield 11 x 11 x 6mm Two-piece EMI shield can for PCB RF cage	11	11	6	Y	Y	732690997	48
MS130-10	RF shield 13 x 13 x 5mm Two-piece EMI shield can for PCB RF cage	13	13	5	Y	Y	732690995	50
MS135-20	RF shield 13.5 x 13.5 x 5.1mm Two-piece EMI shield can for PCB RF cage	13,5	13,5	5,1	Y	Y	732690995	50
MS148-10	RF shield 14.8 x 8.9 x 2mm Two-piece EMI shield can for PCB RF cage	14,8	8,9	2	Y	Y	732690995	50
MS156-10	RF shield 15.6 x 10.6 x 3mm Two-piece EMI shield can for PCB RF cage	15,6	10,6	3	Y	Y	732690995	50
MS168-10	RF shield 16.8 x 13.5 x 5mm Two-piece EMI shield can for PCB RF cage	16,8	13,5	5	Y	Y	732690995	50

Setting the **Standard for Shielding**.

MS183-10	RF shield 18.3 x 10.5 x 3mm Two-piece EMI shield can for PCB RF cage	18,3	10,5	3	Y	Y	732690995	50
MS190-10	RF shield 19 x 13.9 x 2mm Two-piece EMI shield can for PCB RF cage	19	13,9	2	Y	Y	732690995	50
MS193-10	RF shield 19.3 x 10.5 x 3mm Two-piece EMI shield can for PCB RF cage	19,3	10,5	3	Y	Y	732690995	50
MS206-10	RF shield 20.6 x 17.8 x 3mm Two-piece EMI shield can for PCB RF cage	20,6	17,8	3	Y	Y	732690995	35
MS209-10	RF shield 20.9 x 15.3 x 1.65mm Two-piece EMI shield can for PCB RF cage	20,9	15,3	1,65	Y	Y	732690996	42
MS209-20	RF shield 20.9 x 15.3 x 2mm Two-piece EMI shield can for PCB RF cage	20,9	15,3	2	Y	Y	732690997	42
MS210-10	RF shield 21 x 12 x 5mm Two-piece EMI shield can for PCB RF cage	21	12	5	Y	Y	732690995	40
MS213-10	RF shield 21.3 x 19.9 x 2.9mm Two-piece EMI shield can for PCB RF cage	21,3	19,9	2,9	Y	Y	732690997	35
MS220-10	RF shield 22 x 19.3 x 3.3mm Two-piece EMI shield can for PCB RF cage	22	19,3	3,3	Y	Y	732690995	26
MS220-20	RF shield 22 x 17.7 x 3mm Two-piece EMI shield can for PCB RF cage	22	17,7	3	Y	Y	732690995	35
MS220-30	RF shield 22 x 11.3 x 2.8mm Two-piece EMI shield can for PCB RF cage	22	11,3	2,8	Y	Y	732690995	42
MS220-40	RF shield 22 x 11.3 x 7mm Two-piece EMI shield can for PCB RF cage	22	11,3	7	Y	Y	732690995	42
MS223-10	RF shield 22.3 x 17.3 x 5mm Two-piece EMI shield can for PCB RF cage	22,3	17,3	5	Y	Y	732690995	30
MS226-10	RF shield 22.6 x 17.1 x 2mm Two-piece EMI shield can for PCB RF cage	22,6	17,1	2	Y	Y	732690995	30
MS233-10	RF shield 23.3 x 17.5 x 3.3mm Two-piece EMI shield can for PCB RF cage	23,3	17,5	5	Y	Y	732690995	25
MS233-20	RF shield 23.3 x 14.5 x 3mm Two-piece EMI shield can for PCB RF cage	23,3	14,5	3	Y	Y	732690995	36
MS256-10	RF shield 25.6 x 15.5 x 2.3mm Two-piece EMI shield can for PCB RF cage	25,6	15,5	2,3	Y	Y	732690995	36
MS257-10	RF shield 25.7 x 25.7 x 6.5mm Two-piece EMI shield can for PCB RF cage	25,7	25,7	6,5	Y	Y	732690995	20

MS259-10	RF shield 25.9 x 25.9 x 3mm Two-piece EMI shield can for PCB RF cage	25,9	25,9	3	Y	Y	732690995	24
MS260-10	RF shield 26 x 23 x 7.8mm Two-piece EMI shield can for PCB RF cage	26	23	7,8	Y	Y	732690995	24
MS263-10	RF shield 26.3 x 16.8 x 4.5mm Two-piece EMI shield can for PCB RF cage	26,3	16,8	4,5	Y	Y	732690995	25
MS263-20	RF shield 26.3 x 19.8 x 8.1mm Two-piece EMI shield can for PCB RF cage	26,3	19,8	8,1	Y	Y	732690995	30
MS268-10	RF shield 26.8 x 15.6 x 2.5mm Two-piece EMI shield can for PCB RF cage	26,8	15,6	2,5	Y	Y	732690995	36
MS268-20	RF shield 26.8 x 15.6 x 4mm Two-piece EMI shield can for PCB RF cage	26,8	15,6	4	Y	Y	732690995	36
MS288-10	RF shield 28.8 x 19.4 x 5mm Two-piece EMI shield can for PCB RF cage	28,8	19,4	5	Y	Y	732690995	25
MS293-10	RF shield 29.3 x 25.3 x 6.4mm Two-piece EMI shield can for PCB RF cage	29,3	25,3	6,4	Y	Y	732690995	20
MS300-10	RF shield 30 x 24.4 x 3.5mm Two-piece EMI shield can for PCB RF cage	30	24,4	3,5	Y	Y	732690995	20
MS312-10	RF shield 31.2 x 30 x 5mm Two-piece EMI shield can for PCB RF cage	31,2	30	5	Y	Y	732690995	15
MS321-10	RF shield 32.1 x 16.6 x 2.5mm Two-piece EMI shield can for PCB RF cage	32,1	16,6	2,5	Y	Y	732690995	30
MS323-10	RF shield 32.3 x 23.8 x 3.7mm Two-piece EMI shield can for PCB RF cage	32,3	23,8	3,7	Y	Y	732690995	15
MS323-20	RF shield 32.3 x 23.8 x 4.7mm Two-piece EMI shield can for PCB RF cage	32,3	23,8	4,7	Y	Y	732690995	15
MS323-30	RF shield 32.3 x 23.8 x 9mm Two-piece EMI shield can for PCB RF cage	32,3	23,8	9	Y	Y	732690995	15
MS329-10	RF shield 32.9 x 20.7 x 2.5mm Two-piece EMI shield can for PCB RF cage	32,9	20,7	2,5	Y	Y	732690995	25
MS338-10	RF shield 33.8 x 30.3 x 3.3mm Two-piece EMI shield can for PCB RF cage	33,8	30,3	3,3	Y	Y	732690995	15
MS345-10	RF shield 34.5 x 23.3 x 3.5mm Two-piece EMI shield can for PCB RF cage	34,5	23,3	3,5	Y	Y	732690995	18
MS353-10	RF shield 35.3 x 20 x 6.4mm Two-piece EMI shield can for PCB RF cage	35,3	20	6,4	Y	Y	732690995	20

MS353-20	RF shield 35.3 x 22.3 x 6.4mm Two-piece EMI shield can for PCB RF cage	35,3	22,3	6,4	Y	Y	732690995	20
MS355-10	RF shield 35.5 x 19 x 5.5mm Two-piece EMI shield can for PCB RF cage	35,5	19	5,5	Y	Y	732690995	21
MS366-10	RF shield 36.6 x 34.1 x 3.3mm Two-piece EMI shield can for PCB RF cage	36,6	34,1	3,3	Y	Y	732690995	12
MS378-10	RF shield 37.8 x 21.6 x 3mm Two-piece EMI shield can for PCB RF cage	37,8	21,6	3	Y	Y	732690995	16
MS382-10	RF shield 38.2 x 33.3 x 5mm Two-piece EMI shield can for PCB RF cage	38,2	33,3	5	Y	Y	732690995	12
MS384-10	RF shield 38.4 x 37.6 x 11mm Two-piece EMI shield can for PCB RF cage	38,4	37,6	11	Y	Y	732690995	8
MS400-10	RF shield 40 x 18.3 x 4mm Two-piece EMI shield can for PCB RF cage	40	18,3	4	Y	Y	732690995	20
MS402-10	RF shield 40.2 x 34.6 x 5.3mm Two-piece EMI shield can for PCB RF cage	40,2	34,6	5,3	Y	Y	732690995	12
MS412-10	RF shield 41.2 x 13.6 x 5.1mm Two-piece EMI shield can for PCB RF cage	41,2	13,6	5,1	Y	Y	732690995	24
MS415-10	RF shield 41.5 x 16.8 x 6.8mm Two-piece EMI shield can for PCB RF cage	41,5	16,8	6,8	Y	Y	732690995	15
MS415-20	RF shield 41.5 x 26.5 x 9.5mm Two-piece EMI shield can for PCB RF cage	41,5	26,5	9,5	Y	Y	732690995	16
MS448-10	RF shield 44.8 x 18.2 x 3mm Two-piece EMI shield can for PCB RF cage	44,8	18,2	3	Y	Y	732690995	20
MS448-20	RF shield 44.8 x 18.2 x 5.7mm Two-piece EMI shield can for PCB RF cage	44,8	18,2	5,7	Y	Y	732690995	20
MS453-10	RF shield 45.3 x 16.2 x 6mm Two-piece EMI shield can for PCB RF cage	45,3	16,2	6	Y	Y	732690995	16
MS466-10	RF shield 46.6 x 17.3 x 5mm Two-piece EMI shield can for PCB RF cage	46,6	17,3	5	Y	Y	732690995	16
MS473-10	RF shield 47.3 x 23.3 x 5.3mm Two-piece EMI shield can for PCB RF cage	47,3	23,3	5,3	Y	Y	732690995	12
MS477-10	RF shield 47.7 x 18.2 x 4mm Two-piece EMI shield can for PCB RF cage	47,7	18,2	4	Y	Y	732690995	15
MS483-10	RF shield 48.3 x 44.3 x 4.4mm Two-piece EMI shield can for PCB RF cage	48,3	44,3	4,4	Y	Y	732690995	8

Setting the **Standard for Shielding**.

MS511-10	RF shield 51.1 x 25.7 x 6.5mm Two-piece EMI shield can for PCB RF cage	51,1	25,7	6,5	Y	Y	732690995	10
MS511-20	RF shield 51.1 x 38.4 x 6.5mm Two-piece EMI shield can for PCB RF cage	51,1	38,4	6,5	Y	Y	732690995	8
MS513-10	RF shield 51.3 x 26.5 x 9.5mm Two-piece EMI shield can for PCB RF cage	51,3	26,5	9,5	Y	Y	732690995	10
MS544-10	RF shield 54.4 x 23.9 x 7.5mm Two-piece EMI shield can for PCB RF cage	54,4	23,9	7,5	Y	Y	732690995	10
MS544-20	RF shield 54.4 x 23.9 x 13.5mm Two-piece EMI shield can for PCB RF cage	54,4	23,9	13,5	Y	Y	732690995	12
MS585-10	RF shield 58.5 x 49.7 x 4.7mm Two-piece EMI shield can for PCB RF cage	58,5	49,7	4,7	Y	Y	732690995	6
MS593-10	RF shield 59.3 x 20.6 x 3mm Two-piece EMI shield can for PCB RF cage	59,3	20,6	2,8	Y	Y	732690995	14
MS593-20	RF shield 59.3 x 20.6 x 5.7mm Two-piece EMI shield can for PCB RF cage	59,3	20,6	5,7	Y	Y	732690995	14
MS631-10	RF shield 63.1 x 35.5 x 2.8mm Two-piece EMI shield can for PCB RF cage	63,1	35,5	2,8	Y	Y	732690995	9
MS737-10	RF shield 73.7 x 28.1 x 2.9mm Two-piece EMI shield can for PCB RF cage	73,7	28,1	2,9	Y	Y	732690995	7
MS-ENG-KIT21	RF shields engineering kit, Two-piece EMI shielding cans for PCB RF cage	Engineering Kit	Engineering Kit	Engineering Kit	Y	Y	732690995	1