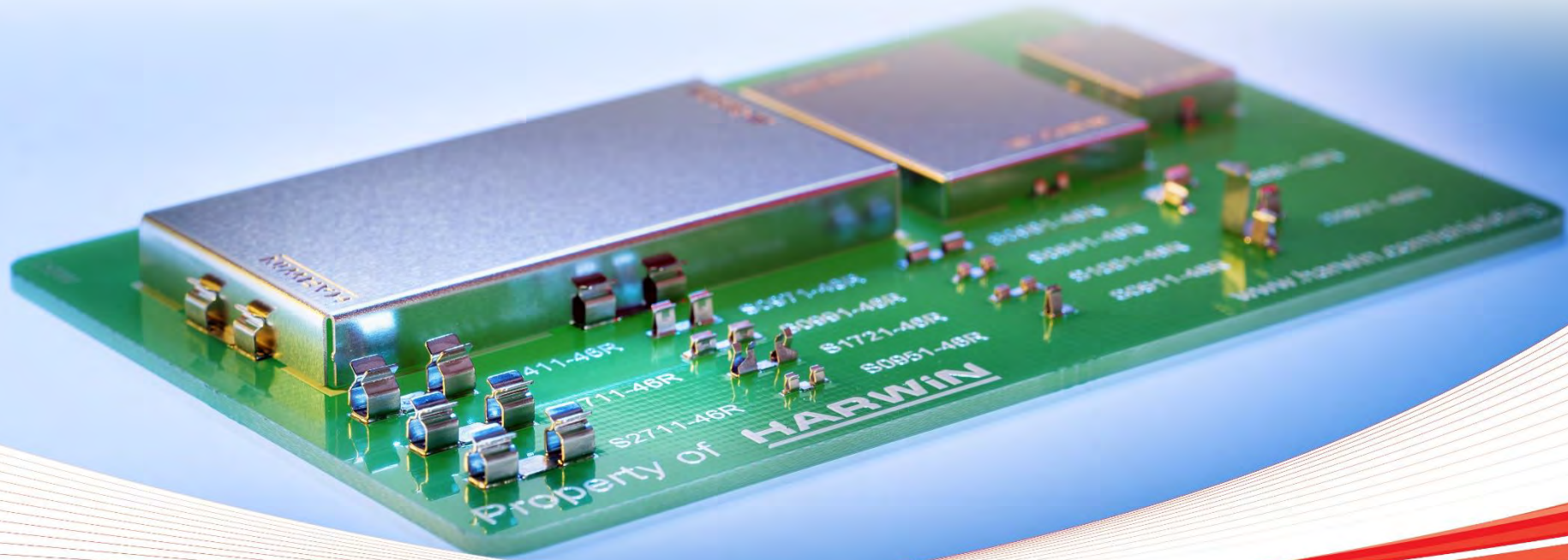


# RFI Shield Clips & Cans



# RFI Shield Clips & Cans

Why is EMI/RFI Compliance important?

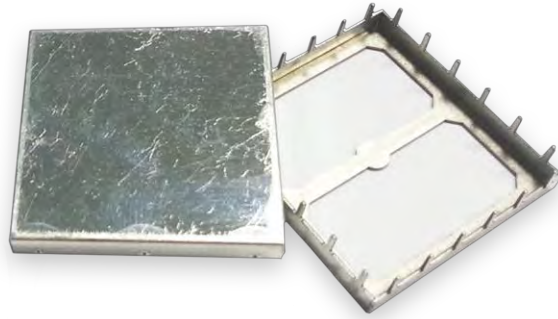
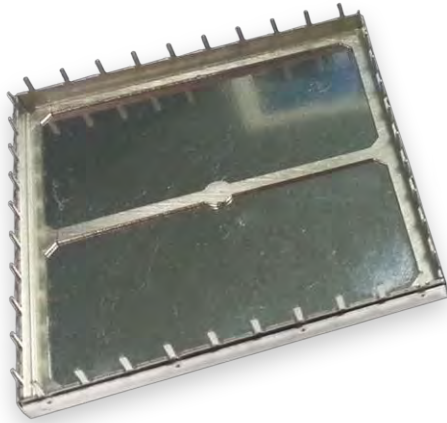
All electronic equipment must comply with international legislation regarding RFI (Radio Frequency Interference) and EMI (Electro-Magnetic Interference) protection – the design and construction must be such that:

- It does not emit unacceptable levels of EMI or RFI,
- Functionality is not compromised by external EMI and RFI sources.



# RFI Shield Clips & Cans

## The Traditional Solution



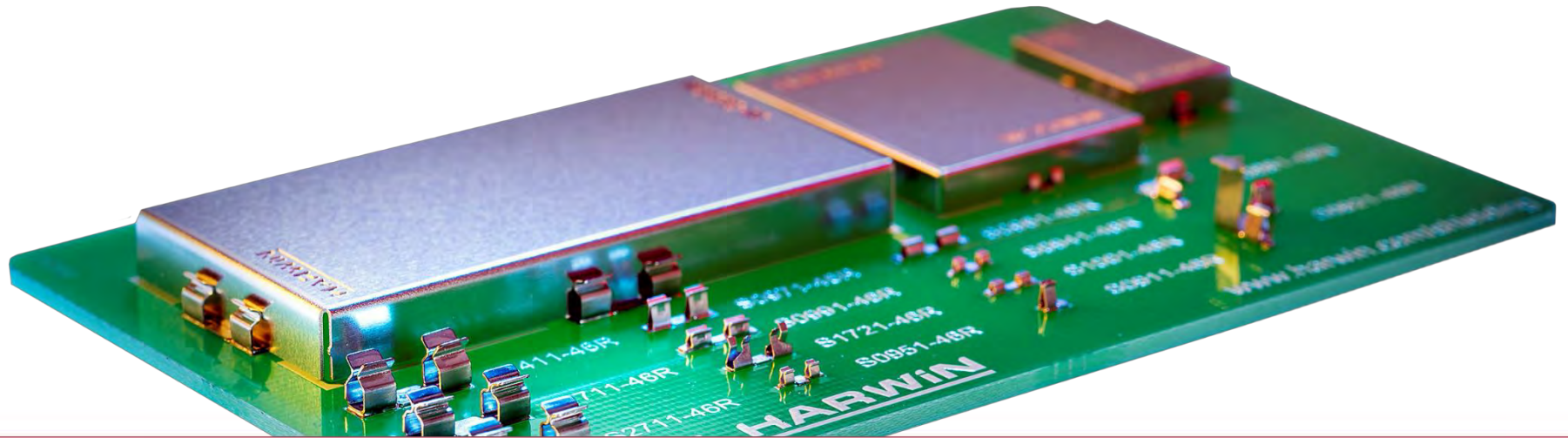
RFI/EMI Shield cans are the most popular way of providing protection against the effects of RFI and EMI. They create a [Faraday cage](#) around the sensitive or emitting circuits, preventing interference disrupting the device. The disadvantages of this method are:

- Cans are fixed into place using expensive hand-soldering
- They cannot be easily or safely removed for maintenance or repair – leading to the risk of PCB damage
- Two-piece cans (for later access) are expensive products



# RFI Shield Clips & Cans

## Easy Removal without Desoldering



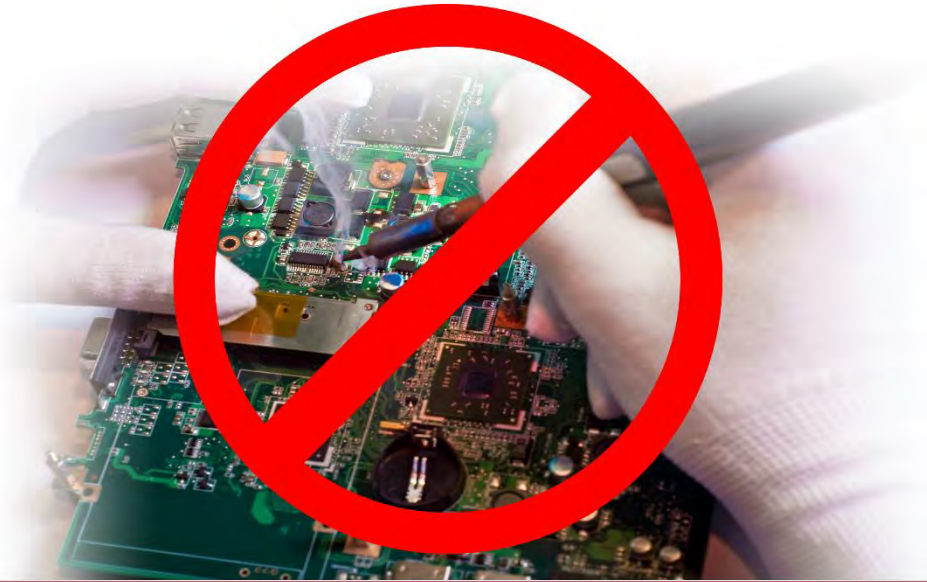
Harwin's SMT Clip and Can system works by soldering the Clips to the PCB during the SMT phase. The Cans are then pushed into the clips in a very quick secondary operation.

- Fast secondary operation for Can assembly with no soldering
- Allows easy removal/replacement of the Can without de-soldering – avoiding PCB damage
- Simple 5 side can construction gives for additional cost savings



# RFI Shield Clips & Cans

Eliminate damage risk



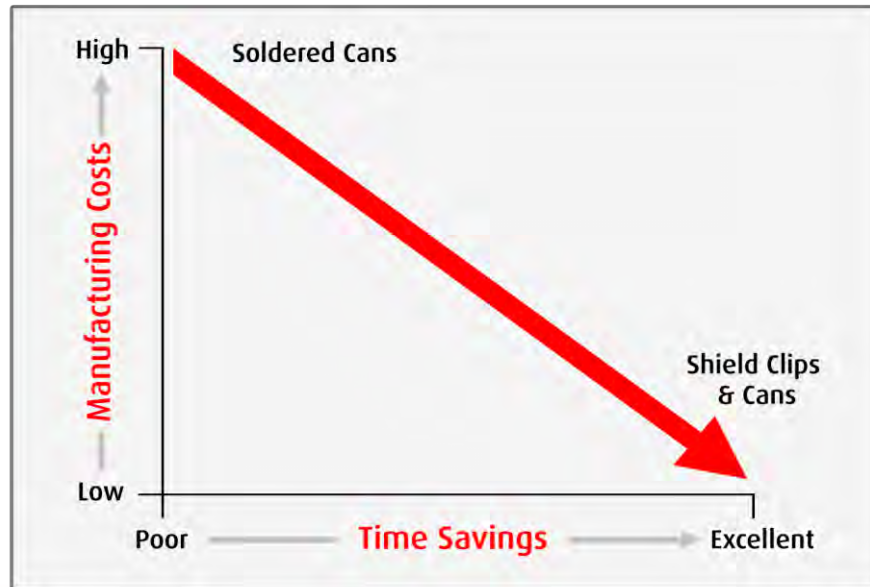
Hand-soldering the can to the PCB increases the risk of localized hot-spots during this operation. Those hot-spots could damage other components, especially any devices more sensitive to heat.

By SMT soldering the clips instead, the risk is minimized, with the same solder process being utilized across the PCB.



# RFI Shield Clips & Cans

Eliminate slow production bottlenecks



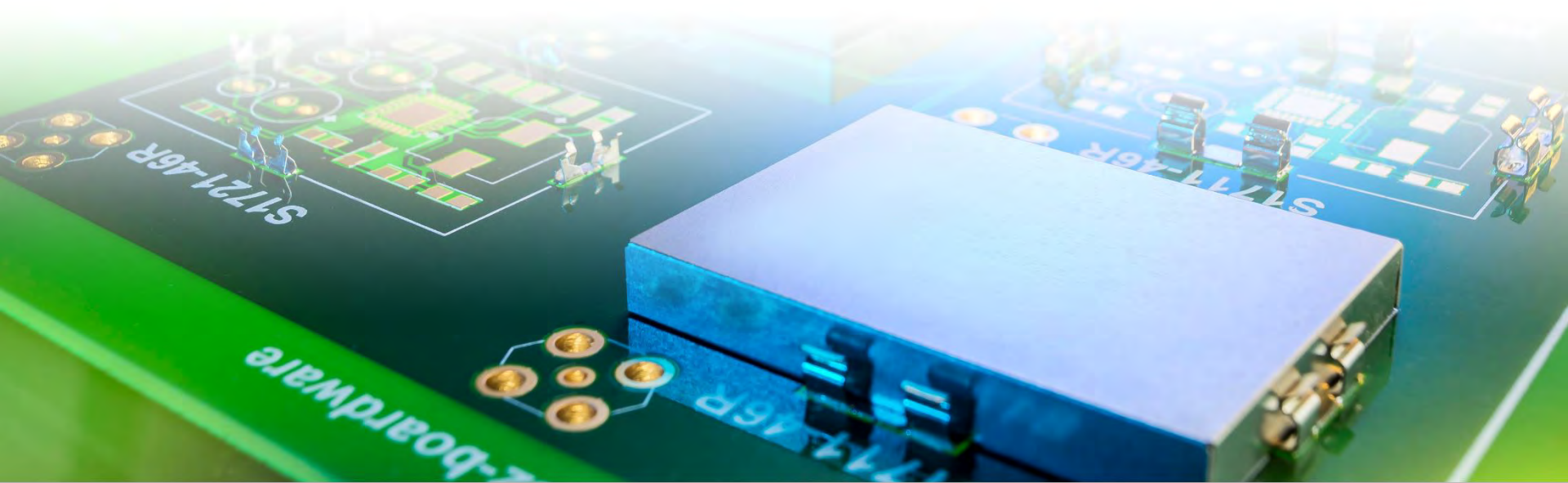
Removing the hand soldering phase and replacing it with a simple locate-and-press operation speeds up this secondary offline manufacturing process. Minimal skill is also required – it can even be automated with cans supplied in pick-and-place packaging. Costs are therefore saved on operator time and training – or eliminated completely.

In addition, the simplicity of the 5-sided can is itself a more cost-effective design than with solder tails or fence and lid options.



# RFI Shield Clips & Cans

Eliminate rework damage



A soldered can that covers components requiring rework must first be desoldered. The remedial work underneath is carried out, then the can must be soldered back in place. Each solder operation adds the risk of damage, and greatly increases the rework cost due to time and operator skill.

With the Harwin can and clip design, cans are easily removed and replaced in a fraction of the time, cost and risk of damage.



# RFI Shield Clips & Cans

## Maximum flexibility and choice



- 13 different products, for shield can thicknesses 0.13mm to 1.00mm
- 90 Degree clip options for addressing localized eddy interference at corners
- Low Profile clips, so cans as low as 1.1mm can use this method
- High retention clip for additional retention force for the can

The complete range can be found through the website [Product Selection](#) and samples can be requested from any product page.





# RFI Shield Clips & Cans

## Tape and Reel packaging



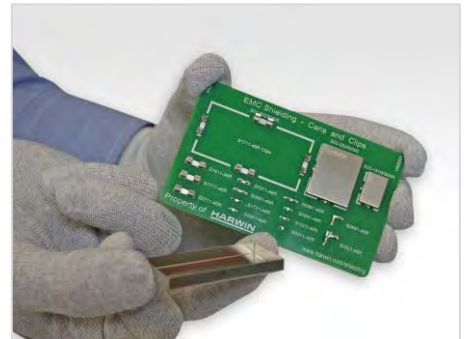
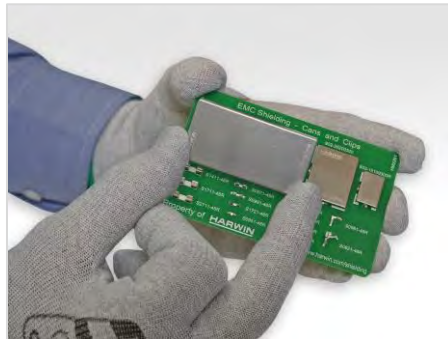
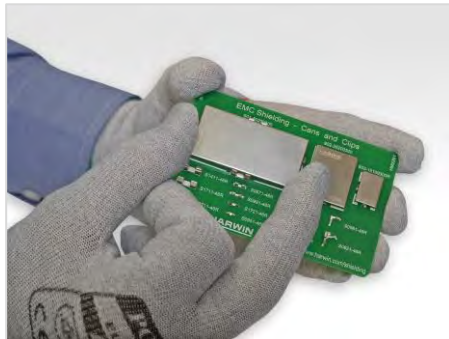
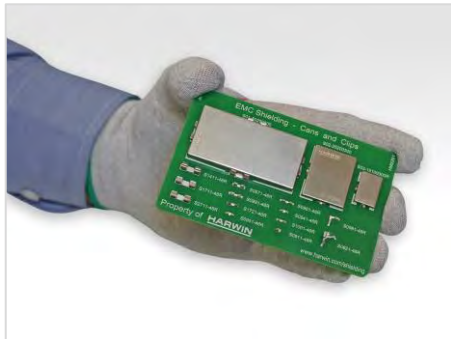
All Shield Can Clips are supplied on Tape and Reel packaging and have a flat pick-and-place area built-in, making them ideal for automatic assembly to the PCB.

The clips are Surface Mount designs and can therefore be soldered with the rest of the SMT components. No expensive hand soldering required.



# RFI Shield Clips & Cans

Easy on and Easy off



Manufactured from Nickel Silver, ideal for high frequency shielding, these Shield Cans are available in a number of standard sizes.

- 0.3mm Thick cans – use [S1711-46R](#), [S2711-46R](#), [S0971-46R](#) or [S0921-46R](#) clips
- 0.2mm Thick cans – use [S0911-46R](#), [S0951-46R](#), [S0961-46R](#), [S0971-46R](#), [S0981-46R](#), [S0991-46R](#), [S1001-46R](#) or [S1721-46R](#)
- 0.15mm Thick cans – use [S0911-46R](#), [S0941-46R](#), [S0961-46R](#), [S1001-46R](#) or [S1721-46R](#)

The complete range can be found [on the website](#), and samples can also be requested from each Product page.



# RFI Shield Clips & Cans

## Markets and Applications



Almost all markets have a requirement for RFI and EMI protection, often using shield cans. The small size of these RFI Shield Clips and Cans makes them ideal for use in all sizes of product, including smaller portable devices.

- Wi-Fi Modules
- Smart Fridges
- Bluetooth devices
- Smartphones
- Telecoms hubs

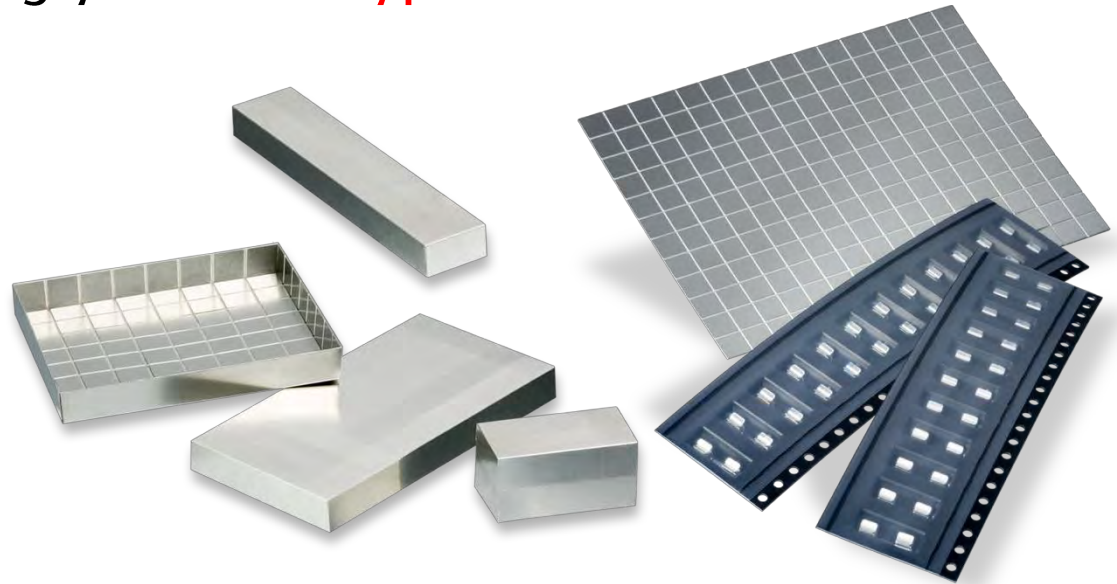


# RFI Shield Can Development Kit

Solving your **Prototype** needs



**Winner of  
Tools, Kits and  
Reference Designs**



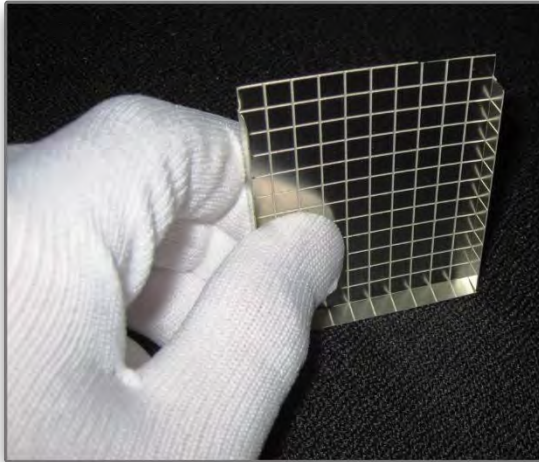
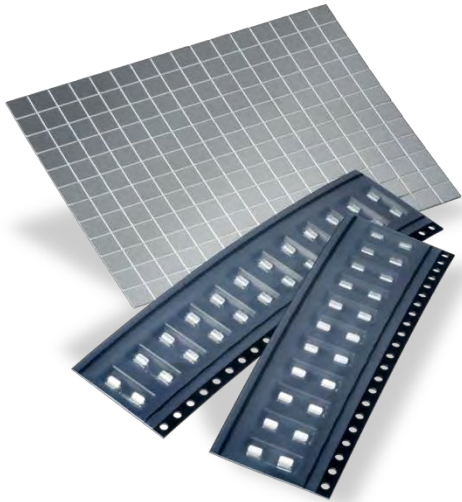
When you are not entirely sure about the size of can you require, Harwin's Shield Can Kit [S01-806005KIT](#) can assist with your prototyping requirements. These kits are designed to provide good screening capabilities in high frequency applications.

Just cut to size, fold the sides, assemble the clips to the PCB and add the can. Further information can be found [on the website](#). The Shield Can Kit won the ECN Impact Award in the Tools, Kits & Reference Designs category in 2015.



# Fast Prototype Shield Cans

Minimise Product Development **Cost and Time**



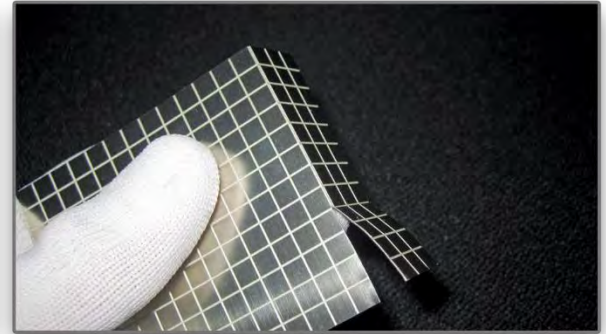
The Shield Can Kit eliminates costs and lead-times associated in sourcing custom prototypes, allowing faster product development. The kit includes:

- 2 pre-scored sheets of 0.3mm thick Nickel Silver - your Shield Can blanks
- 24 x [S1711-46R](#) Midi Clips - to securely attach the cans to the PCB
- Detailed usage instructions - the [instruction sheet](#) is also available on the website



# Easy to use – No Special Tools

The Size **You** Want, When You Want

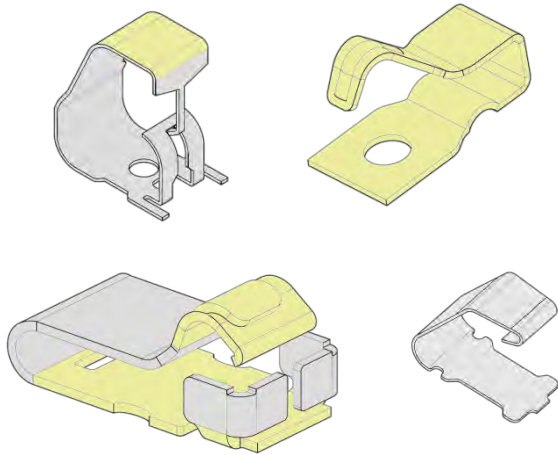


The Shield Can Kit [S01-806005KIT](#) allows you to make prototypes and limited quantities of cans, quickly and easily. The blanks are simple to cut and easy to form, requiring no special tooling. Pre-scored on a 5mm grid, cans of 5mm, 10mm or higher are possible. Maximum can size per sheet is 70mm x 50mm, 5mm high.



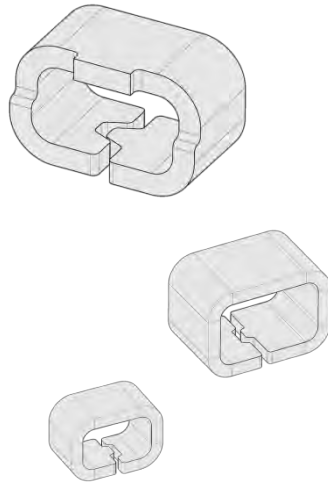
# If you like this product, try...

## Spring Contacts



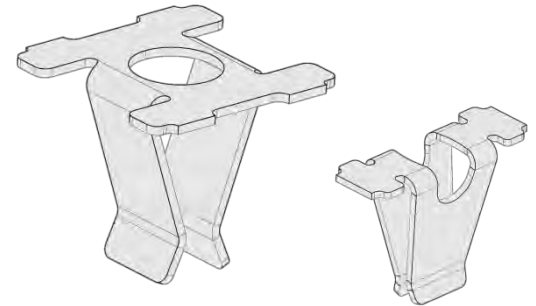
- 30 different styles, all Surface Mount
- Heights from 1.23mm to 7.25mm
- Suitable for signal, grounding, antenna contacts
- Right-angle option available

## Test Points



- 3 different heights for flexibility
- Surface Mount fixed testing locations
- Suitable for hook probes, standard & mini
- Reduced footprint versions

## SMT PCB Sockets



- Surface Mount Throughboard connections
- Accepts pins  $\varnothing 0.8$  to 1.8mm
- Supplied on tape and reel
- Ultra-low profile



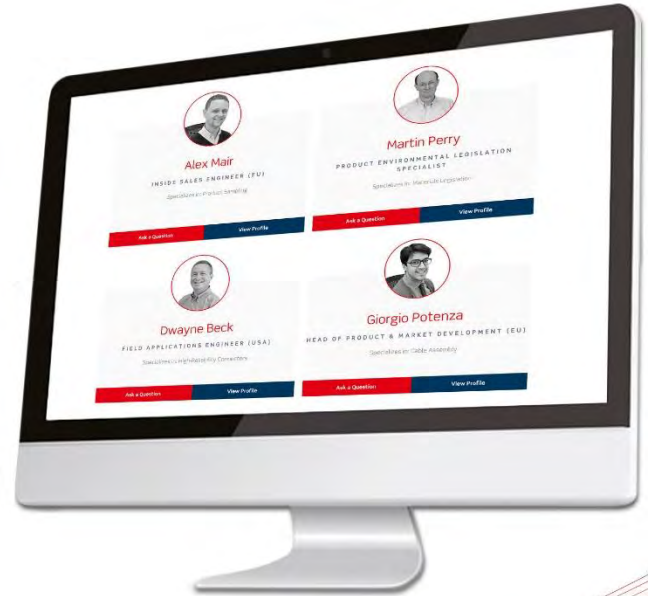
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