



The Enclosure & Instrument
Case Designer & Manufacturer

PERANCEA RFI/EMI Screening on Plastic Cases

All electronic equipment is susceptible to EMI (electromagnetic interference), RFI (radio frequency interference) and ESD (electromagnetic discharge) which is not screened out by plastic enclosures. However, for reasons such as appearance, lightness, insulation and so on, a plastic housing may be the preferred option.

To reduce or prevent RFI and EMI when using plastic case or enclosure solutions, either the internal or the external and the mating surfaces need to be coated with a conductive metal layer.

Perancea is readily able to supply all standard moulded housings and the majority of its custom moulded products sprayed with a nickel loaded paint and if required, selectively masked. Alternative materials such as copper, silver and copper silver are also available for applications where nickel does not give the required performance.

Screening performance is dependent on other factors as well as the choice of enclosure and thus the level of screening can only be ascertained by testing the final product. However, the following provides an indication of the attenuation efficiency over a range of frequencies obtained using a coating of nickel loaded paint:

Frequency (MHz)	Attenuation (dB)	Frequency (MHz)	Attenuation (dB)
0.1	84	100	62
0.2	84	150	49
0.4	80	200	80
0.6	81	250	78
1	78	300	69
2	75	400	66
4	58	600	61
6	56	700	54
15	54	800	54
40	52	900	55
60	49	1000	52

If you need screened plastic enclosure solutions to protect your applications against RFI and EMI, call Perancea now and see what we can do for you.

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In line with our policy of continuous improvement, we reserve the right to make design or product alterations without prior notice.