

Technical information : METALLIZATION OF PLASTIC PARTS

Description:

The metallization consists in depositing a **thin layer** of an electrically conductive material on a plastic case. The objective is to realize an **electromagnetic shielding** or a **continuity of mass**. The metallization is realized either on an integral or a selective area.

Material

Copper, Nickel, Aluminum, Gold...

Manufacturing processes

Physical Vapor Deposition, Electrolysis or paint principle.

Packaging

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Options

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Prototyping

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SPECIFICATIONS

Electrical resistance :

Square resistance <0.5Ω

We either follow a certain resistance requirement (e.g. resistance between 2 specified points, square resistance), a thickness or a damping requirement (dB).

Adhesion testing :

Adhesion test as per ASTM D3356 (tape test)

Adhesion test as per ASTM D3356b (cross hatch test)

Corrosion resistance in environmental chamber :

Thermal cycling between -40°C and +80°C (-40°F ~ +180°F)

Humidity cycling ASTM D2247 >48h

Thickness measurement :

Copper : 0.5 ~ 5.0μm

Stainless steel : 0.2μm

Other materials as requested

Attenuation :

>65 dB (800 MHz ~ 15GHz)

Coating properties are always adjusted to the customer requirements

KEY FEATURES

Coating material can be selected from a large range of metals : Cu, AlSi, Al, Au, Zn, Cr

Coating thickness can be selected from 0.1 to 5 μm

Low temperatures in coating process

Excellent adhesion

Very even and uniform film of coating

Selective coating method

High yields

Part can be processed after the coating

Environnementally friendly coating : no heavy metals and plastic can be recycled as such (no pretreatments),