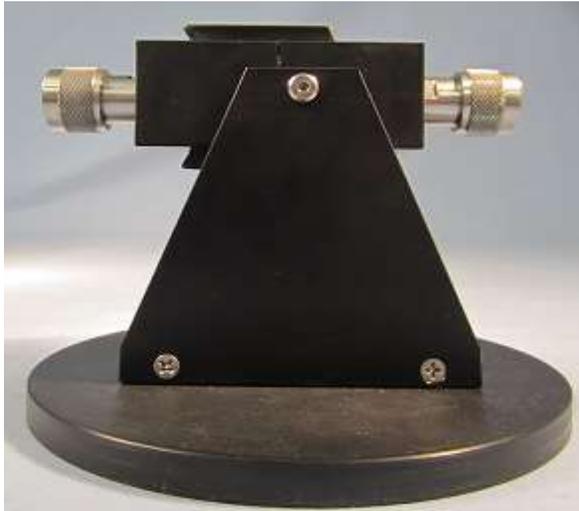


## EM-2108 | Test Fixture, Shielding Effectiveness



Specimen Holder in Horizontal Testing Position

### Description

The EM-2108 is a standard test fixture for evaluation of the electromagnetic shielding effectiveness (SE) of planar materials. The fixture is a section of coaxial transmission line broken to allow the insertion of planar test materials. Although ASTM D4935-10 is currently limited to an upper frequency of 1.5 GHz, the EM-2108 meets and complies fully with both the impedance and SE requirements called out in ASTM test method D4935-10 up to 10 GHz. These results are shown in Figures 1 & 2. The measured data relates to the shielding effectiveness due to a plane wave (far field EM wave) from which near field values for magnetic and electric fields may be inferred.

The EM-2108 is provided with a reference standard test specimen, a load standard test specimen, and a dynamic range specimen. Dynamic range of greater than 80 dB is achievable, although the cables and other test system components usually establish the limiting factors.

Ref: 130603

### Specifications

#### Electrical

**Frequency Range:** 1.5 GHz - 10 GHz

**Fixture Impedance:**  $50 \pm 0.5 \Omega$

**Measured SE of a Gold Specimen:**  $32 \pm 3$  dB

**Connector:** Type N

#### Mechanical

**Length:** 14 cm (5.5")

**Height (Vertical):** 16.9 cm (6.63")

**Height (Horizontal):** 11.9 cm (4.7")

**Fixture Diameter:** 3.2 cm (1.26")

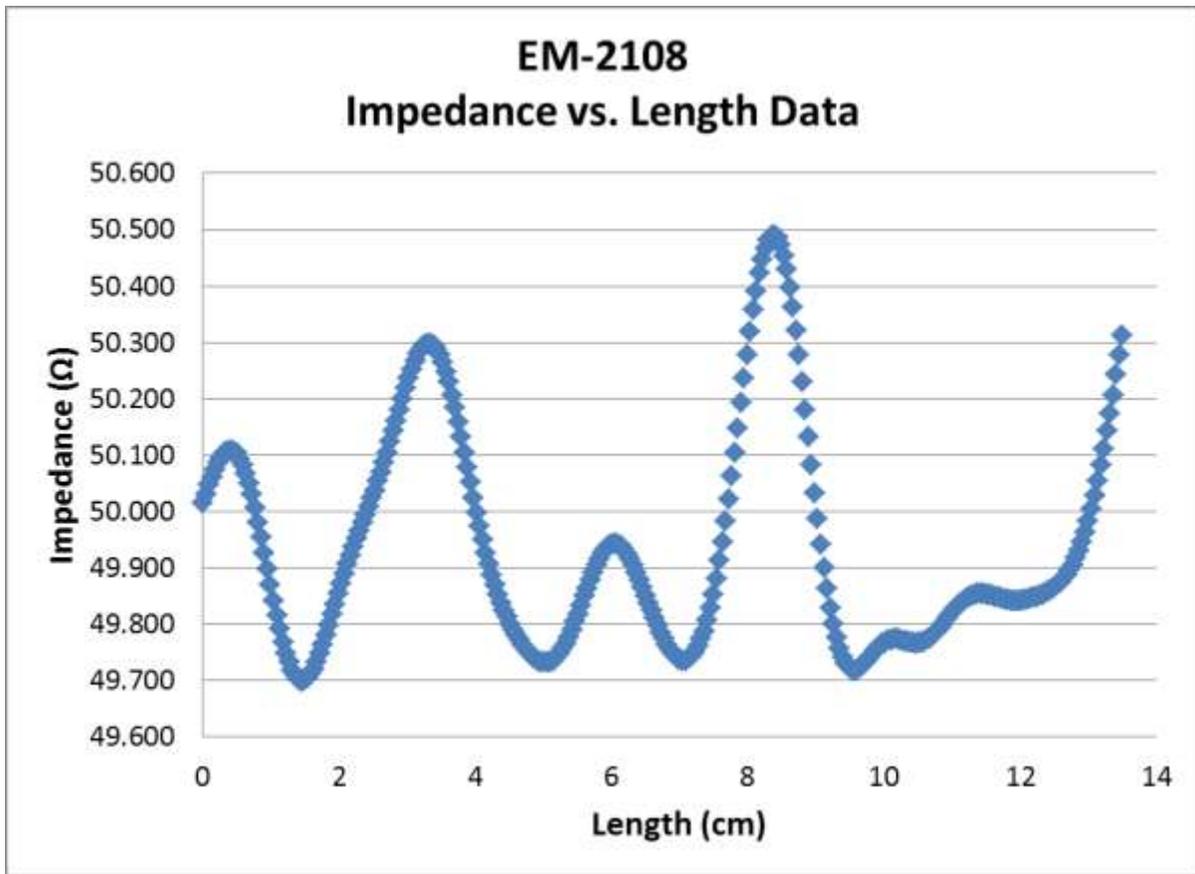
**Base Diameter:** 15.25 cm (6")



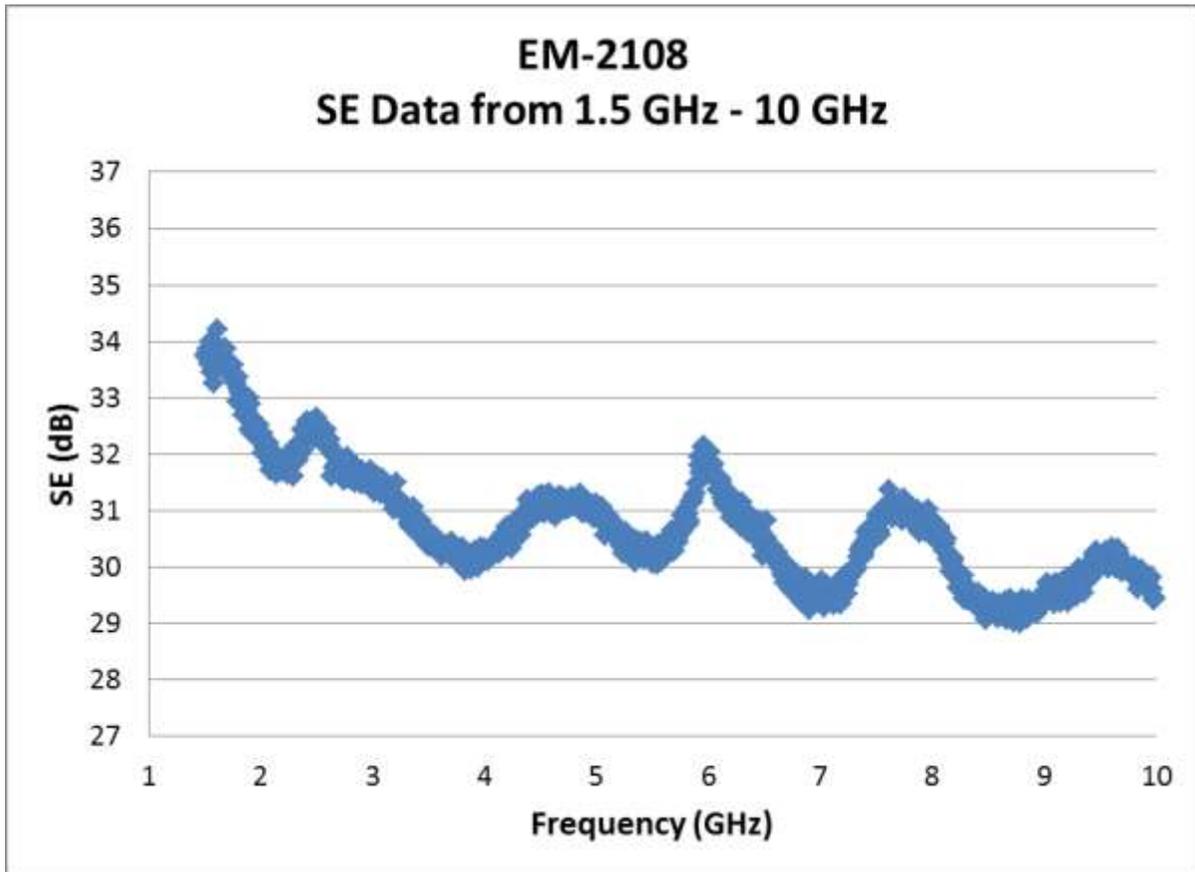
Decoupled Specimen Holder with Gold Reference (left) and Load (right) Inserts in foreground

Specifications subject to change without notice. Unless otherwise specified, product is manufactured in Johnstown, NY USA.





**Figure 1: Typical Impedance Test Data**



**Figure 2: Typical Shielding Effectiveness (SE) Test Data for a 4.1  $\Omega$  Gold Test Sample**