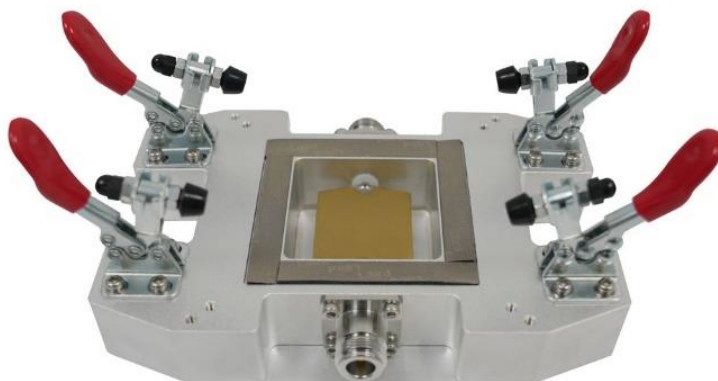


EM601-6 IC Stripline TEM Cell



1. Description

ESDEMC's EM601-6 is a 6 GHz IC Stripline TEM Cell generates an electromagnetic field for testing small devices such as IC's, wireless communication modules, etc. An external test signal applied through the input port of the EM601-6 generates a consistent and predictable TEM test field inside the cell. The radiation field from a device transmitting in the TEM Cell can be measured through the port using a test receiver.

The unique compact and economical design is optimized for medium accuracy measurements beyond the standard TEM Cell frequency range. The operating principle of EM601-6 is essentially the same as TEM Cell. The E-H field inside the test volume is proportional to the input voltage and inversely proportional to the cell height. If a radiating object is inserted inside the cell, the radiated wave toward input port is guided by the transmission line and measured at the input with a receiver such as a spectrum analyzer. With this method, the RFI from a radiating device can be measured quantitatively. Since this apparatus is very broadband, it has many applications in the area of EMI, EMS, receiver sensitivity test, etc. The EM601-6 TEM Cell requires only 0.3125 mW input power to achieve 10 V/m E-field, or 3.125 W to achieve 1000 V/m E-field.

2. Features

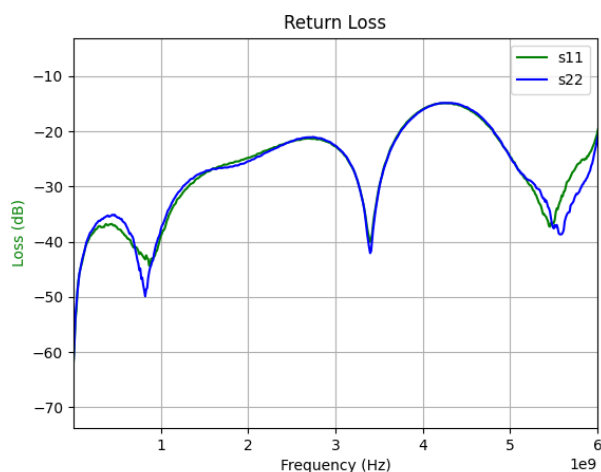
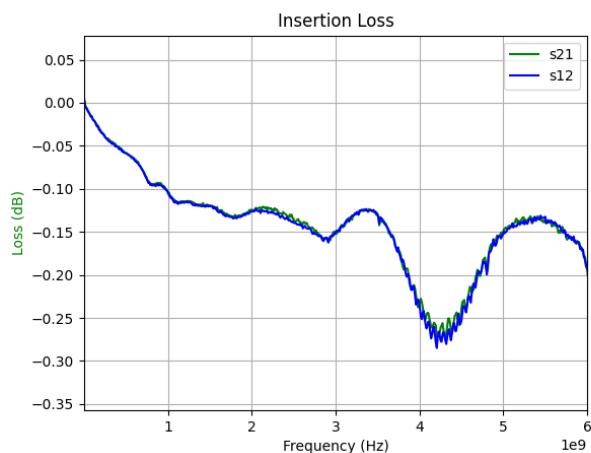
- Up to 6 GHz bandwidth (beyond normal TEM Cell bandwidth of 1 GHz)
- Can test up to 5 kV high voltage pulse for transient field injection

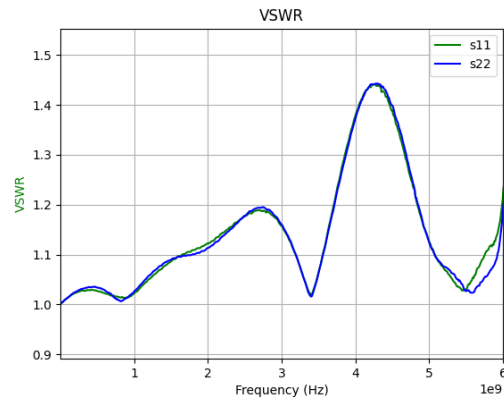
3. Applications

- Electromagnetic immunity testing for integrated circuits
- Electromagnetic radiation testing for integrated circuits
- ESD/Surge field susceptibility testing for integrated circuits
- Designed to meet requirements of the following standards:
 - IEC 61967-2
 - IEC 61967-8
 - IEC 62132-2
 - IEC 62132-8

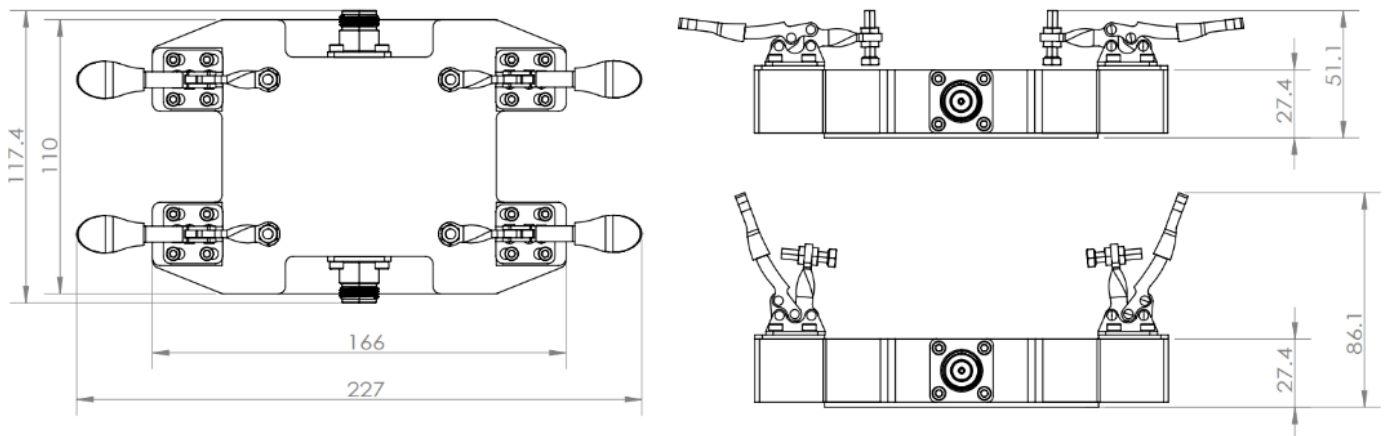
4. Specifications

Specification	Parameters			
Frequency range	DC to 6 GHz (First spike by undesired higher order mode > 6 GHz)			
TEM Cell Impedance	50Ω ± 5% nominal			
Standard	IEC 61967-2	IEC 61967-8	IEC 62132-2	IEC 62132-8
VSWR	DC – 6 GHz < 1.5	DC – 6 GHz < 1.5	DC – 3 GHz < 1.2	DC – 3 GHz < 1.25
Insertion Loss (S21)	DC – 6 GHz < 1.5 dB	DC – 6 GHz < 1.5 dB	DC – 6 GHz < 1.5 dB	DC – 6 GHz < 1.5 dB
Effective Septum to Wall Height	12.5 mm			
E-Field Strength at Center of Cell	80 V/m @ 1V (max 12.5 kV/m @ 500 W-rms, 400 kV/m @ 5 kV pulse) Requires only 0.3125 mW input power to achieve 10 V/m E-field, or 3.125 W to achieve 1000 V/m			
H-Field Strength at Center of Cell	= E-Field Strength / 377 (A/m)			
RF Connectors	Type-N			
Maximum Input Power	500 W-rms, 57 dBm			
Maximum Input Voltage	150 V-rms, 5kV TLP pulse			
DUT Port Dimension	50 (W) x 50 (L) mm			
Maximum DUT Dimensions	37 (W) x 37 (L) x 3(H) mm			
DUT Test Board Dimensions	100 (W) x 100 (L) mm 110 (W) x 110 (L) mm			
TEM Cell Dimensions	166 (W) x 120 (D) x 70 (H) mm			
Weight	Approx. 1 kg; 2lbs			

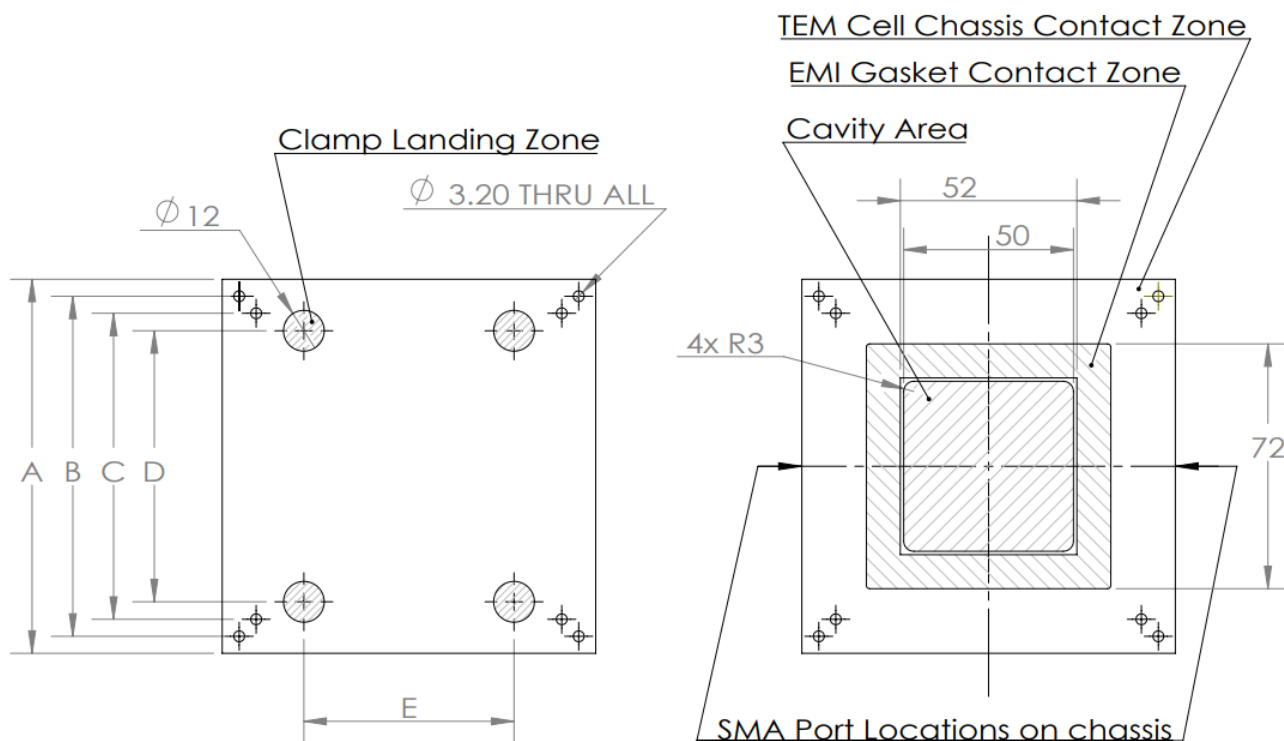




5. Dimensions



EM601-6 DUT Size Options, Recommended Construction



Dimensions in mm	A	B	C	D	E
100mm DUT	100	90	n/a	79.7	61.9
110mm DUT	110	90	100	79.7	61.9

Note: Dimension A, B, and C represent square pattern features
 Recommended Board Thickness: 1.6mm

6. Ordering Information

Line	Part # or Option #	Description	Status
1	EM601-6	EM601-6 IC Stripline TEM Cell, DC-6 GHz	Active