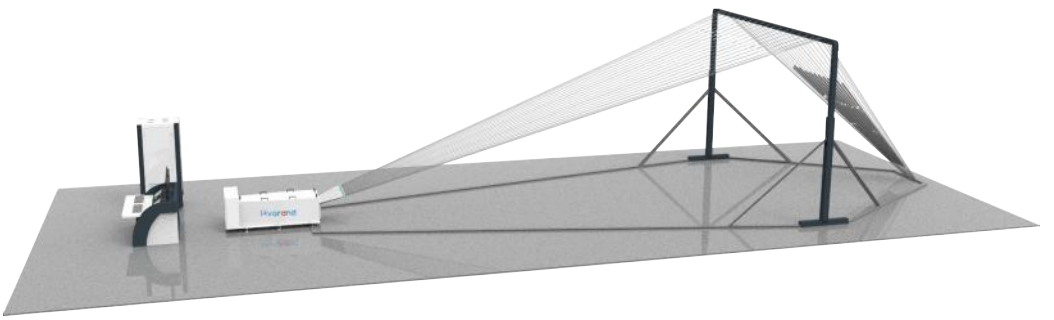
Electromagnetic Pulse Test System (EMP)

Introduction

This system is mainly used for conducting nuclear electromagnetic pulse sensitivity tests on electronic systems as per MIL-STD-461G, RS105 of GJB151B and GJB8848.
It can apply a maximum pulse electric field of 50kV/m to the test object to test its reliability in a strong pulse electric field environment.



Features

1) Colorful touch panel for easy operation, user friendly and remote control;
2) Considerate safety measures;
3) Abnormal charging protection;
4) Automatic diagnosis of multiple faults such as charging over current, over voltage and self discharge lamp;
5) Fiber optic remote communication control;
6) Program controlled DC high-voltage charging.

Technical Parameters

Common Technical Data			
Rise Time	2.3ns ± 0.5ns	Electric Field Strength	Max. 50kV/m
Pulse Width	23ns ± 5ns	Transmission Line Impedance	120 Ω
Charging Time	10-999s adjustable	Interval Time	14-999s adjustable
Power Supply	220V ± 10% , 50Hz , 20A AC	Output Polarity of Control Unit	Positive
Control System	Automatic control with iMCS2000, remote control		

Model	EMP100	EMP240	EMP300	EMP400	EMP800
Charging Voltage	120kV	240kV	300kV	400kV	800kV
HV Impulse Power	120kV	240kV	300kV	400kV	800kV
TEM Antenna	1.8m cone shaped transmission; Line simulator	3.6m cone shaped transmission; Line simulator	5m cone shaped transmission; Line simulator	6m cone shaped transmission; Line simulator	12m cone shaped transmission; Line simulator
Dimension (L*W*H)	8*2.5*1.8m	15*4.5*3.6m	20*7*5m	24*8*6m	48*15*12m
Test Area (L*W*H)	1.1*1.2*0.9m	3* 2.5* 1.1m	3*3*1.6m	4*4*2m	8*8*4m
Installation Dimension (L*W*H)	9*4.5*3m	20*7*6m	25*10*10m	28*12*10m	60*20*18m
Accessories for Optional					
Pulse Decoupling Device	Model: DN-450T; Operation voltage: AC450V/DC300V,3 phase 5 lines; Power frequency: DC-400Hz; Decoupling wave: 2.3/23ns; Load operating current: max. 50A; Used for EUT online testing to prevent any impact on the power supply				
Voltage Probe	Model: SXVP-200; Non inductive resistive voltage divider; Measure voltage wave upto 200kV; Measure the wave of 2.3/23ns.				
Ground Electric Field Probe	Model: SEFP-100; Using D-DOT measurement technology, combined with an integrator, it can measure 2.3/23ns electric field waveform up to 100kV/m; Measurement range: 5kV/m-100kV/m.				
Fiber Optic Electric Field Probe	Model: SFFP-100; Using the original waveform probe; Directly cooperate with analog fiber optic signal transmission; The transmitting and receiving ends are included; Measurement range: 5kV/m-100kV/m.				
Measurement System	SMAX3000 measurement software with a laptop; Communicate with oscilloscope (Tektronix, Rigol and Agilent brand); Support GPIB, TCPIP and USB communication interfaces; Automatically measure and analyze waveform parameters; Output test reports.				
Oscilloscope	Tektronix, Rigol or Agilent brand				