

# CUS200M

## TEST DATA

### IEC61000 SERIES

DWG No. CA811-58-01		
APPD	CHK	DWG
<i>Wang YD</i> 22-Jan-'16	<i>Wang HL</i> 22-Jan-'16	<i>Zhangbc</i> 22-Jan-'16

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### Terminology used

FG ..... Frame GND

※ Test results are reference data based on our standard measurement condition.

**1. Electrostatic Discharge Immunity Test (IEC61000-4-2)**

**MODEL : CUS200M**

**(1) Equipment Used**

Electro Static Discharge Simulator : NSG435 (SCHFFNER)

Discharge Resistance : 330Ω Capacity : 150pF

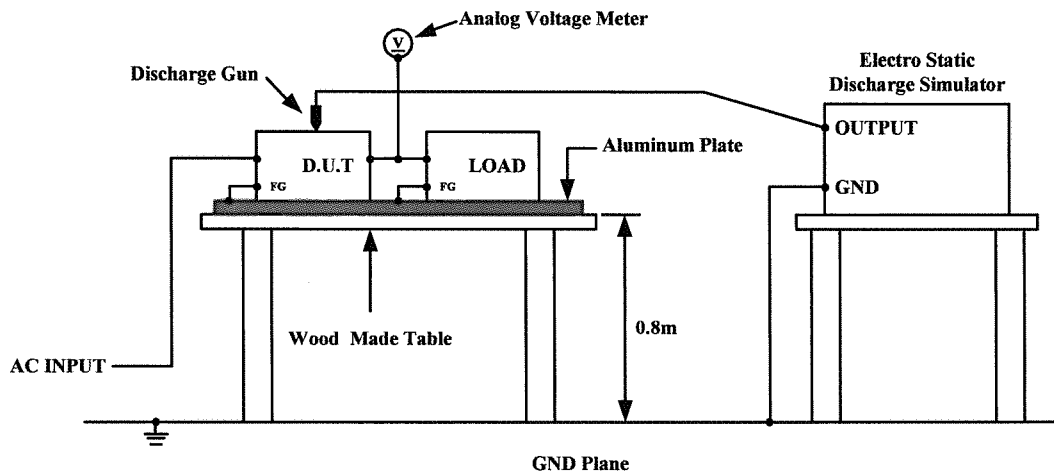
**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 100%
- Polarity : +, -
- Test Times : 10 times
- Discharge Interval : > 1 second
- Ambient Temperature : 25°C

**(3) Test Method and Device Test Point**

Contact Discharge : ⚡, Mounting screw

Air Discharge : ⚡, Input and output terminal, Mounting screw



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed ±5% of initial (before test) value during test.
2. Output voltage to be within regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Contact Discharge (kV)	CUS200M-12/18/24/48	Air Discharge(kV)	CUS200M-12/18/24/48
2	PASS	2	PASS
4	PASS	4	PASS
		8	PASS

**2. Radiated Radio-Frequency Electromagnetic Field Immunity Test (IEC61000-4-3)**

**MODEL : CUS200M**

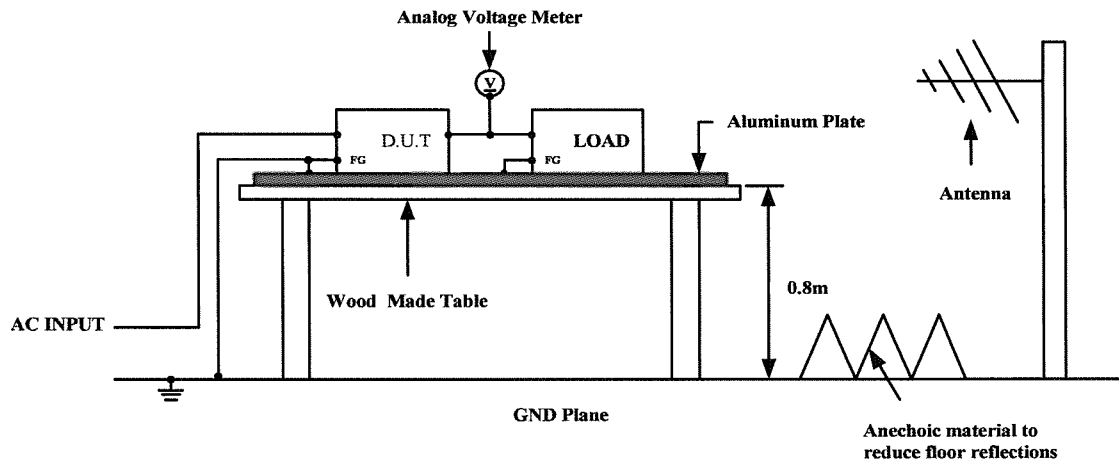
**(1) Equipment Used**

SML 03(RS CORPORATION)  
 HL 046(RS CORPORATION)  
 AR500W 1000A(AR CORPORATION)  
 FM5004(AR CORPORATION)  
 FP6001(AR CORPORATION)

**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 100%
- Amplitude Modulated : 80%, 1kHz
- Electromagnetic Frequency : 80~1000MHz
- Ambient Temperature : 25°C
- Wave Angle : Horizontal and Vertical
- Distance : 3.0m
- Sweep Condition : 1.0%Step Up, 2.8 Seconds Hold
- Test Angle : Top/Bottom, Both Sides, Front/Back

**(3) Test Method**



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed  $\pm 5\%$  of initial (before test) value during test.
2. Output voltage to be within regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Radiation Field Strength (V/m)	CUS200M-12/18/24/48
1	PASS
3	PASS
10	PASS

**3. Electrical Fast Transient / Burst Immunity Test (IEC61000-4-4)**

**MODEL : CUS200M**

**(1) Equipment Used**

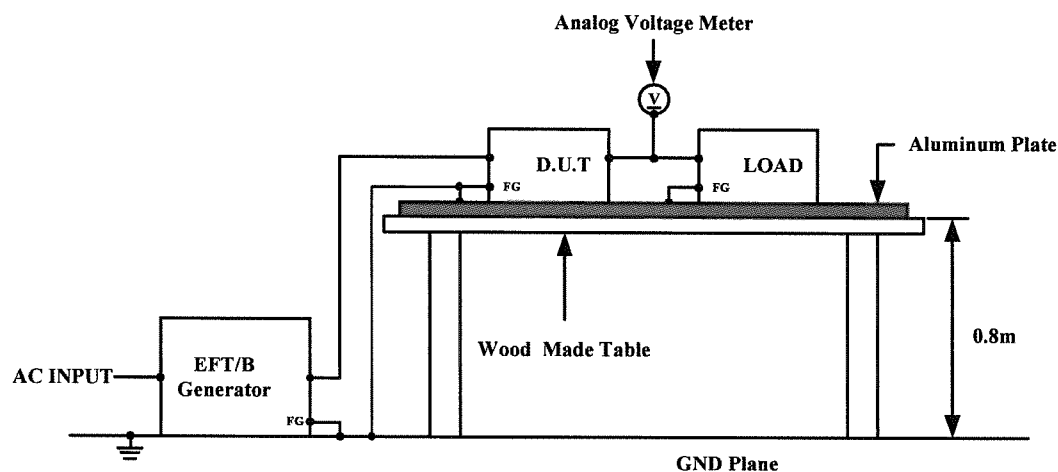
EFT/B Generator : FNS-100L (NOISEKEN)

**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 100%
- Test Time : 1 minute
- Polarity : +, -
- Ambient Temperature : 25°C
- Number of Tests : 3 times

**(3) Test Method and Device Test Point**

Apply to (N, L,  $\neq$ ), (N, L), (N), (L), ( $\neq$ ).



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed  $\pm 5\%$  of initial (before test) value during test.
2. Output voltage to be within output voltage regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Test Voltage (kV)	Repetition Rate (kHz)	CUS200M-12/18/24/48
0.5	5 / 100	PASS
1	5 / 100	PASS
2	5 / 100	PASS

**4. Surge Immunity Test (IEC61000-4-5)**

**MODEL : CUS200M**

**(1) Equipment Used**

Surge Generator : 6100 (SCHAFFNER)

Coupling Impedance : Common 12Ω  
Normal 2Ω

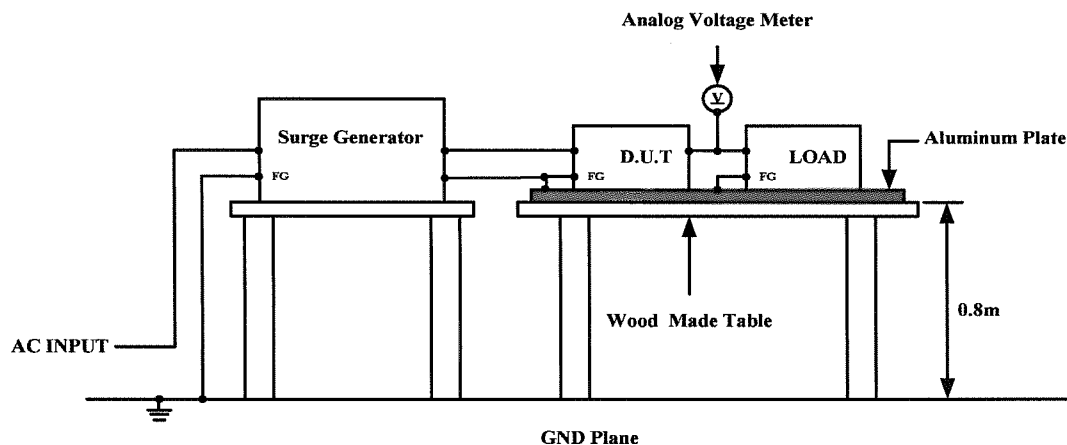
Coupling Capacitance : Common 9μF  
Normal 18μF

**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 0, 100%
- Number of Tests : 3 times
- Polarity : +, -
- Mode : Common, Normal
- Phase : 0, 90 deg
- Ambient Temperature : 25°C

**(3) Test Method and Device Test Points**

Apply to Common mode (N-⊥, L-⊥) and Normal mode (N-L).



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed ±5% of initial (before test) value during test.
2. Output voltage to be within regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Common		Normal	
Test Voltage (kV)	CUS200M-12/18/24/48	Test Voltage (kV)	CUS200M-12/18/24/48
0.5	PASS	0.5	PASS
1	PASS	1	PASS
2	PASS	2	PASS
4	PASS		

**5. Conducted Disturbances Induced by Radio-Frequency Field Immunity Test (IEC61000-4-6)**

**MODEL : CUS200M**

**(1) Equipment Used**

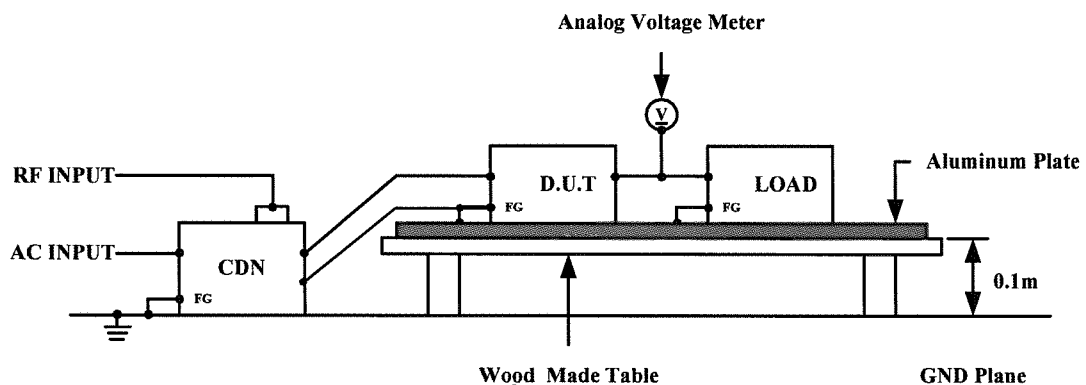
RF POWER AMPLIFIER : (AR U.S.A)

SIGNAL GENERATOR : IFR 2023A (IFR U.K)

**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 100%
- Electromagnetic Frequency : 150kHz~80MHz
- Ambient Temperature : 25°C
- Sweep Condition : 1.0%Step Up, 2.8 Seconds Hold

**(3) Test Method**



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed  $\pm 5\%$  of initial (before test) value during test.
2. Output voltage to be within regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Voltage Level (V)	CUS200M-12/18/24/48
1	PASS
3	PASS
10	PASS

**6. Power Frequency Magnetic Field Immunity Test (IEC61000-4-8)**

**MODEL : CUS200M**

**(1) Equipment Used**

AC Power Source : 1501L (California Instrument)

Helmholts Coil : HHS5215 (Spulen)

**(2) Test Conditions**

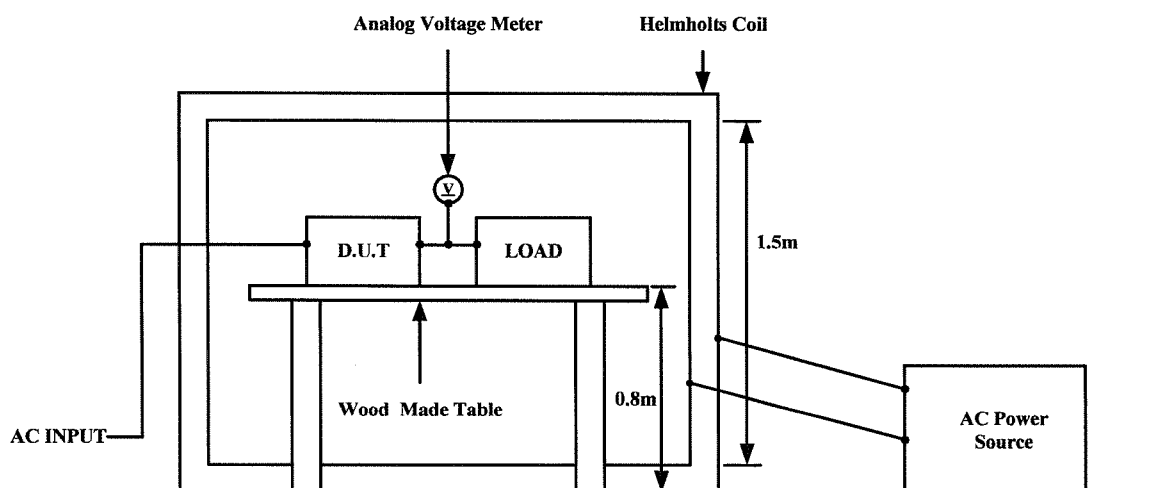
•Input Voltage :115, 230VAC •Output Voltage : Rated

•Output Current :100% •Magnetic Frequency :50Hz

•Ambient Temperature :25°C •Direction :X, Y, Z

•Test Time : More than 10 seconds(Each direction)

**(3) Test Method and Device Test Point**



**(4) Acceptable Conditions**

1. Output voltage regulation not to exceed  $\pm 5\%$  of initial (before test) value during test.
2. Output voltage to be within regulation specification after the test.
3. Along with 1 and 2, without the occurrence of smoke and fire, as well as no output failure.

**(5) Test Result**

Magnetic Field Strength (A/m)	CUS200M-12/18/24/48
1	PASS
3	PASS
10	PASS
30	PASS



**7. Voltage Dips, Short Interruptions Immunity Test (IEC61000-4-11)**

**MODEL : CUS200M**

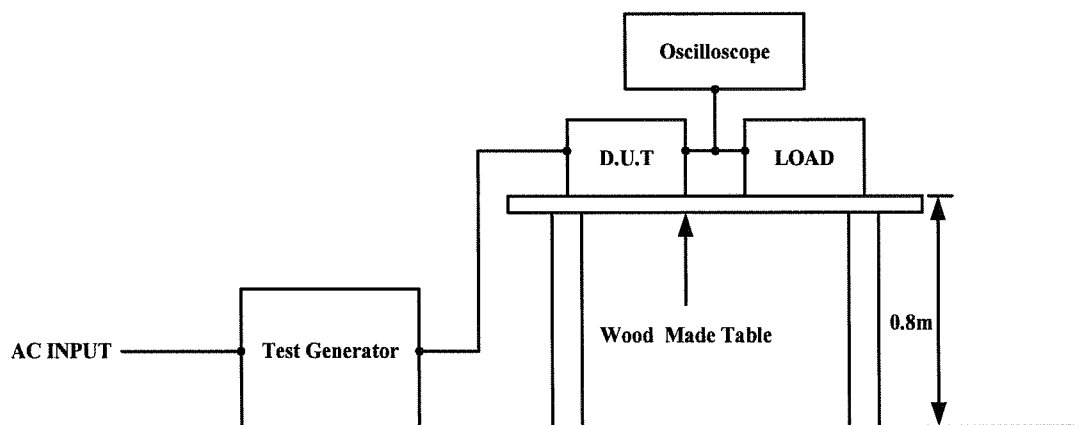
**(1) Equipment Used**

Test Generator : PCR2000L (KIKUSUI)

**(2) Test Conditions**

- Input Voltage : 115, 230VAC
- Output Voltage : Rated
- Output Current : 100%
- Ambient Temperature : 25°C
- Number of Tests : 3 times
- Test interval : More than 10 seconds

**(3) Test Method and Device Test Point**



**(4) Acceptable Conditions**

1. Output voltage to be within output voltage regulation specification after the test.
2. Smoke and fire do not occur.

**(5) Test Result**

Test Level	Dip rate	Continue Time	CUS200M-12/18/24/48
70%	30%	500ms	PASS
40%	60%	200ms	PASS
0%	100%	20ms	PASS
0%	100%	5000ms	PASS