

VS15C

TEST DATA IEC61000 SERIES

DWG No. : CA710-58-01			
APPD	APPD	CHK	DWG
<i>J. Murayama</i> 6/sep/99	<i>[Signature]</i> 2-SEP-99	<i>[Signature]</i> Sep. 2, '99	<i>[Signature]</i> 02-Sep-99

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*The above data is typical value data.
The values are considered to be actual capability data.

1. ELECTRO-STATIC DISCHARGE TEST (IEC61000-4-2)

MODEL : VS15C

(1) Equipment used

NSG435 (SCHAFFNER.)

Discharge resistance : 330Ω Capacity : 150pF

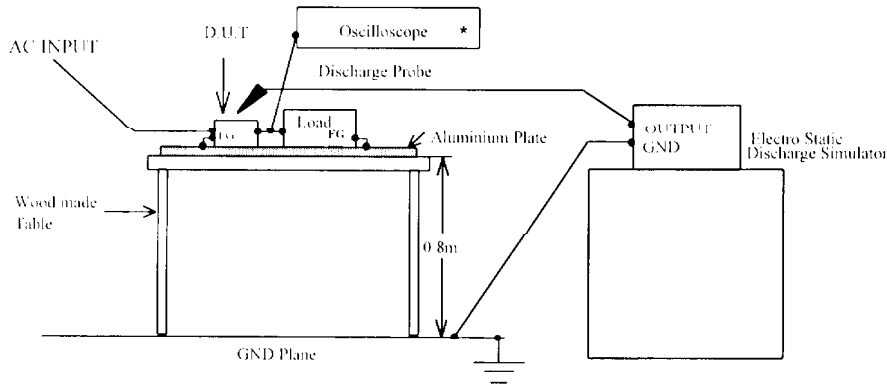
(2) Test conditions

- Input voltage : 100VAC • Output voltage : Rated
- Output current : 100% • Polarity : +,-
- Number of tests : 10 times • Discharge interval : >1 Second

(3) Test method and Device test point

Contact discharge : FG,Case screw

Air discharge : Input and Output terminal



(*) Used Oscilloscope or Analog Voltage Meter.

(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, no discharge of fire or smoke, as well as no output failure.

(5) Test Result

Contact Discharge (kV)	Test Result			Air Discharge (kV)	Test Result		
	VS15C -5	VS15C -12	VS15C -24		VS15C -5	VS15C -12	VS15C -24
2	PASS	PASS	PASS	2	PASS	PASS	PASS
4	PASS	PASS	PASS	4	PASS	PASS	PASS
				8	PASS	PASS	PASS

2. ELECTROMAGNETIC RADIATION SUSCEPTIBILITY TEST (IEC61000-4-3)

MODEL : VS15C

(1) Equipment used

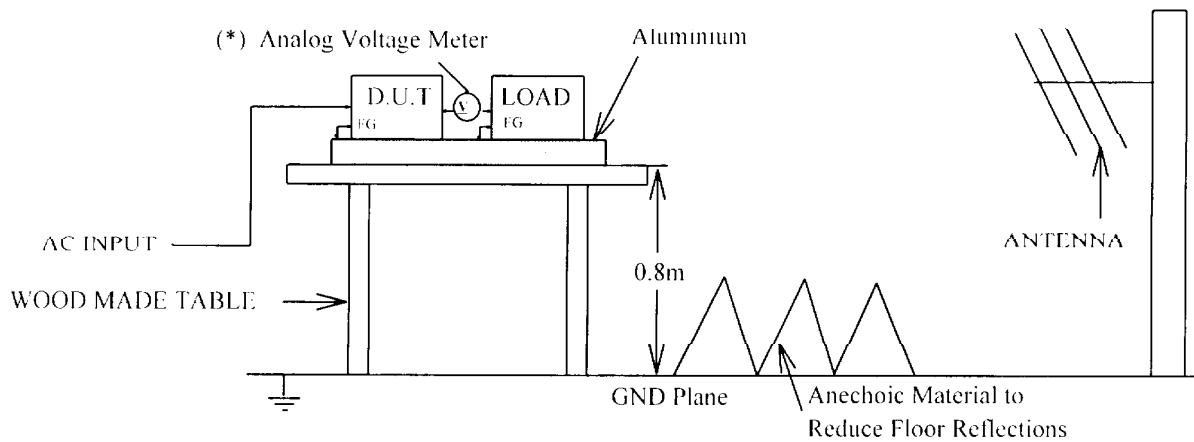
TS5010 RADIATION IMMUNITY MEASUREMENT SYSTEM (TOYO CORPORATION)

BILOG ANTENNA (CHASE)

(2) Test conditions

- Input voltage : 100VAC · Output voltage : Rated
- Output current : 100% · Amplitude Modulated : 80%, 1KHz
- Electromagnetic Frequency : 80~1000MHZ · Ambient temperature : 25°C
- Distance : 2.4m · Wave Angle : Horizontal and Vertical
- Sweep Condition : 1.0% Step Up, 2.0 Seconds Hold
- Test Angle : Top/Bottom, Both Sides, Front/Back

(3) Test method



(*) Analog Voltage Meter used because Oscilloscope may malfunction.

(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, no discharge of fire or smoke, as well as no output failure.

(5) Test Result

Radiation Field Strength (V/m)	VS15C-5	VS15C-12	VS15C-24
1	PASS	PASS	PASS
3	PASS	PASS	PASS
10	PASS	PASS	PASS

3. ELECTRICAL FAST TRANSIENT BURST TEST (IEC61000-4-4)

MODEL : VS15C

(1) Equipment used

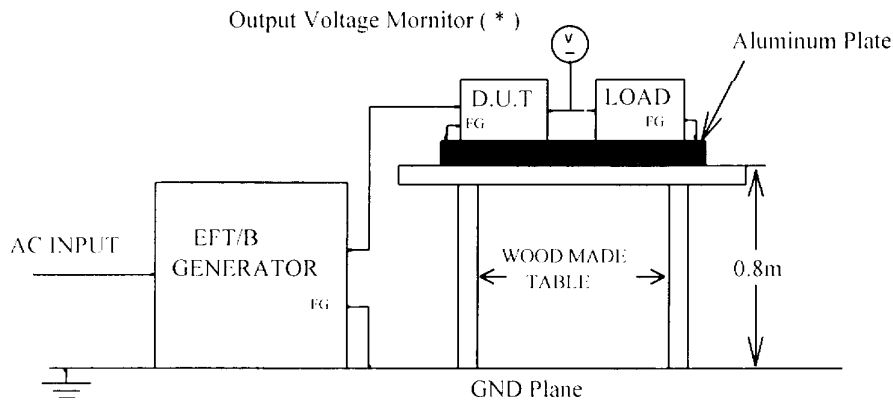
EFT/B Generator : FNS-100L (NOISEKEN)

(2) Test conditions

- Input voltage : 100VAC
- 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,FG separately,as well as,all at the same time.



(*) Used Oscilloscope or Analog Voltage Meter.

(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, no discharge of fire or smoke, as well as no output failure.

(5) Test Result

Test Voltage (kV)	Repetition Rate (kHz)	Test Result		
		VS15C-5	VS15C-12	VS15C-24
0.5	5	PASS	PASS	PASS
1	5	PASS	PASS	PASS
2	5	PASS	PASS	PASS

4. SURGE TEST (IEC61000-4-5)

MODEL : VS15C

(1) Equipment used

Surge Generator : NSG651 (SCHAFFNER)
 Coupling impedance : Common 12 Ω Normal 2 Ω Coupling capacitance : Common 9uF Normal 18uF

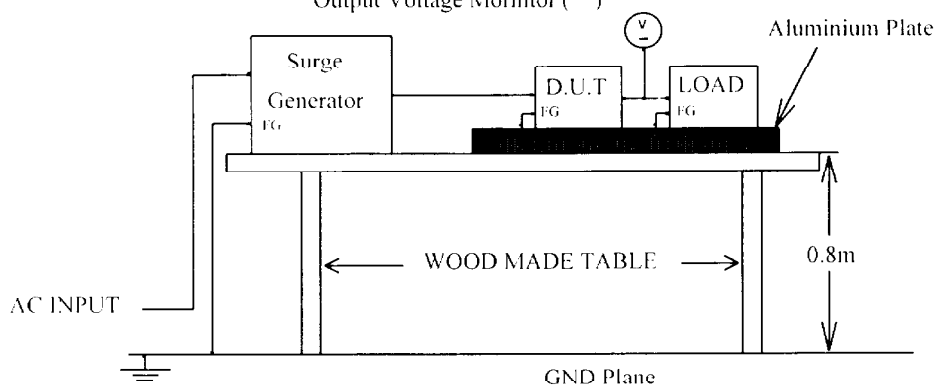
(2) Test conditions

· Input voltage	: 100VAC	· Output voltage	: Rated
· Output current	: 100%	· Number of tests	: 5 times
· Polarity	: +/-	· Mode	: Common, Normal
· Phase	: 0°, 90°	· Ambient temperature	: 25°C

(3) Test method and Device test point

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

Output Voltage Monitor (*)



(*) Used Oscilloscope or Analog Voltage Meter.

(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, no discharge of fire or smoke, as well as no output failure.

(5) Test Result

Test Voltage (kV)	Test Result			Test Voltage (kV)	Test Result		
	VS15C -5	VS15C -12	VS15C -24		VS15C -5	VS15C -12	VS15C -24
0.5	PASS	PASS	PASS	0.5	PASS	PASS	PASS
1	PASS	PASS	PASS	1	PASS	PASS	PASS
2	PASS	PASS	PASS				

5. CONDUCTED SUSCEPTIBILITY TEST (IEC61000-4-6)

MODEL : VS15C

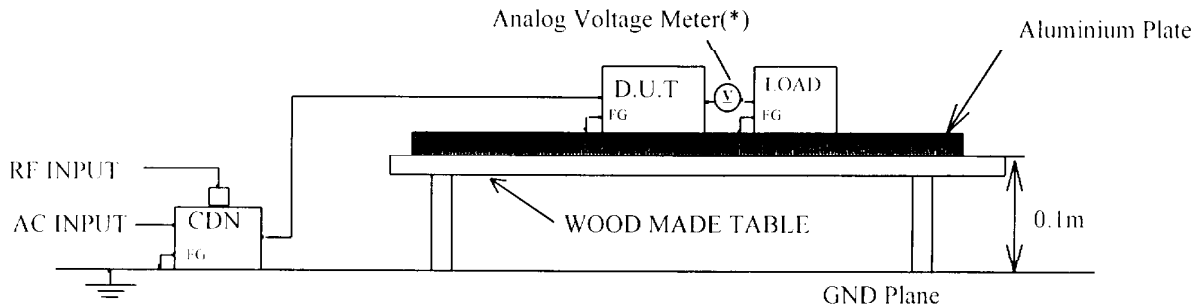
(1) Equipment used

- RF POWER AMPLIFIER : A01580-50-R (R&K)
- SIGNAL GENERATOR : SMG (ROHDE & SCHWARZ)
- COUPLING DE-COUPPING NETWORK (CDN) : KSI-8003 (KYORITSU)

(2) Test conditions

- Input voltage : 100VAC • Output voltage : Rated
- Output current : 100% • Electromagnetic Frequency : 150KHz-80MHz
- Sweep Condition : 1.0% Step Up, 2.0 Seconds Hold
- Ambient temperature : 25°C

(3) Test method



(*) Used Oscilloscope or Analog Voltage Meter.

(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, no discharge of fire or smoke, as well as no output failure.

(5) Test Result

Voltage Level (V)	VS15C-5	VS15C-12	VS15C-24
1	PASS	PASS	PASS
3	PASS	PASS	PASS
10	PASS	PASS	PASS