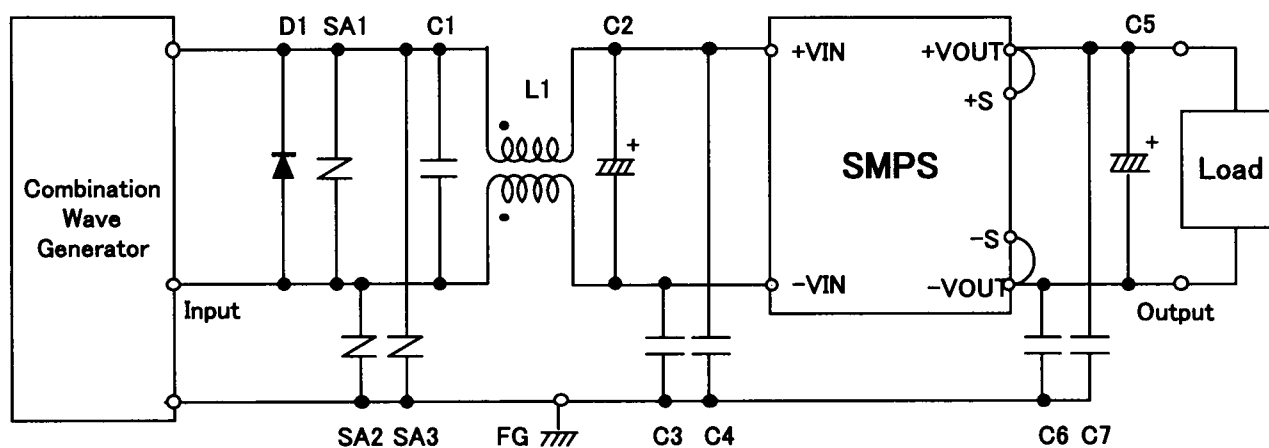


CES 24 series EMI/EMS Test resultApproved : *T. Mano*Prepared : *M. Miyake*

No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. FCC Part15 classA , VCCI classA CISPR22 classA , EN55022-A	OK
2	Radiated emission	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. FCC Part15 classA , VCCI classA CISPR22 classA , EN55022-A	OK
3	Static electricity immunity test (EN61000-4-2)	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Contact discharge voltage 8[kV] (EN61000-4-2 Level 4) (5) Testing circuitry Fig.1	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
4	Radiated, radio-frequency, electromagnetic field immunity test (EN61000-4-3)	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4)Testing field strength 10[V/m] (EN61000-4-3 Level 3) (5) Testing circuitry Fig.1	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
5	Electrical fast transient/ burst immunity test (EN61000-4-4)	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test peak voltage 4[kV] (IEC61000-4-4 Level 4) (5) Testing circuitry Fig.1	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
6	Surge immunity test (EN61000-4-5)	(1) Rated input(DC24V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test voltage Line to line 2[kV] (Level 3) Line to earth 4[kV] (Level 4) (5) Testing circuitry Fig.2	(1)The power supply is not stop (2)Circuit does not malfunction. (3)No abnormality of the insulation destruction etc. (4)Parts are no damaged.	OK

The diagram illustrates a power supply system. It starts with a **DC Input** block connected to a network of capacitors **C1**, **C2**, **C3**, and **C4**. A transformer **L1** is connected between the input and the **SMPS** (Switching Mode Power Supply) block. The **SMPS** block has two input terminals, **+VIN** and **-VIN**, and two output terminals, **+VOUT** and **-VOUT**. The output of the **SMPS** is connected to a **Load** block through a network of capacitors **C5**, **C6**, and **C7**. A feedback network **FG** is connected to the input of the **SMPS** and the output of the **Load**.

L1	: SC-10-10J	NEC/TOKIN	or equivalent.
C1	: 2.2 μ F 100V	Film capacitor	
C2	: 220 μ F 50V	Electric capacitor	
C3,4	: 0.068 μ F 630V	Film capacitor	
C5	: 10 μ F 25V	Electric capacitor	
C6,7	: 0.033 μ F 630V	Film capacitor	



L1	:1mH	NEC/TOKIN	or equivalent.
C1	:2.2 μ F 100V	Film capacitor	
C2	:220 μ F 50V	Electric capacitor	
C3,4	:0.068 μ F 630V	Film capacitor	
C5	:10 μ F 25V	Electric capacitor	
C6,7	:0.033 μ F 630V	Film capacitor	
SA1~3	:ERZV10D470	Panasonic	
D1	:ERD32-02	FUJI ELECTRIC	or equivalent.