参考資料

COSEL

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Cosel Co., Ltd.
OS Design Dept.

EMI/EMS Test Result

Model Name : CHS120 series

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The EUT is operated with following condition during EMI/EMS test.
Input Voltage : Rated Voltage
Output Current : Rated Current
Ambient Temperature : 25°C ± 10°C

#	Subject		Reference standard	Test Condition	Criteria *1	Result
1	EMI	Conducted Emission		EN55011, EN55032 Class A CISPR 32 Class A FCC Part15 Class A VCCI Class A Testing circuitry Fig. 1	-	Pass
2		Radiated Emission		EN55011, EN55032 Class A CISPR 32 Class A FCC Part15 Class A VCCI Class A Testing circuitry Fig. 1	-	Pass
3	EMS	Electrostatic discharge immunity test	IEC61000-4-2	Contact Discharge : Level 4 (8kV) Air Discharge : Level 4 (15kV) Testing circuitry Fig. 1	A	Pass
4		Radiated, radio-frequency, electromagnetic field immunity test	IEC61000-4-3	10V/m : (80MHz~1.0GHz) 3V/m : (1.4 ~ 2.0GHz) 1V/m : (2.0 ~ 2.7GHz) 80% Amplitude modulated Testing circuitry Fig. 1	A	Pass
5		Electrical fast transient / Burst immunity test	IEC61000-4-4	Level 4 (4kV) Repetition Rate : 5kHz and 100kHz Testing circuitry Fig. 1	A	Pass
6		Surge immunity test	IEC61000-4-5	Line to Line : Level 3 (2kV) Line to Earth : Level 4 (4kV) Testing circuitry Fig. 2	B	Pass

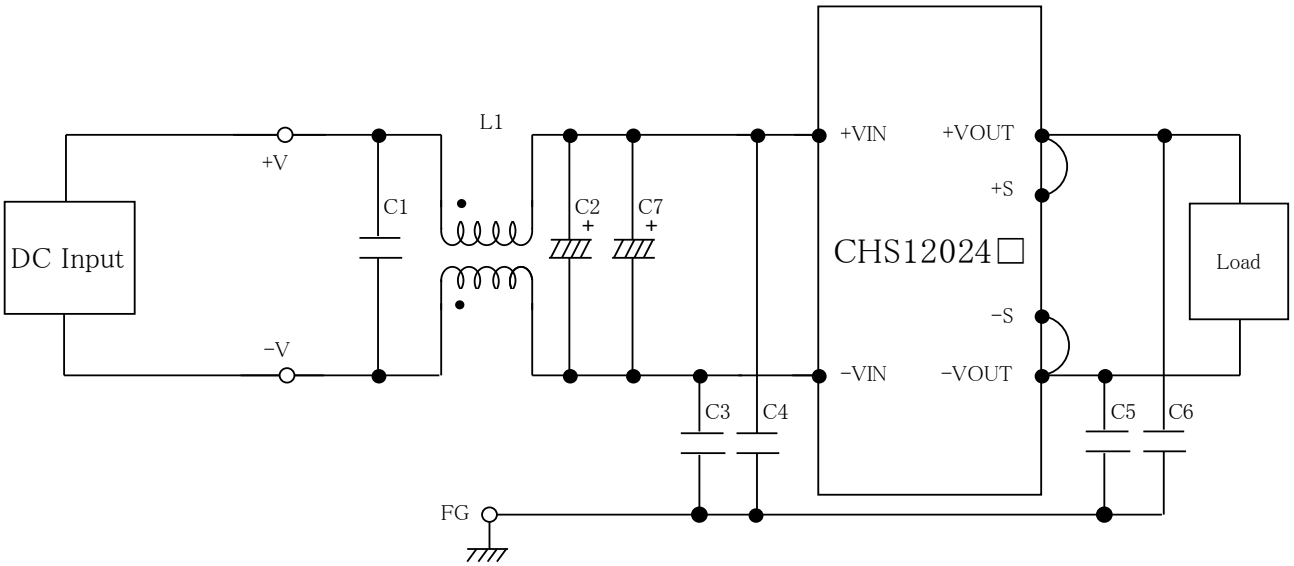
*1 Definition of Criteria

Criteria A : (1) No output voltage drop with control circuit failure.
(2) No protection circuit and other circuit malfunction.

Criteria B : (1) The output voltage is temporary degradation of performance.
It recovers its normal performance without operator intervention.
(2) No protection circuit and other circuit failure.

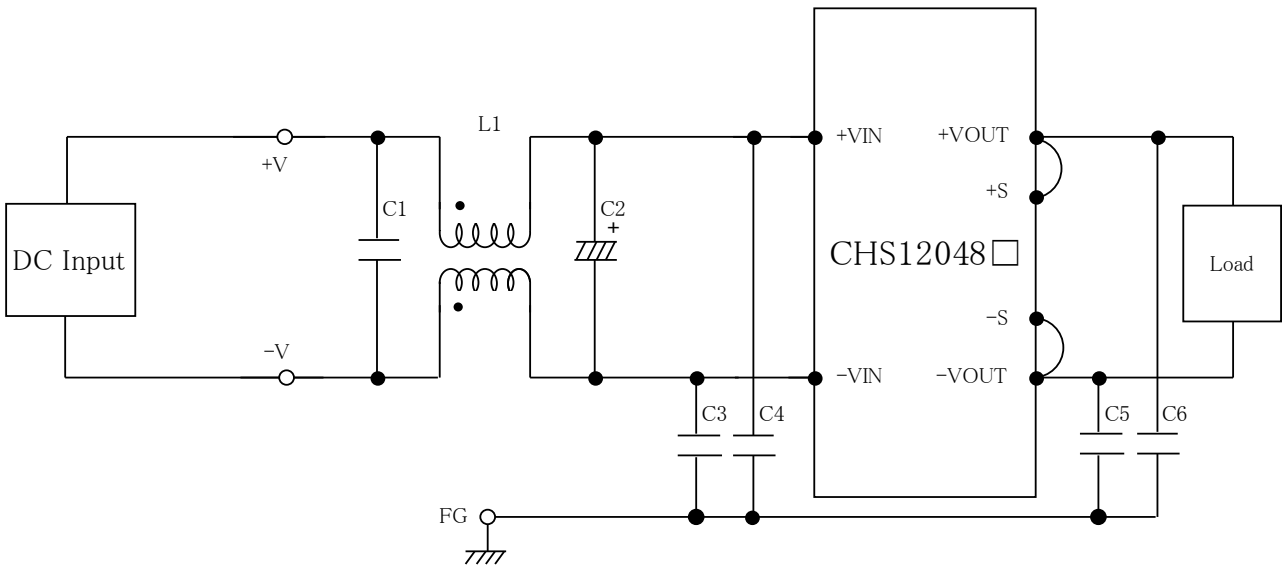
<Notes>
Power supply can't determine the final equipment performance against EMS test. Therefore we confirmed the output voltage performance only. EMS test should be performed as a final product.

○ Testing circuitry



CHS12024□

L1 : 0.5mH SC-15-05J (TOKIN)
C1 : 250V 2.2μF FPD22E225J4(NITSUKO)
C2.C7 : 50V 100μF PWseries(nichicon)
C3,C4 : 630V 0.068μF FPD22J683J4(NITSUKO)
C5,C6 : 630V 0.033μF FPD22J333J4(NITSUKO)

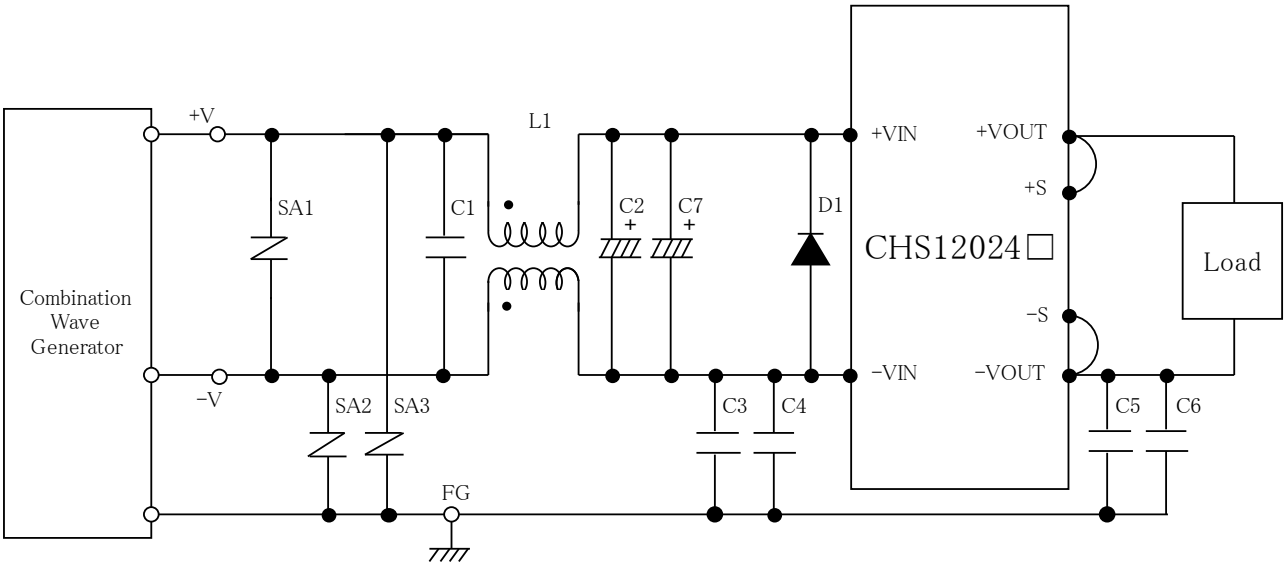


CHS12048□

L1 : 1mH SC-05-10J (TOKIN)
C1 : 250V 2.2μF FPD22E225J4(NITSUKO)
C2 : 100V 47μF PWseries(nichicon)
C3,C4 : 630V 0.068μF FPD22J683J4(NITSUKO)
C5,C6 : 630V 0.033μF FPD22J333J4(NITSUKO)

Fig.1 Testing circuitry

○ Testing circuitry



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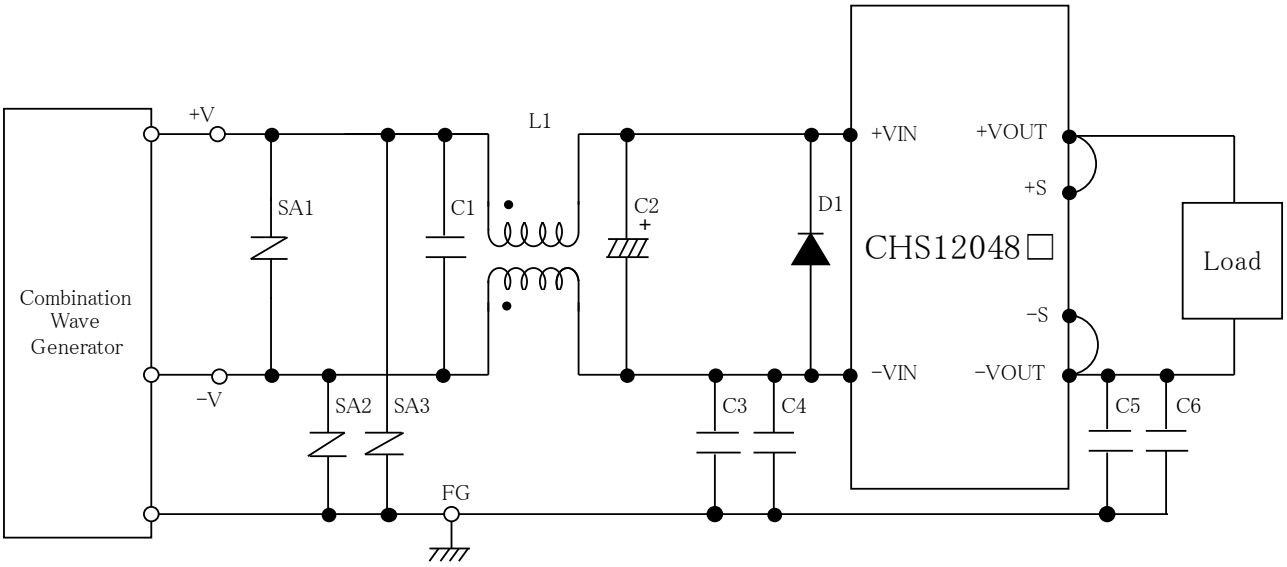
C5,C6 : 630V 0.033μF FPD22J333J4(NITSUKO)
D1 : ERD32-02(FUJI ELECTRIC)
SA1,SA2,SA3 : ERZV10D470 (Panasonic)



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C2 : 100V 47μF PWseries (nichicon)
C3,C4 : 630V 0.068μF FPD22J683J4(NITSUKO)
C5,C6 : 630V 0.033μF FPD22J333J4(NITSUKO)
D1 : ERD32-02(FUJI ELECTRIC)
SA1.SA2.SA3 : ERZV10D101(Panasonic)

Fig.2 Surge immunity Testing circuitry