



TUHS10F series EMI/EMS Test result

September 13, 2017

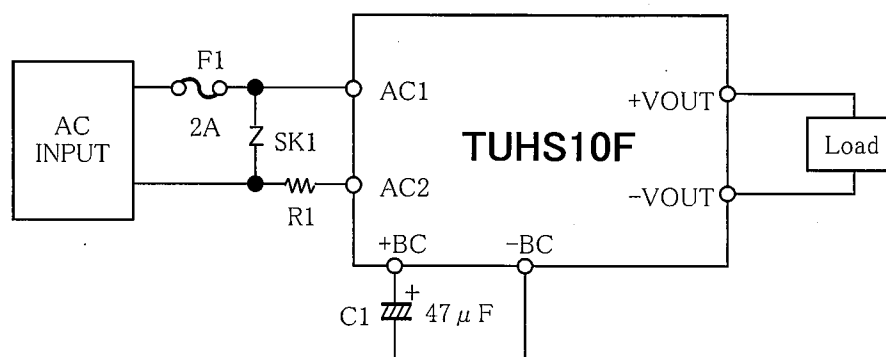
CS DESIGN DEPT.

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No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. FCC Part15 classB , VCCI classB CISPR22 classB , EN55022-B	ok
2	Radiated emission	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. FCC Part15 classB , VCCI classB CISPR22 classB , EN55022-B	ok
3	Harmonic current (EN61000-3-2)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. EN61000-3-2 classA	ok
4	Static electricity immunity test (EN61000-4-2)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Contact discharge voltage 8[kV] (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
5	Radiated, radio-frequency, electromagnetic field immunity test (EN61000-4-3)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing field strength (Level 3) 10[V/m] (80MHz to 1.0GHz) (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	Electrical fast transient/ burst immunity test (EN61000-4-4)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test peak voltage 4[kV] (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
7	Surge immunity test (EN61000-4-5)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test voltage Line to line 2[kV] (Level 3) (5) Testing circuitry Fig.1	(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
8	Immunity to conducted disturbances, induced by radio-frequency fields (EN61000-4-6)	(1) Input AC230V (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Voltage level (e.m.f.) 10[V] (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
9	Power frequency magnetic field immunity test (EN61000-4-8)	(1) Rated input AC230V (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Magnetic field strength 30[A/m] (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
10	Voltage dips, short interruptions and voltage variations immunity test (EN61000-4-11)	(1) Input AC230V • 30% reduction at 500ms min. • 60% reduction at 200ms min. (2) Outout Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) 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

○ Testing circuitry



F1: SLT250V2A (Nippon Seisen) 2A
 R1: 2K100JA (TAMURA THERMAL DEVICE) 10Ω
 SK1: TND10V-511K (NIPPON CHEMI-CON)

Fig.1 Testing circuitry