



DCS1400B Safety test results

May 15, 2025
New Product Development Dept.3

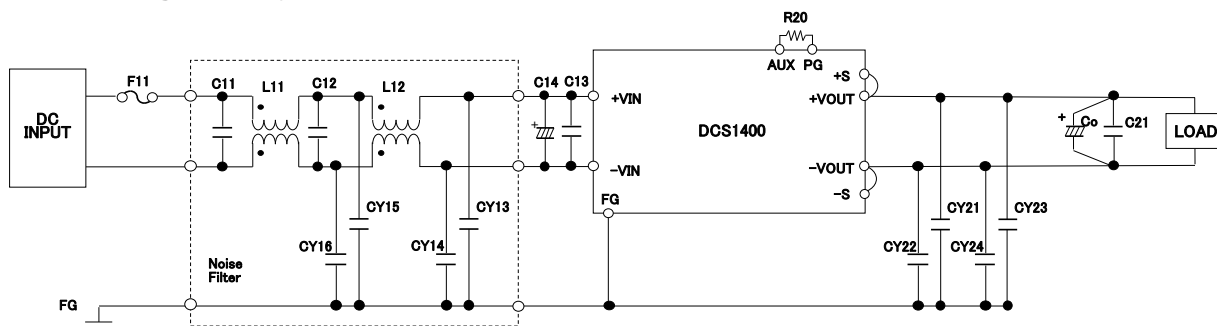
Approved Junichi Hatagishi

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No.	Test item	Conditions	Conditions of acceptability	Result
1	High temp./Overload test	(1) Input : Max.voltage, Min.voltage (2) Output : Overload (3) Baseplate temp. : 80°C (4) Test period : 48 hours (5) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
2	Capacitance reduction test	(1) Input : Rated input (280VDC) (2) Output : Rated output (3) Ambient temp. : 25±10°C (4) Testing circuitry: Fig.1	(1) No smoke or fire. (2) No rise of the output voltage.	Pass
3	Low voltage input test	(1) Input :Min. regulation voltage (175VDC) (2) Output : Rated output (3) Baseplate temp. : 80°C (4) Test period : 48 hours (5) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
4	Input ON/OFF test	(1) Input : Rated input T= 2sec Duty= 50% (2) Output : Rated output (3) Ambient temp. : 25±10°C (4) ON/OFF period : 1,000 (5) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
5	Output ON/OFF test	(1) Input : Rated input (280VDC) (2) Output : 0%←→100% T= 2sec Duty= 50% (3) Ambient temp. : 25±10°C (4) ON/OFF period : 1,000 (5) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
6	Output-short start test	(1) Input : Max.voltage, Min.voltage (2) Output : Short start (3) Ambient temp. : 25±10°C (4) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
7	Output short test	(1) Input : Max.voltage, Min.voltage (2) Output : Short (3) Ambient temp. : 25±10°C (4) Test period : 48 hours (5) Testing circuitry: Fig.1	(1) The power supply is not failed.	Pass
8	Withstand voltage test (Hi-Pot test)	(1) Input : No input (2) Ambient temp. : 25±10°C (3) Test voltage : specifications (4) Testing circuitry: Fig.1	(1) Insulation breakdown, flashover or electric arc is not occurred.	Pass
9	Isolation resistance test	(1) Input : No input (2) Ambient temp. : 25±10°C	(1) Satisfies the specifications.	Pass
10	Vibration/Impact test	Vibration (1) f = 10 - 150Hz, 73.5 m/s ² (2) 3 minutes period (3) 60 minutes along X, Y and Z axis Impact (1) 294 m/s ² , 11msec (2) Once each X, Y and Z axis	(1) No degradation of electric characteristics after test. (2) No crack at solder joint. (3) No marked damage of appearance.	Pass
11	Line noise tolerance test	(1) Input : 230VAC (2) Output : Rated current (3) Ambient temp. : 25±10°C (4) Test Voltage : ±2 kV (5) Pulse width : 50~1000nsec (6) Mode : Normal and Common (7) Testing circuitry: Fig.2	(1) No protection circuit failure. (2) No output voltage drop with control circuit failure. (3) No function fail.	Pass

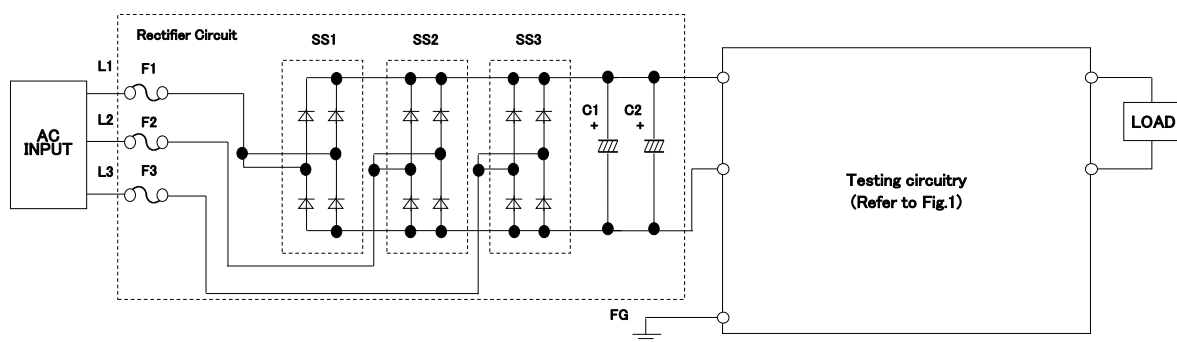


○ Testing circuitry



F11	:	0505016
L11,L12	:	SCF25XV-150-1R6A010JH
C11,C13	:	1.0uF 450V Film Calacitor
C12	:	2.2uF 450V Film Calacitor
C14	:	82uF 450V Electrolytic Capacitor
CY13,CY14	:	2200pF 400V
CY15,CY16	:	1500pF 400V
C21	:	1.0uF Ceramic Capacitor
CY21,CY22,CY23,CY24	:	0.01uF 300V (For DCS1400B65 only)
Co	:	DCS1400B12 2200uF 16V Electrolytic Capacitor
		DCS1400B24 2200uF 35V Electrolytic Capacitor
		DCS1400B28 1000uF 50V Electrolytic Capacitor
		DCS1400B36 1000uF 50V Electrolytic Capacitor
		DCS1400B48 680uF 63V Electrolytic Capacitor
		DCS1400B65 330uF 100V Electrolytic Capacitor
R20	:	1100ohm(For Line noise tolerance test only)

Fig.1 Testing circuitry



F1,F2,F3	:	0505016
SS1,SS2,SS3	:	D25XB60
C1,C2	:	ELXS451VSN471MA40S

Fig.2 Testing circuitry (Line noise tolerance test)