



DCS1400B series Reliability test results

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New Product Development Dept.3

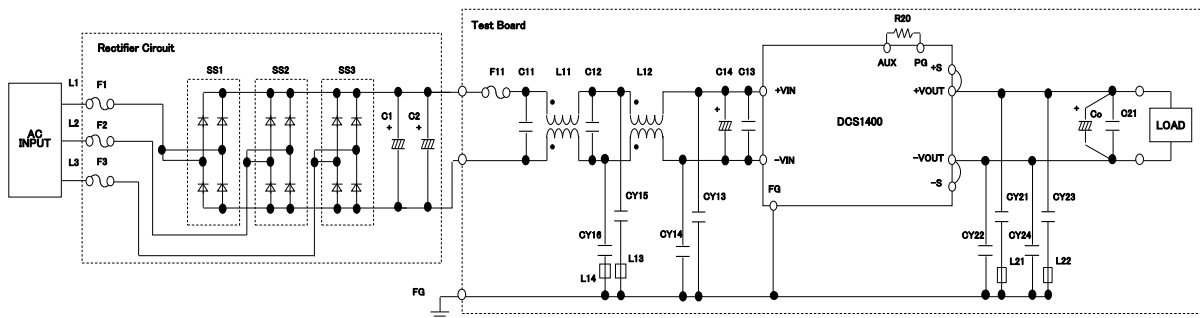
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No.	Test Item	Testing conditions	Conditions of acceptability	Number of samples	Number of failures
1	Heat cycle test	(1) -40°C ~ 125°C 30minutes each (2) 600cycles	(1)No degradation of electric characteristics after test. (2)No crack at solder joint.	5	0
2	High temperature/ High humidity bias test	(1) Ta=85°C, RH=85% (2) At rated input (3) Load 0% (4) 1000hours	(1)No degradation of electric characteristics after test.	5	0
3	Vibration test	(1) f=10~150Hz, 73.5m/s ² (7.5G) (2) 3 minutes period (3) 60 minutes along X, Y and Z axis	(1)No degradation of electric characteristics after test. (2)No crack at solder joint. (3)No mechanical damage of appearance.	3	0
4	Impact test	(1) 294.0m/s ² (30G), 11ms (2) Once each X, Y and Z axis	(1)No degradation of electric characteristics after test. (2)No crack at solder joint. (3)No thermal damage of appearance.	3	0
5	Soldering heat test	(1) Soldering iron 260°C, 15 seconds (2) Mounting board : t=1.6mm / FR4	(1)No crack at solder joint. (2)No marked damage of appearance.	1	0
6	Pin strength test	(1) Weight : 1.0kg (2) Bending angle : 90 deg., total 180 deg. (3) 1 cycle	(1)No degradation of electric characteristics after test. (2)No degradation of terminal	1	0
7	Electrostatic discharge immunity test	(1) Applied voltage ±8kV (2) At rated input and load (3) Testing circuitry: Fig.1	(1)No protection circuit fail. (2)No output voltage drop with control circuit fail. (3)No function fail.	1	0



○ Testing circuitry



▪ Rectifier Circuit

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

▪ Test Board

F11	: 0505016
L11, L12	: SCF25XV-150-1R6A010JH
L13, L14	: Ferrite Bead (K5B T 4x2x2)
C11, C13	: 1.0uF 450V Film Capacitor
C12	: 2.2uF 450V Film Capacitor
C14	: 82uF 450V Electrolytic Capacitor
CY13, CY14	: 2200pF 400V
CY15, CY16	: 1500pF 400V
L21, L22	: Ferrite Bead (K5B T 4x2x2) (For DCS1400B65 only)
C21	: 1.0uF Ceramic Capacitor
CY21, CY22, CY23, CY24	: 0.01uF 300V (For DCS1400B65 only)
R20	: 1100ohm
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

Fig.1 Testing circuitry