



MG30 series Reliability test results

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OS DESIGN DEPT.2

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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) 900cycles	(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.	3	0
3	Vibration test	(1) f=10~55Hz, 98.0m/s ² (10G) (2) 3minutes period (3) 60minutes each 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) 490.3m/s ² (50G), 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 340~360°C, 7.5 seconds (2) Mounting board : t=1.6mm / FR4	(1)No crack at solder joint. (2)No marked damage of appearance.	1	0
6	Pin solder ability test	(1) Pre-process Step1 Humidifying processing (85°C, 85%, 168H) Step2 Dip into flux (2) Dip soldering 230~240°C, 2sec	(1)Over 95% of dipped part is covered with solder.	5	0
7	Pin strength test	(1) Weight : 1kg (2) Bending angle : 90 deg., total 180 deg. (3) 1 cycle	(1)No crack at solder joint. (2)No mechanical damage of appearance.	1	0
8	Static electricity 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 due to control (3)No any other function fail.	7	0



○ Testing circuitry

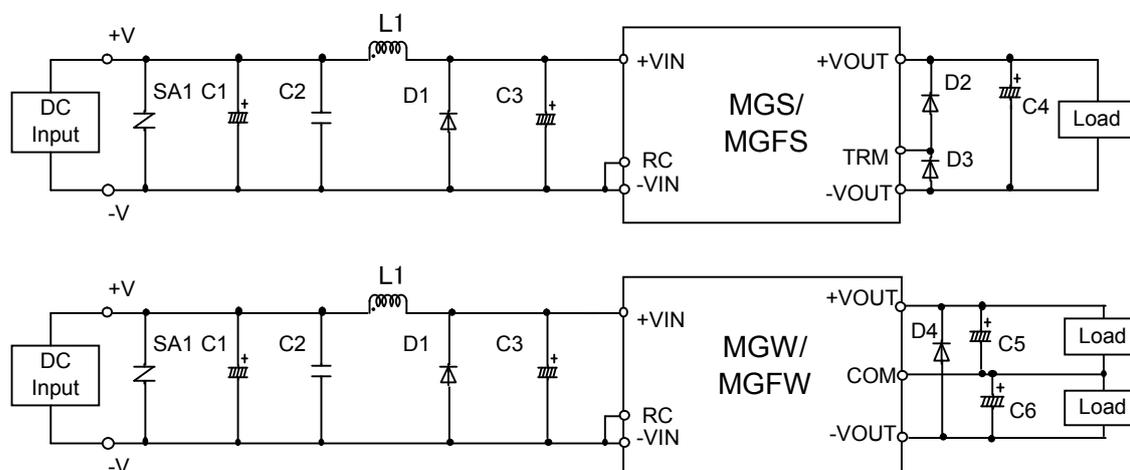


Fig.1 Testing circuitry

C1	:	MG□3012□□	50V	470 μ F	Electrolytic Capacitor
		MG□3024□□/MGF□3024□□	50V	470 μ F	Electrolytic Capacitor
		MG□3048□□/MGF□3048□□	100V	330 μ F	Electrolytic Capacitor
C2	:	MG□3012□□	25V	10 μ F	Ceramic Capacitor
		MG□3024□□/MGF□3024□□	50V	4.7 μ F	Ceramic Capacitor
		MG□3048□□/MGF□3048□□	100V	2.2 μ F	Ceramic Capacitor
C3	:	MG□3012□□	50V	220 μ F	Electrolytic Capacitor
		MG□3024□□/MGF□3024□□	50V	100 μ F	Electrolytic Capacitor
		MG□3048□□/MGF□3048□□	80V	47 μ F	Electrolytic Capacitor
SA1	:	MG□3012□□	27V	ERZV10D270	(PANASONIC)
		MG□3024□□/MGF□3024□□	47V	ERZV10D470	(PANASONIC)
		MG□3048□□/MGF□3048□□	100V	ERZV10D101	(PANASONIC)
L1	:	MG□3012□□/MGF□3024□□	0.6uH	CI8C-0R6	(KORIN ELECTRONICS)
		MG□3024□□/MGF□3048□□	4.7uH	CI8C-4R7	(KORIN ELECTRONICS)
		MG□3048□□	10uH	CI8C-100	(KORIN ELECTRONICS)
D1,D2,D3,D4	:	3A 600V S3K60			(SHINDENGEN)
C4	:	MGS30□□3R3/MGFS30□□3R3	50V	470 μ F	Electrolytic Capacitor
		MGS30□□05/MGFS30□□05	50V	470 μ F	Electrolytic Capacitor
		MGS30□□12/MGFS30□□12	35V	150 μ F	Electrolytic Capacitor
		MGS30□□15/MGFS30□□15	50V	100 μ F	Electrolytic Capacitor
C5,C6	:	MGW30□□05/MGFW30□□05	50V	330 μ F	Electrolytic Capacitor
		MGW30□□12/MGFW30□□12	50V	100 μ F	Electrolytic Capacitor
		MGW30□□15/MGFW30□□15	80V	47 μ F	Electrolytic Capacitor