

MG30 Series EMI/EMS Test results

Approved :

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No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1, Fig.2	(1)Meets the undermentioned standard. FCC Part15 classA , VCCI classA CISPR11 classA , EN55011-A	OK
2	Radiated emission	(1) Rated input (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Testing circuitry Fig.1, Fig.2	(1)Meets the under mentioned standard. FCC Part15 classA , VCCI classA CISPR11 classA , EN55011-A	OK
3	Static electricity immunity test (EN61000-4-2)	(1) Rated input (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Contact discharge voltage 8[kV] (EN61000-4-2 Level 4) (5) Testing circuitry Fig.3	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure.	OK
4	Radiated, radio-frequency, electromagnetic field immunity test (EN61000-4-3)	(1) Rated input (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4)Testing field strength 10[V/m] (EN61000-4-3 Level 3) (5) Testing circuitry Fig.1, Fig.2	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure.	OK
5	Electrical fast transient/ burst immunity test (EN61000-4-4)	(1) Rated input (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test peak voltage 4[kV] (IEC61000-4-4 Level 4) (5) Testing circuitry Fig.3	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure.	OK
6	Surge immunity test (EN61000-4-5)	(1) Rated input (2) 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.4	(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

○ Testing circuitry 1

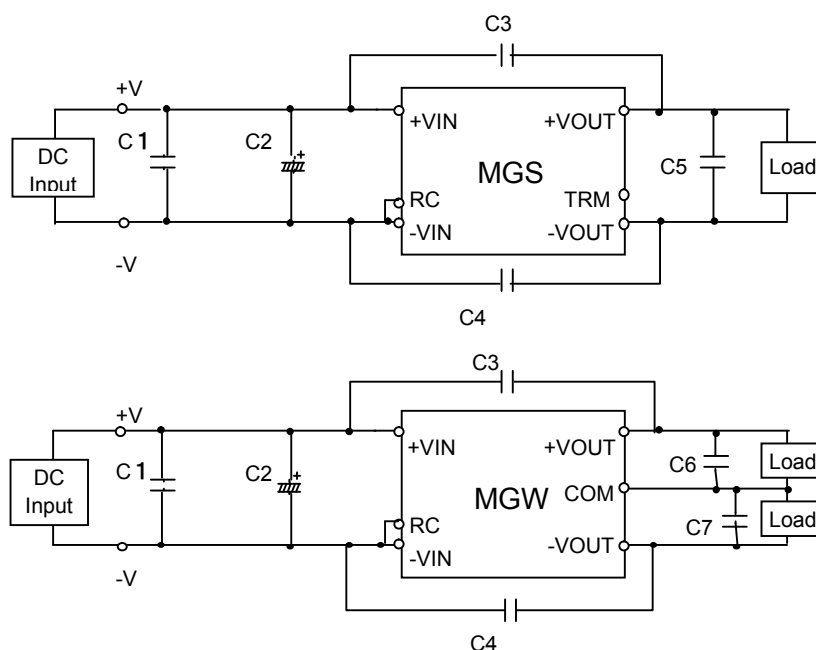


Fig.1 Testing circuitry 1

C1	:	MGS3012□□/MGW3012□□	25V	10 μ F	Ceramic Capacitor
	:	MGS3024□□/MGW3024□□	50V	4.7 μ F	Ceramic Capacitor
	:	MGS3048□□/MGW3048□□	100V	2.2 μ F	Ceramic Capacitor
C2	:	MGS3012□□/MGW3012□□	50V	220 μ F	Electrolytic Capacitor
	:	MGS3024□□/MGW3024□□	50V	100 μ F	Electrolytic Capacitor
	:	MGS3048□□/MGW3048□□	80V	47 μ F	Electrolytic Capacitor
C3,C4	:	2kV	1000pF		Ceramic Capacitor
C5,C6,C7	:	25V	22 μ F		Ceramic Capacitor

○ Testing circuitry 2

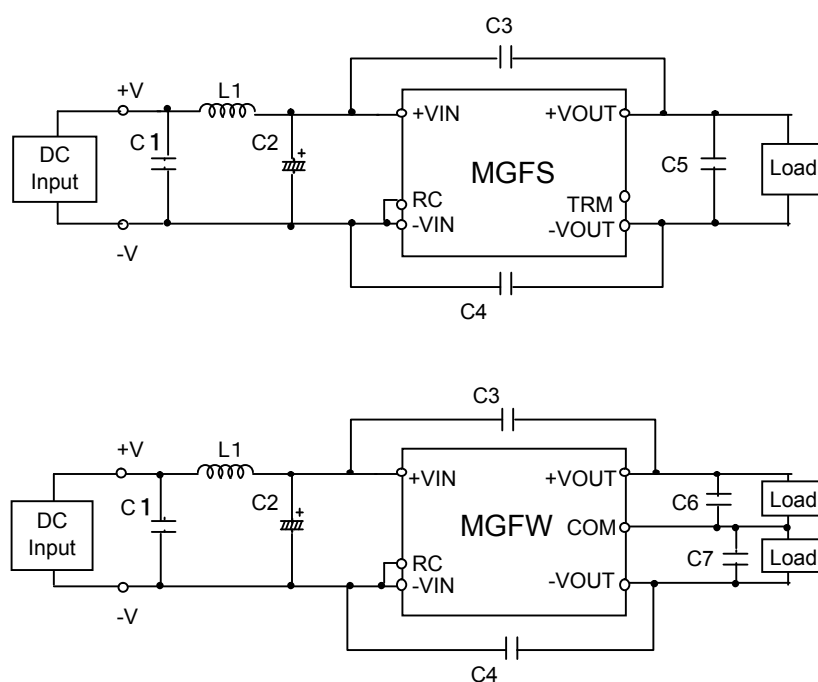


Fig.2 Testing circuitry 2

C1	:	MGFS3024□□/MGFW3024□□	50V	4.7 μ F	Ceramic Capacitor
	:	MGFS3048□□/MGFW3048□□	100V	2.2 μ F	Ceramic Capacitor
C2	:	MGFS3024□□/MGFW3024□□	50V	100 μ F	Electrolytic Capacitor
	:	MGFS3048□□/MGFW3048□□	80V	47 μ F	Electrolytic Capacitor
C3,C4	:	2kV 1000pF	Ceramic Capacitor		
L1	:	MGFS3024□□/MGFW3024□□	0.6 μ H	CI8C-0R6	(KORIN ELECTRONICS)
	:	MGFS3048□□/MGFW3048□□	4.7 μ H	CI8C-4R7	(KORIN ELECTRONICS)
C5,C6,C7	:	25V 22 μ F	Ceramic Capacitor		

○ Testing circuitry 3

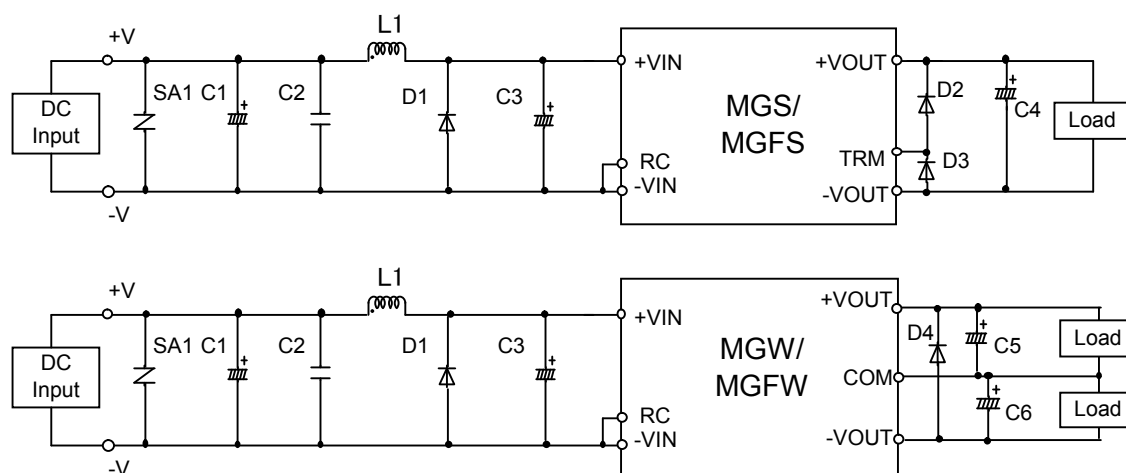


Fig.3 Testing circuitry 3

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

○ Testing circuitry 4

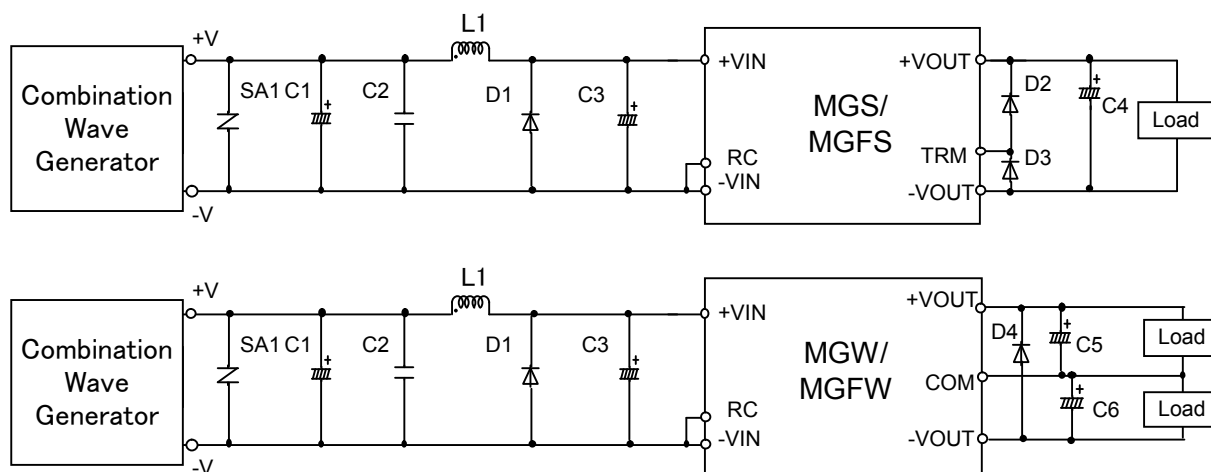


Fig.4 Testing circuitry 4

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□□	0.6 μ H	CI8C-0R6	(KORIN ELECTRONICS)
	:	MG□3024□□/MGF□3048□□	4.7 μ H	CI8C-4R7	(KORIN ELECTRONICS)
	:	MG□3048□□	10 μ H	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