参考資料

COSEL

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OS DESIGN DEPT.

MGW6 Series EMI／EMS Test results

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Shohei Mukaide

No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4) Testing circuitry Fig.1	(1)Meets the undermentioned standard. FCC Part15 classA , VCCI classA CISPR22 classA , EN55022-A	ok
2	Radiated emission	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4) Testing circuitry Fig.1	(1)Meets the under mentioned standard. FCC Part15 classA , VCCI classA CISPR22 classA , EN55022-A	ok
3	Static electricity immunity test (EN61000-4-2)	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4) Contact discharge voltage 4[kV] (EN61000-4-2 Level 2) (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
4	Radiated, radio-frequency, electromagnetic field immunity test (EN61000-4-3)	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4)Testing field strength (Level 3) ① 10 [V/m] (80MHz to 1.0GHz) ② 3 [V/m] (1.4GHz to 2.0GHz) ③ 1 [V/m] (2.0GHz to 2.7GHz) (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	Electrical fast transient/ burst immunity test (EN61000-4-4)	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4) Test peak voltage 4[kV] (IEC61000-4-4 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
6	Surge immunity test (EN61000-4-5)	(1) Rated input (2) Rated load (3) Ambient temp. 25±10℃ (4) Test voltage Line to line 2[kV] (Level 3) (5) Testing circuitry Fig.2	(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

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○Testing circuitry 1

Test : Line conduction , Radiated emission
Static electricity immunity test
Radiated, radio-frequency, electromagnetic field immunity test
Electrical fast transient / burst immunity test

Model Name : MGW6□□

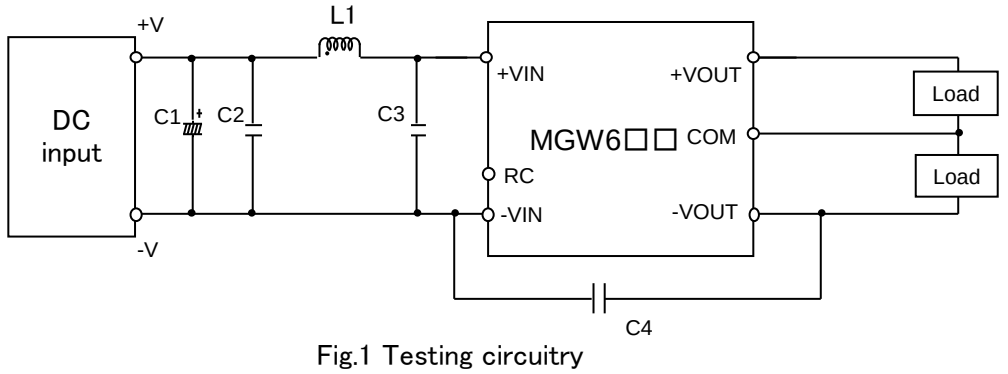

Fig.1 Testing circuitry

C1 : MGW605□□ 25V 220μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
MGW612□□ 50V 100μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
MGW624□□ -
MGW648□□ -

C2 : MGW605□□ 16V 22μF Ceramic capacitor (GRM31CC71C226K MURATA MANUFACTURING)
MGW612□□ 25V 10μF Ceramic capacitor (GRM31CR71E106K MURATA MANUFACTURING)
MGW624□□ 50V 4.7μF Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
MGW648□□ 100V 2.2μF Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)

C3 : MGW605□□ -
MGW612□□ 25V 10μF Ceramic capacitor (GRM31CR71E106K MURATA MANUFACTURING)
MGW624□□ 50V 4.7μF Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
MGW648□□ 100V 2.2μF Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)

C4 : MGW605□□ 2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
MGW612□□ 2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
MGW624□□ 2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
MGW648□□ 2kV 1000pF Ceramic capacitor (GR442QR73D102K MURATA MANUFACTURING)

L1 : MGW605□□ 3000mA 1.5μH Inductor(LQH5BPN1R5NT0 MURATA MANUFACTURING)
MGW612□□ 2600mA 2.2μH Inductor(LQH5BPN2R2NT0 MURATA MANUFACTURING)
MGW624□□ 1600mA 10μH Inductor(LQH5BPN100MT0 MURATA MANUFACTURING)
MGW648□□ 1050mA 22μH Inductor(LQH5BPN220MT0 MURATA MANUFACTURING)

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○Testing circuitry 2

Test : Surge immunity test

Model Name : MGW6□□

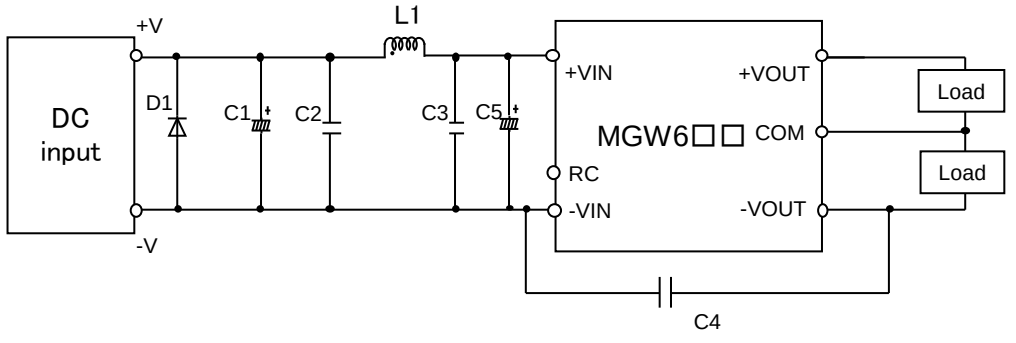

Fig.2 Testing circuitry

C1 :	MGW605□□	16V 2200μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW612□□	25V 1000μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW624□□	63V 470μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW648□□	100V 180μF Electric capacitor (LXVseries NIPPON CHEMI-CON)
C2 :	MGW605□□	16V 22μF Ceramic capacitor (GRM31CC71C226K MURATA MANUFACTURING)
	MGW612□□	25V 10μF Ceramic capacitor (GRM31CR71E106K MURATA MANUFACTURING)
	MGW624□□	50V 4.7μF Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
	MGW648□□	100V 2.2μF Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)
C3 :	MGW605□□	–
	MGW612□□	25V 10μF Ceramic capacitor (GRM31CR71E106K MURATA MANUFACTURING)
	MGW624□□	50V 4.7μF Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
	MGW648□□	100V 2.2μF Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)
C4 :	MGW605□□	2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
	MGW612□□	2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
	MGW624□□	2kV 470pF Ceramic capacitor (GR442QR73D471K MURATA MANUFACTURING)
	MGW648□□	2kV 1000pF Ceramic capacitor (GR442QR73D102K MURATA MANUFACTURING)
C5 :	MGW605□□	16V 2200μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW612□□	25V 1000μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW624□□	63V 470μF Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGW648□□	100V 180μF Electric capacitor (LXVseries NIPPON CHEMI-CON)
L1 :	MGW605□□	3000mA 1.5μH Inductor(LQH5BPN1R5NT0 MURATA MANUFACTURING)
	MGW612□□	2600mA 2.2μH Inductor(LQH5BPN2R2NT0 MURATA MANUFACTURING)
	MGW624□□	1600mA 10μH Inductor(LQH5BPN100MT0 MURATA MANUFACTURING)
	MGW648□□	1050mA 22μH Inductor(LQH5BPN220MT0 MURATA MANUFACTURING)
D1 :	MGW605□□	400V 3A Diode(S3L40U SHINDENGEN)
	MGW612□□	400V 3A Diode(S3L40U SHINDENGEN)
	MGW624□□	400V 3A Diode(S3L40U SHINDENGEN)
	MGW648□□	400V 3A Diode(S3L40U SHINDENGEN)