



**MGFS10 Series EMI/EMS Test results**

Approved : *Takayuki Fukuda*  
Takayuki Fukuda

Prepared : *Takaaki Sekiguchi*  
Takaaki Sekiguchi

No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input (2) Rated load (3) Ambient temp. 25±10°C (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°C (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°C (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°C (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°C (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°C (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



## Conditions

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

Model Name : MGFS10□□

○Testing circuitry

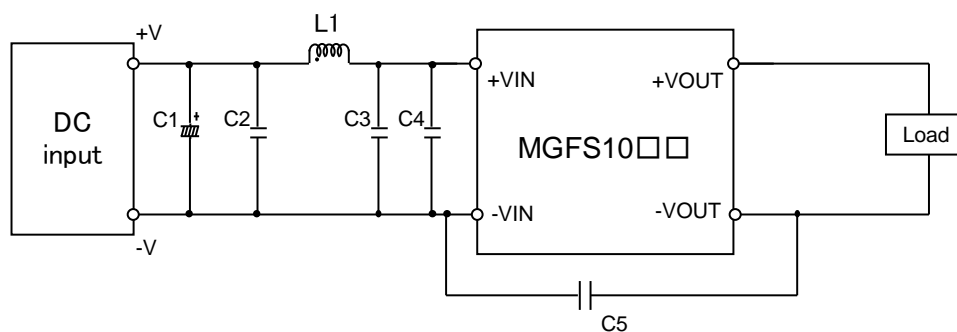


Fig.1 Testing circuitry

- |      |            |                   |   |
|------|------------|-------------------|---|
| C1 : | MGFS1024□□ | 50V 100 $\mu$ F   | Electric capacitor (LXZseries NIPPON CHEMI-CON)         |
|      | MGFS1048□□ | 100V 39 $\mu$ F   | Electric capacitor (LXVseries NIPPON CHEMI-CON)         |
| C2 : | MGFS1024□□ | 50V 4.7 $\mu$ F   | Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING) |
|      | MGFS1048□□ | 100V 2.2 $\mu$ F  | Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING) |
| C3 : | MGFS1024□□ | 50V 4.7 $\mu$ F   | Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING) |
|      | MGFS1048□□ | 100V 2.2 $\mu$ F  | Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING) |
| C4 : | MGFS1024□□ | 50V 4.7 $\mu$ F   | Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING) |
|      | MGFS1048□□ | 100V 2.2 $\mu$ F  | Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING) |
| C5 : | MGFS1024□□ | 2kV 2200pF        | Ceramic capacitor (GR443QR73D222K MURATA MANUFACTURING) |
|      | MGFS1048□□ | 2kV 2200pF        | Ceramic capacitor (GR443QR73D222K MURATA MANUFACTURING) |
| L1 : | MGFS1024□□ | 1600mA 10 $\mu$ H | Inductor(LQH5BPN100MT0 MURATA MANUFACTURING)            |
|      | MGFS1048□□ | 1050mA 22 $\mu$ H | Inductor(LQH5BPN220MT0 MURATA MANUFACTURING)            |

### Conditions

Test : Surge immunity test

Model Name : MGFS10□□

○Testing circuitry

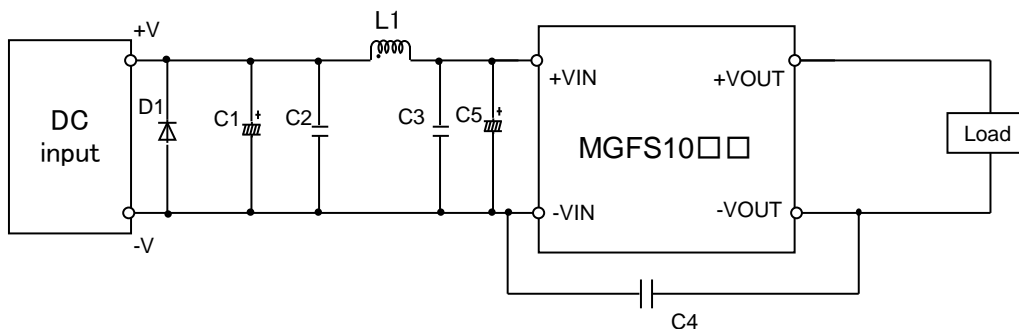


Fig.2 Testing circuitry

C1 :	MGFS1024□□	63V 470 $\mu$ F Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGFS1048□□	100V 180 $\mu$ F Electric capacitor (LXVseries NIPPON CHEMI-CON)
C2 :	MGFS1024□□	50V 4.7 $\mu$ F Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
	MGFS1048□□	100V 2.2 $\mu$ F Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)
C3 :	MGFS1024□□	50V 4.7 $\mu$ F Ceramic capacitor (GRM31CR71H475K MURATA MANUFACTURING)
	MGFS1048□□	100V 2.2 $\mu$ F Ceramic capacitor (GRM31CC72A225K MURATA MANUFACTURING)
C4 :	MGFS1024□□	2kV 2200pF Ceramic capacitor (GR443QR73D222K MURATA MANUFACTURING)
	MGFS1048□□	2kV 2200pF Ceramic capacitor (GR443QR73D222K MURATA MANUFACTURING)
C5 :	MGFS1024□□	63V 470 $\mu$ F Electric capacitor (LXZseries NIPPON CHEMI-CON)
	MGFS1048□□	100V 180 $\mu$ F Electric capacitor (LXVseries NIPPON CHEMI-CON)
L1 :	MGFS1024□□	1600mA 10 $\mu$ H Inductor(LQH5BPN100MT0 MURATA MANUFACTURING)
	MGFS1048□□	1050mA 22 $\mu$ H Inductor(LQH5BPN220MT0 MURATA MANUFACTURING)
D1 :	MGFS1024□□	400V 3A Diode(S3L40U SHINDENGEN)
	MGFS1048□□	400V 3A Diode(S3L40U SHINDENGEN)