



EMI/EMS Test Result

Model Name : HFA3500TF series

Approved : Takashi Yamamine

The EUT is operated with following condition during EMI/EMS test.

Input Voltage : 400VAC / 50Hz

Output Current : Rated Current

Ambient Temperature : 25°C ± 10°C

Prepared : Yutaka Murai

| # | Subject | Reference standard | Test Condition | Criteria *1 | Result |
|---|---------|--|---|------------------|------------------------------|
| 1 | EMI | Conducted Emission | EN55011, EN55032 Class A CISPR11, CISPR32 Class A FCC Part15 Class A FCC Part18 Class A VCCI Class A | - | Pass |
| 2 | | Radiated Emission | EN55011, EN55032 Class A CISPR11, CISPR32 Class A FCC Part15 Class A FCC Part18 Class A VCCI Class A | - | Pass |
| 3 | EMS | Electrostatic discharge immunity test | IEC61000-4-2 Contact Discharge : Level 4 (8kV) Air Discharge : Level 4 (15kV) | A | Pass |
| 4 | | Radiated, radio-frequency, electromagnetic field immunity test | IEC61000-4-3 10V/m : (80MHz-1.0GHz) 3V/m : (1.4GHz-2.0GHz) 1V/m : (2.0GHz-2.7GHz) | A | Pass |
| 5 | | Electrical fast transient / Burst immunity test | IEC61000-4-4 Level 4 (4kV) Repetition Rate : 5kHz and 100kHz | A | Pass |
| 6 | | Surge immunity test | IEC61000-4-5 Line to Line : Level 4 (2kV) Line to Earth : Level 4 (4kV) | A | Pass |
| 7 | | Immunity to conducted disturbances, induced by radio-frequency fields | IEC61000-4-6 Voltage Level (e.m.f.) : Level 3 (10Vrms) | A | Pass |
| 8 | | Power frequency magnetic field Immunity test | IEC61000-4-8 Magnetic Field Strength : Level 4 (30A/m) | A | Pass |
| 9 | | Voltage dips, short interruptions and voltage variations immunity test | IEC61000-4-11 (1) 100% dip for 20ms (2) 60% dip for 200ms (3) 30% dip for 500ms (4) 100% dip for 5 seconds (short interruption) | A B A B | Pass Pass Pass Pass |

***1 Definition of Criteria**

Criteria A : (1) No output voltage drop with control circuit failure.
(2) No protection circuit and other circuit malfunction.

Criteria B : (1) The output voltage is temporary degradation of performance.
It recovers its normal performance without operator intervention.
(2) No protection circuit and other circuit failure.

<Notes>

Power supply shall not determine the final equipment performance against EMS test. Therefore we confirmed the output voltage performance only. EMS test should be performed as a final product.