



EMI/EMS Test Result

Model Name : TECS20F/TEPS20F

Approved : Tetsuro Hirata

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

Input Voltage : 230VAC / 50Hz

Output Current : Rated Current

Ambient Temperature : 25°C ± 10°C

Prepared : Yuta Haginaka

#	Subject	Reference standard	Test Condition	Criteria *1	Result
1	EMI	Conducted Emission	EN55011, EN55032 Class B CISPR11, CISPR32 Class B FCC Part15, FCC Part18 Class B VCCI Class B	-	Pass
2		Radiated Emission	EN55011, EN55032 Class B CISPR11, CISPR32 Class B FCC Part15, FCC Part18 Class B VCCI Class B	-	Pass
3		Harmonic Current	IEC61000-3-2 Class A	-	Pass
4	EMS	Electrostatic discharge immunity test	IEC61000-4-2 Contact Discharge : Level 4 (8kV) Air Discharge : Level 4 (15kV)	B	Pass
5		Radiated, radio-frequency, electromagnetic field immunity test	IEC61000-4-3 10V/m : (80MHz~1.0GHz) 3.0V/m : (1.4 ~ 2.0GHz) 1.0V/m : (2.0 ~ 2.7GHz) 80% Amplitude modulated	A	Pass
6		Electrical fast transient / Burst immunity test	IEC61000-4-4 Level 4 (4kV) Repetition Rate : 5kHz and 100kHz	A	Pass
7		Surge immunity test	IEC61000-4-5 Line to Line : Level 4 (2kV)	A	Pass
8		Immunity to conducted disturbances, induced by radio-frequency fields	IEC61000-4-6 Voltage Level (e.m.f.) : Level 3 (10Vrms)	A	Pass
9		Power frequency magnetic field Immunity test	IEC61000-4-8 Magnetic Field Strength : Level 4 (30A/m)	A	Pass
10		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 *2 B *3 A *3 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.

*2 Output current:60% or less of rated current.

*3 Output current:90% or less of rated current.

<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.