



Sep 13, 2019  
Cosel Co., Ltd.  
US Design Dept.

EMI/EMS Test Result

Model Name : LHA150F series

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

Approved : *Junya Kaneda*  
Junya Kaneda

Prepared : *Koki Miyazaki*  
Koki Miyazaki

#	Subject	Reference standard	Test Condition	Criteria *1	Result	
1	EMI		Conducted Emission	EN55011, EN55032 Class B CISPR 32 Class B FCC Part15 Class B VCCI Class B	-	Pass
			Radiated Emission	EN55011, EN55032 Class B CISPR 32 Class B FCC Part15 Class B VCCI Class B	-	Pass
			Harmonic Current	IEC61000-3-2 Class A	-	Pass
4	EMS	IEC61000-4-2	Electrostatic discharge immunity test	Contact Discharge : Level 4 (8kV) Air Discharge : Level 4 (15kV)	A	Pass
5			Radiated, radio-frequency, electromagnetic field immunity test	10V/m : (80MHz~1.0GHz) 3V/m : (1.4 ~ 2.0GHz) 1V/m : (2.0 ~ 2.7GHz) 80% Amplitude modulated	A	Pass
6			Electrical fast transient / Burst immunity test	Level 4 (4kV) Repetition Rate : 5kHz and 100kHz	A	Pass
7			Surge immunity test	Line to Line : Level 3 (2kV) Line to Earth : Level 4 (4kV)	A	Pass
8			Immunity to conducted disturbances, induced by radio-frequency fields	Voltage Level (e.m.f.) : Level 3 (10Vrms)	A	Pass
9			Power frequency magnetic field Immunity test	Magnetic Field Strength : Level 4 (30A/m)	A	Pass
10			Voltage dips, short interruptions and voltage variations immunity test	IEC61000-4-11	(1) >95% dip for 20ms	A
	(2) 60% dip for 200ms	B			Pass	
			(3) 30% dip for 500ms	A	Pass	
			(4) 95% dip for 5 seconds (short interruption)	B	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.