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SPECIFICATION

1. Standard atmospheric condition :

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows :

Ambient temperature: 15°C to 35°C

Relative humidity : 25% to 85%

Air pressure : 86kPa to 106kPa

If there is any doubt about the results, measurements shall be made within the following limits :

Ambient temperature: 20±1°C

Relative humidity : 63% to 67%

Air pressure : 86kPa to 106kPa

Operating temperature range: -30°C to 85°C

Storage temperature : -40°C to 90°C

Humidity range : 85% RH MAX.

2. Electrical characteristics

	Item	Condition	Specifications
1	Max current	FUSE HOLDER	DC24V40A
2	Rated voltage/	FUSE HOLDER	DC24V28A
	Rated current	SCREW TERMINAL (M4)	DC24V40A
3	Dielectric strength	Between conductors which should not make contact under normal conditions. 2000V AC (50 to 60Hz) for 1 minute. (Trip current : 3mA)	Without distinct damage.

ISSUE	DATE	WRN	CHKD	APVD	DESCRIPTIONS
	2003.09.26	TARRY	JOHNSON	KUNG	
△x2	2003.11.18	TARRY	JOHNSON	KUNG	Modify SPEC
△x2	2008.04.22	PATRICK	JOHNSON	DICK	Modify the item 4.1 and 4.6

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	Item	Condition		Specifications		
4	Insulation resistance	A voltage of 500 V DC shall be applied for a minute. Between conductors which should not make contact under normal conditions after which measurement shall be made.		500M Ω MIN.		
5	Contact resistance (with fuse holder)	Measurement shall be made at 1000Hz with small current (100mA MAX) Between a fuse and a contact.		After actuates it several times. 10m Ω MAX		
3. Mechanical characteristics						
	Item	Condition		Specifications		
1	Operating force	First to use fuse with 10 times of insertion & pull out, then, testing with fuse.				
		Fuse holder	Insertion force		98N (10kgf) MAX.	
			Withdrawal force		39.2N~98N (4.0~10.0kgf)	
2	Fuse holder strength	(a) A contact should not come out or damaged when a fuse is inserted with 117.6N (12kg) .		Without excessive looseness to the terminal.		
		(b) Each contact should withstand 58.8N (6kg) force.				
3	Screw terminal strength	Pulling terminal at 49N (5kg) for 10 sec toward worst direction.		Electrical and mechanical Characteristics shall be satisfied.		
4	Housing bear testing	To use ϕ 3 \times 10 to screw tight on housing, then, Use 147N(15kg) to push(or pulling) chassis toward screw direction for 5 seconds.				
5	Strength of tapping part	(a) Testing for mounting hardware side : To screw tight ϕ 3 \times 10 tapping screw type p with 63.7 \pm 4.9N-cm (6.5 \pm 0.5kgf-cm) , through 1.0 mm thickness board.				No lose screw or damage on housing
		(b) Testing for mounting P.C.B side : To screw tight ϕ 3 \times 10 tapping screw type p with 63.7 \pm 4.9N-cm (6.5 \pm 0.5kgf-cm) , through 1.6 mm thickness P.C.B.				

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Item	Condition	Specifications	
6 Screw terminal torque test	To screw tight M4 screw with 98N-cm (10kgf-cm)	Without excessive looseness to the terminal. Electrical and mechanical characteristics shall be satisfied. Screw must tightened and loosened smoothly or looseness and tightness torque value.	
7 M4 SCREW Hardening Treatment	M4 SCREW Hardness Procedure : Degrease Treatment → Carbonization Treatment → Heat Treatment Carbonization Treatment Conditions : 1.5Hrs 90°C Heat Treatment Conditions : 2 Hrs 180°C~200°C	Hardenability Standards: JIS B 0205 & JIS B 0209	
4. Endurance characteristics			
Item	Condition	Specifications	
1 △ Solderability	Temperature of solder : 250°C ±5°C Time of dip : 3 ±0.5 seconds Length of dip : 2 ±0.5mm (from top of terminal)	The soldered area shall be covered a minimum of 90% of the surface being immersed.	
2 Dry heat	The jack shall be stored at a temperature of 90±2°C for 96 hours. Then the jack shall be maintained at standard atmospheric conditions for 30 minute after which measurement shall be made within 1 hour.	Dimensional requirements shall be satisfied.	
3 Cold	The jack shall be stored at a temperature of -40±2°C for 96 hours. Then the jack shall be maintained at standard atmospheric conditions for 30 minute after which measurement shall be made within 1 hour.	Electrical and mechanical characteristics shall be satisfied.	
4 Damp heat	The jack shall be stored at a temperature of 40±2°C and a humidity of 90% to 95% for 96 hours. Then the jack shall be maintained at standard atmospheric conditions for 30 minutes after which measurement shall be made within 1 hour.	Electrical and mechanical characteristics shall be satisfied, and not show visible damage.	
5 Fuse holder dry heat	To inset 40A fuse into fuse holder, testing with 85°C for 6 hours, with 40A load.	No remarkable damage on chassis.	

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Item	Condition	Specifications		
6	Wave soldering Process	Electrical and mechanical characteristics shall be satisfied, and not show remarkable failure.		
	Profile Feature		Pb-Free Assembly	
			Topside PCB	Padside PCB
	Preheat -Temperature min -Temperature max -Time (ts min to max)		120°C (Ts1 max)	110°C (Ts min) 150°C (Ts max) 75 sec
	Peak/Classification Temperature		165°C (Tp1)	260°C ±5°C (Tp)
	Time within 5°C of actual Temperature (tp)			10 sec (within 2 times every time 2-3 sec)
	Time 25°C to Peak temperature			3 minutes max
△ Resistance to Soldering Heat Test	Wave Soldering Temperature Profile are as below			
	<p>Temperature</p> <p>Time</p> <p>----- Topside PCB</p> <p>———— Padside PCB</p>			
	Soldering Iron Test Temperature of soldering Iron : 380±10°C Soldering time : 3±1 seconds	Same as Wave soldering Process		

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Item	Condition	Specifications													
7 Vibration	15 thru 150 HZ (gradually) , Amplitude 2mm MAX, Acceleration 3G, one cycle 6 minutes, 2 hours, 3 directions (X,Y,Z)	Without excessive looseness to the terminal. Electrical and mechanical characteristics shall be satisfied.													
8 Composite temperature / humidity cyclic test	The jack shall be subjected to 200 continuous cycles. Then jack shall be stored at standard atmospheric conditions for 24 hours for recovery, after which measurement shall be made. Temperature shall be changed as below chart.	Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.													
	<table border="1"> <caption>Temperature Cycle Data</caption> <thead> <tr> <th>Time (min.)</th> <th>Temperature (°C)</th> </tr> </thead> <tbody> <tr><td>0</td><td>20</td></tr> <tr><td>60</td><td>-35</td></tr> <tr><td>120</td><td>-35</td></tr> <tr><td>160</td><td>85</td></tr> <tr><td>240</td><td>85</td></tr> <tr><td>300</td><td>25</td></tr> </tbody> </table>		Time (min.)	Temperature (°C)	0	20	60	-35	120	-35	160	85	240	85	300
Time (min.)	Temperature (°C)														
0	20														
60	-35														
120	-35														
160	85														
240	85														
300	25														

5. Environmental item

5.1. The following chemical material should not be contained. △

Chemical material :

- (1) CFC
- (2) trichloroethylene
- (3) Mercury and its compounds
- (4) Cadmium
- (5) chromium VI compounds
- (6) arsenic and its inorganic compounds
- (7) chloroform
- (8) polychlorinated biphenyls :PCBs
- (9) lead
- (10) PBB
- (11) PBDE

5.2. After surface treatment, the terminal couldn't include Bi component. △