



ABNORMAL TEST RESULT

OF MODEL MHFW648□□

1. Did Cheese Cloth or Paper Glow?

No.

2. Did Ground Fuse Open?

No.

3. Dielectric breakdown?

No.

4. Other Results?

See the following pages .

(FMEA : 2/11 ~ 10/11)

(Abnormal Test Result: 11/11 ~ 11/11)

There was no emission of flame, molten metal, ignition of cheesecloth, dielectric breakdown, opening of the ground fuse, other indication of a shock or fire hazard.

F M E A

Component	Mode	Comment	Output Voltage (V)
C11	Open	Normal operation.	
	Short	See page 11.	
C12	Open	No Hazard.	AVR1:0 AVR2:0
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C13	Open	Normal operation.	
	Short	No Hazard.	AVR1:0 AVR2:0
C14	Open	Normal operation.	
	Short	Normal operation.	
C21	Open	Normal operation.	
	Short	No Hazard.	AVR1:0 AVR2:0
C22	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C31	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C32	Open	Normal operation.	
	Short	No Hazard.	AVR1:0 AVR2:0
C33	Open	Output voltage decreased. No Hazard.	AVR1:decreased
	Short	No Hazard.	AVR1:0 AVR2:0
C34	Open	Normal operation.	
	Short	Normal operation.	
C51	Open	Normal operation.	
	Short	See page 11.	
C52	Open	Normal operation.	
	Short	See page 11.	

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Component	Mode	Comment	Output Voltage (V)
C71	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
	Short	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
C72	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
	Short	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
C73	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
	Short	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
C101	Open	Normal operation.	
	Short	See page 11.	
C102	Open	Normal operation.	
	Short	See page 11.	
C103	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C111	Open	Normal operation.	
	Short	Normal operation.	
C112	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C201	Open	Normal operation.	
	Short	See page 11.	
C202	Open	Normal operation.	
	Short	See page 11.	
C203	Open	Normal operation.	
	Short	See page 11.	
C204	Open	Normal operation.	
	Short	See page 11.	

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Component	Mode	Comment	Output Voltage (V)
C211	Open	Normal operation.	
	Short	See page 11.	
C212	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
C213	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
CN101	Open	External Fuse opened, No hazard.	AVR1:0 AVR2:0
CN102	Open	No Hazard.	AVR1:0 AVR2:0
CN103	Open	No Hazard.	AVR1:0 AVR2:0
CN104	Open	No Hazard.	AVR1:0 AVR2:0
CN105	Open	No Hazard.	AVR1:0 AVR2:0
CN106	Open	No Hazard.	AVR1:0 AVR2:0
CN107	Open	No Hazard.	AVR1:0 AVR2:0
D11	Open	Normal operation.	
	Short	Normal operation.	
D21	Open	See page 11.	
	Short	No Hazard.	AVR1:0 AVR2:0
D22	Open	Normal operation.	
	Short	Normal operation.	
D31	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
D201	Open	No Hazard.	AVR1:0 AVR2:0
	Short	External Fuse opened, No hazard.	AVR1:0 AVR2:0
D202	Open	No Hazard.	AVR1:0 AVR2:0

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Component	Mode		Comment	Output Voltage (V)
D202	Short		External Fuse opened, No hazard.	AVR1:0 AVR2:0
IC11	Open	1	No Hazard.	AVR1:0 AVR2:0
		2	See page 11.	
		3	No Hazard.	AVR1:0 AVR2:0
		4	Normal operation.	
		5	No Hazard.	AVR1:0 AVR2:0
		6	No Hazard.	AVR1:0 AVR2:0
		7	External Fuse opened, No hazard.	AVR1:0 AVR2:0
		8	No Hazard.	AVR1:0 AVR2:0
	Short	1-2	External Fuse opened, No hazard.	AVR1:0 AVR2:0
		2-3	Normal operation.	
		3-4	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
		5-6	No Hazard.	AVR1:0 AVR2:0
		6-7	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
		7-8	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
IC12	Open	1	External Fuse opened, No hazard.	AVR1:0 AVR2:0
		2	Normal operation.	
		3	External Fuse opened, No hazard.	AVR1:0 AVR2:0
		4	Normal operation.	
		5	See page 11.	
		6	No Hazard.	AVR1:0 AVR2:0
	Short	1-2	No Hazard.	AVR1:0 AVR2:0
		2-3	No Hazard.	AVR1:0 AVR2:0
		4-5	External Fuse opened, No hazard.	AVR1:0 AVR2:0



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Component	Mode		Comment	Output Voltage (V)
IC12	Short	5-6	No Hazard.	AVR1:0 AVR2:0
IC71	Open	1	No Hazard.	AVR1:0 AVR2:0
		3	No Hazard.	AVR1:0 AVR2:0
		6	No Hazard.	AVR1:0 AVR2:0
L101	Open		No Hazard.	AVR1:0 AVR2:0
	Short		Normal operation.	
L201	Open		No Hazard.	AVR1:0 AVR2:0
	Short		Normal operation.	
L202	Open		No Hazard.	AVR1:0 AVR2:0
	Short		Normal operation.	
PC11	Open	A, K	No Hazard.	AVR1:0 AVR2:0
		C, E	No Hazard.	AVR1:0 AVR2:0
	Short	A-K	No Hazard.	AVR1:0 AVR2:0
		C-E	No Hazard.	AVR1:0 AVR2:0
PTH31	Open		No Hazard.	AVR1:0 AVR2:0
	Short		Normal operation.	
R11	Open		No Hazard.	AVR1:0 AVR2:0
R12	Open		No Hazard.	AVR1:0 AVR2:0
R13	Open		Normal operation.	
R14	Open		External Fuse opened, No hazard.	AVR1:0 AVR2:0
R15	Open		External Fuse opened, No hazard.	AVR1:0 AVR2:0
R16	Open		External Fuse opened, No hazard.	AVR1:0 AVR2:0
R17	Open		Normal operation.	
R18	Open		No Hazard.	AVR1:0 AVR2:0

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Component	Mode	Comment	Output Voltage (V)
R21	Open	Normal operation.	
R22	Open	Normal operation.	
R23	Open	Normal operation.	
R24	Open	Normal operation.	
R25	Open	Normal operation.	
R26	Open	Normal operation.	
R27	Open	Normal operation.	
R28	Open	No Hazard.	AVR1:0 AVR2:0
R31	Open	External Fuse opened, No hazard.	AVR1:0 AVR2:0
R33	Open	Normal operation.	
R41	Open	Normal operation.	
R42	Open	No Hazard.	AVR1:0 AVR2:0
R71	Open	No Hazard.	AVR1:0 AVR2:0
R72	Open	No Hazard.	AVR1:0 AVR2:0
R73	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R74	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R75	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R76	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R77	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R82	Open	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
R101	Open	Normal operation.	
R111	Open	External Fuse opened, No hazard.	AVR1:0 AVR2:0
R112	Open	Normal operation.	
R113	Open	Normal operation.	

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Component	Mode		Comment	Output Voltage (V)
R114	Open		Normal operation.	
SS41	Open	1	No Hazard.	AVR1:0 AVR2:0
		2	Normal operation.	
		3	No Hazard.	AVR1:0 AVR2:0
	Short	1-2	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
		2-3	Normal operation.	
		3-1	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
TR12	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No Hazard.	AVR1:0 AVR2:0
		E-B	Normal operation.	
		B-C	No Hazard.	AVR1:0 AVR2:0
TR13	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No Hazard.	AVR1:0 AVR2:0
		E-B	Normal operation.	
		B-C	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
TR14	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No Hazard.	AVR1:0 AVR2:0
		E-B	Normal operation.	

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Component	Mode		Comment	Output Voltage (V)
TR14	Short	B-C	No Hazard.	AVR1:0 AVR2:0
TR21	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No Hazard.	AVR1:0 AVR2:0
		E-B	Normal operation.	
		B-C	Normal operation.	
TR101	Open	D	See page 11.	
		S	See page 11.	
		G	See page 11.	
	Short	D-S	See page 11.	
		S-G	See page 11.	
		G-D	See page 11.	
TR111	Open	D	Normal operation.	
		S	Normal operation.	
		G	External Fuse opened, No hazard.	AVR1:0 AVR2:0
	Short	D-S	External Fuse opened, No hazard.	AVR1:0 AVR2:0
		S-G	Normal operation.	
		G-D	External Fuse opened, No hazard.	AVR1:0 AVR2:0
ZD11	Open		Normal operation.	
	Short		Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
ZD21	Open		External Fuse opened, No hazard.	AVR1:0 AVR2:0
	Short		No Hazard.	AVR1:0 AVR2:0
ZD23	Open		Normal operation.	



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Component	Mode	Comment	Output Voltage (V)
ZD23	Short	Normal operation.	
ZD24	Open	Normal operation.	
	Short	No Hazard.	AVR1:0 AVR2:0
ZD71	Open	Normal operation.	
	Short	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased
ZD72	Open	Normal operation.	
	Short	Output voltage decreased. No Hazard.	AVR1:decreased AVR2:decreased



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)	
C11	Short		External Fuse opened, No hazard.	AVR1:0	AVR2:0
C51	Short		No Hazard.	AVR1:0	AVR2:0
C52	Short		No Hazard.	AVR1:0	AVR2:0
C101	Short		External Fuse opened, No hazard.	AVR1:0	AVR2:0
C102	Short		External Fuse opened, No hazard.	AVR1:0	AVR2:0
C201	Short		No Hazard.	AVR1:0	AVR2:0
C202	Short		No Hazard.	AVR1:0	AVR2:0
C203	Short		No Hazard.	AVR1:0	AVR2:0
C204	Short		No Hazard.	AVR1:0	AVR2:0
C211	Short		No Hazard.	AVR1:0	AVR2:0
D21	Open		Normal operation.		
IC11	Open	2	No Hazard.	AVR1:0	AVR2:0
IC12	Open	5	No Hazard.	AVR1:0	AVR2:0
TR101	Open	D	No Hazard.	AVR1:0	AVR2:0
		S	No Hazard.	AVR1:0	AVR2:0
		G	External Fuse opened, No hazard.	AVR1:0	AVR2:0
	Short	D-S	External Fuse opened, No hazard.	AVR1:0	AVR2:0
		S-G	No Hazard.	AVR1:0	AVR2:0
		G-D	External Fuse opened, No hazard.	AVR1:0	AVR2:0