

## ABNORMAL TEST RESULT

OF MODEL KHNA240F-24

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 : 2/38 ~ 36/38)

( Abnormal Test Result: 37/38 ~ 38/38)

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)
C101	Open	Normal operation.	AVR1:*
	Short	See 37 Page.	
C102	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0
C103	Open	See 37 Page.	
	Short	F101 opened, No hazard.	AVR1:0
C109	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0
C110	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0
C112	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C113	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C151	Open	Normal operation.	AVR1:*
	Short	R305 opened, No Hazard.	AVR1:0
C152	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C153	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C155	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C171	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C172	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0
C173	Open	Normal operation.	AVR1:*
	Short	F101 opened, No hazard.	AVR1:0
C174	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C175	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C176	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C177	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C201	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C203	Open	Output voltage decreased.	AVR1:decreased
	Short	Normal operation.	AVR1:*
C204	Open	Output voltage decreased.	AVR1:decreased
	Short	Normal operation.	AVR1:*
C207	Open	Normal operation.	AVR1:*
	Short	Output voltage decreased.	AVR1:decreased
C208	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C209	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*



F M E A

Component	Mode	Comment	Output Voltage (V)
C210	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C211	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C212	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C213	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C214	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C215	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C230	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C301	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C304	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C305	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C306	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C307	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**



F M E A

Component	Mode	Comment	Output Voltage (V)
C308	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C309	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C320	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C321	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C323	Open	See 37 Page.	
	Short	R305 opened, No Hazard.	AVR1:0
C324	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C325	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C326	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C401	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C402	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C410	Open	Normal operation.	AVR1:*
	Short	R305 opened, No Hazard.	AVR1:0
C411	Open	Normal operation.	AVR1:*
	Short	See 37 Page.	



F M E A

Component	Mode	Comment	Output Voltage (V)
C413	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C414	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C415	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C418	Open	Normal operation.	AVR1:**
	Short	R305 opened, No hazard.	AVR1:0
C419	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C430	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C440	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C450	Open	No Hazard.	AVR1:0
	Short	See 37 Page.	
C451	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C452	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C453	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C454	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**

F M E A

Component	Mode	Comment	Output Voltage (V)
C455	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C456	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C457	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C458	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C501	Open	Normal operation.	AVR1:*
	Short	Output voltage decreased.	AVR1:decreased
C502	Open	Normal operation.	AVR1:*
	Short	Output voltage decreased.	AVR1:decreased
C503	Open	Normal operation.	AVR1:*
	Short	Output voltage decreased.	AVR1:decreased
C506	Open	Normal operation.	AVR1:*
	Short	Output voltage decreased.	AVR1:decreased
C530	Open	Normal operation.	AVR1:*
	Short	R305 opened, No Hazard.	AVR1:0
C533	Open	Normal operation.	AVR1:*
	Short	R305 opened, No Hazard.	AVR1:0
C541	Open	Normal operation.	AVR1:*
	Short	See 37 Page.	
C542	Open	Normal operation.	AVR1:*
	Short	See 37 Page.	

## F M E A

Component	Mode	Comment	Output Voltage (V)
C544	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C545	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C546	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C547	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C548	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C549	Open	Normal operation.	AVR1:**
	Short	R305 opened, No Hazard.	AVR1:0
C552	Open	Output voltage decreased.	AVR1:decreased
	Short	Output voltage decreased.	AVR1:decreased
C556	Open	Normal operation.	AVR1:**
	Short	Output voltage decreased.	AVR1:decreased
C558	Open	Normal operation.	AVR1:**
	Short	Output voltage decreased.	AVR1:decreased
C601	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C602	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C603	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0



## F M E A

Component	Mode	Comment	Output Voltage (V)
C604	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C621	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C622	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C623	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D102	Short	Normal operation.	AVR1:**
D103	Open	Output voltage decreased.	AVR1:decreased
	Short	Normal operation.	AVR1:**
D104	Open	Output voltage decreased.	AVR1:decreased
	Short	Normal operation.	AVR1:**
D105	Open	Output voltage decreased.	AVR1:decreased
	Short	Normal operation.	AVR1:**
D152	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D171	Open	F101 opened, No hazard.	AVR1:0
	Short	Normal operation.	AVR1:**
D205	Open	Normal operation.	AVR1:**
	Short	Output voltage decreased.	AVR1:decreased
D301	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D320	Open	F101 opened, No hazard.	AVR1:0



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Component	Mode	Comment	Output Voltage (V)
D320	Short	F101 opened, No hazard.	AVR1:0
D321	Open	No Hazard.	AVR1:0
	Short	See 37 Page.	
D322	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D401	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D402	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D430	Open	Normal operation.	AVR1:**
	Short	See 37 Page.	
D431	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
D441	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
D451	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D452	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D453	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D454	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
D455	Open	Normal operation.	AVR1:**



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Component	Mode	Comment	Output Voltage (V)	
D455	Short	Normal operation.	AVR1:**	
D530	Open	Output voltage decreased.	AVR1:decreased	
	Short	See 37 Page.		
D551	Open	Normal operation.	AVR1:**	
	Short	Normal operation.	AVR1:**	
D552	Open	Normal operation.	AVR1:**	
	Short	Normal operation.	AVR1:**	
D553	Open	Normal operation.	AVR1:**	
	Short	Output voltage decreased.	AVR1:decreased	
IC101	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	Output voltage decreased.	AVR1:decreased
		4	Normal operation.	AVR1:**
		5	Normal operation.	AVR1:**
		6	Normal operation.	AVR1:**
		7	Normal operation.	AVR1:**
		8	Normal operation.	AVR1:**
		9	Normal operation.	AVR1:**
		10	Normal operation.	AVR1:**
		11	Normal operation.	AVR1:**
		12	No Hazard.	AVR1:0
		13	No Hazard.	AVR1:0
		14	Normal operation.	AVR1:**
		15	Normal operation.	AVR1:**

F M E A

Component	Mode		Comment	Output Voltage (V)
IC101	Open	16	Normal operation.	AVR1:*
		17	No Hazard.	AVR1:0
		18	Normal operation.	AVR1:*
		19	No Hazard.	AVR1:0
		20	Normal operation.	AVR1:*
		21	Normal operation.	AVR1:*
		22	F101 opened, No hazard.	AVR1:0
		23	Normal operation.	AVR1:*
		24	No Hazard.	AVR1:0
		25	Normal operation.	AVR1:*
		26	No Hazard.	AVR1:0
		27	Normal operation.	AVR1:*
		28	Normal operation.	AVR1:*
		29	Normal operation.	AVR1:*
		30	No Hazard.	AVR1:0
	Short	1-2	No Hazard.	AVR1:0
		2-3	No Hazard.	AVR1:0
		3-4	Normal operation.	AVR1:*
		4-5	Normal operation.	AVR1:*
		5-6	Normal operation.	AVR1:*
		6-7	Normal operation.	AVR1:*
		7-8	Normal operation.	AVR1:*
		8-9	Normal operation.	AVR1:*
		9-10	Normal operation.	AVR1:*



F M E A

Component	Mode	Comment	Output Voltage (V)	
IC101	Short	10-11	Normal operation.	AVR1:*
		11-12	R305 opened, No Hazard.	AVR1:0
		12-13	Normal operation.	AVR1:*
		13-14	Normal operation.	AVR1:*
		14-15	No Hazard.	AVR1:0
		16-17	See 37 Page.	
		17-18	Normal operation.	AVR1:*
		18-19	Normal operation.	AVR1:*
		19-20	No Hazard.	AVR1:0
		20-21	No Hazard.	AVR1:0
		21-22	Normal operation.	AVR1:*
		22-23	Normal operation.	AVR1:*
		23-24	No Hazard.	AVR1:0
		24-25	No Hazard.	AVR1:0
		25-26	Normal operation.	AVR1:*
		26-27	See 37 Page.	
		27-28	R305 opened, No Hazard.	AVR1:0
		28-29	Normal operation.	AVR1:*
29-30	Normal operation.	AVR1:*		
IC152	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC152	Short	1-2	Normal operation.	AVR1:**
		2-3	No Hazard.	AVR1:0
		4-5	No Hazard.	AVR1:0
IC301	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	R305 opened, No Hazard.	AVR1:0
		4	R305 opened, No Hazard.	AVR1:0
		5	R305 opened, No Hazard.	AVR1:0
	Short	1-2	Normal operation.	AVR1:**
		2-3	No Hazard.	AVR1:0
		4-5	R305 opened, No Hazard.	AVR1:0
IC302	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	Normal operation.	AVR1:**
		4	Normal operation.	AVR1:**
		5	Normal operation.	AVR1:**
	Short	1-2	Normal operation.	AVR1:**
		2-3	No Hazard.	AVR1:0
		4-5	No Hazard.	AVR1:0
IC401	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	Normal operation.	AVR1:**



F M E A

Component	Mode	Comment	Output Voltage (V)		
IC401	Open	6	Normal operation.	AVR1:*	
		7	No Hazard.	AVR1:0	
		8	Normal operation.	AVR1:*	
		9	Normal operation.	AVR1:*	
		10	Normal operation.	AVR1:*	
		11	No Hazard.	AVR1:0	
		12	No Hazard.	AVR1:0	
		13	Normal operation.	AVR1:*	
		14	No Hazard.	AVR1:0	
		15	No Hazard.	AVR1:0	
		16	Normal operation.	AVR1:*	
		Short	1-2	See 37 Page.	
			2-3	See 37 Page.	
			3-4	No Hazard.	AVR1:0
			4-5	Normal operation.	AVR1:*
			5-6	No Hazard.	AVR1:0
	6-7		No Hazard.	AVR1:0	
	7-8		No Hazard.	AVR1:0	
	9-10		Normal operation.	AVR1:*	
	10-11		No Hazard.	AVR1:0	
	11-12		F101 opened, No hazard.	AVR1:0	
	12-13		Normal operation.	AVR1:*	
	13-14		Normal operation.	AVR1:*	
	14-15	No Hazard.	AVR1:0		

F M E A

Component	Mode		Comment	Output Voltage (V)
IC401	Short	15-16	F101 opened, No hazard.	AVR1:0
IC501	Open	1	Normal operation.	AVR1:**
		2	See 37 Page.	
		3	See 37 Page.	
		4	No Hazard.	AVR1:**
		5	No Hazard.	AVR1:**
		6	No Hazard.	AVR1:**
		7	No Hazard.	AVR1:**
		8	No Hazard.	AVR1:**
	Short	1-2	Normal operation.	AVR1:**
		2-3	See 37 Page.	
		3-4	Normal operation.	AVR1:**
		5-6	No Hazard.	AVR1:**
		6-7	No Hazard.	AVR1:**
		7-8	See 37 Page.	
IC502	Open	1	Normal operation.	AVR1:**
		2	Output voltage decreased.	AVR1:decreased
		3	Output voltage decreased.	AVR1:decreased
		4	No Hazard.	AVR1:**
		5	No Hazard.	AVR1:**
		6	No Hazard.	AVR1:**
		7	No Hazard.	AVR1:**
		8	No Hazard.	AVR1:**
	Short	1-2	Normal operation.	AVR1:**





F M E A

Component	Mode		Comment	Output Voltage (V)
IC502	Short	2-3	No Hazard.	AVR1:*
		3-4	Normal operation.	AVR1:*
		5-6	No Hazard.	AVR1:*
		6-7	No Hazard.	AVR1:*
		7-8	Output voltage decreased.	AVR1:decreased
IC503	Open	1	Normal operation.	AVR1:*
		2	Normal operation.	AVR1:*
		3	Output voltage decreased.	AVR1:decreased
		4	Output voltage decreased.	AVR1:decreased
		5	Output voltage decreased.	AVR1:decreased
	Short	1-2	Normal operation.	AVR1:*
		2-3	Output voltage decreased.	AVR1:decreased
		4-5	Output voltage decreased.	AVR1:decreased
	IC601	Open	1	Normal operation.
2			Normal operation.	AVR1:*
3			Normal operation.	AVR1:*
4			Normal operation.	AVR1:*
5			Normal operation.	AVR1:*
Short		1-2	Normal operation.	AVR1:*
		2-3	Output voltage decreased.	AVR1:decreased
		4-5	Normal operation.	AVR1:*
L101	Open	No Hazard.	AVR1:0	
	Short	Normal operation.	AVR1:*	
L102	Open	No Hazard.	AVR1:0	



F M E A

Component	Mode		Comment	Output Voltage (V)
L102	Short		Normal operation.	AVR1:*
L104	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
L105	Open		No Hazard.	AVR1:0
	Short		F101 opened, No hazard.	AVR1:0
L501	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
LED601	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
LED602	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
PC171	Open	A, K	F101 opened, No hazard.	AVR1:0
		C, E	F101 opened, No hazard.	AVR1:0
	Short	A-K	F101 opened, No hazard.	AVR1:0
		C-E	Normal operation.	AVR1:*
PC401	Open	A, K	Output voltage decreased.	AVR1:decreased
		C, E	Output voltage decreased.	AVR1:decreased
	Short	A-K	Output voltage decreased.	AVR1:decreased
		C-E	Output voltage decreased.	AVR1:decreased
PC402	Open	A, K	Normal operation.	AVR1:*
		C, E	Normal operation.	AVR1:*
	Short	A-K	Normal operation.	AVR1:*
		C-E	No Hazard.	AVR1:0
PC601	Open	A, K	Normal operation.	AVR1:*



F M E A

Component	Mode		Comment	Output Voltage (V)
PC601	Open	C, E	Normal operation.	AVR1:*
	Short	A-K	Normal operation.	AVR1:*
		C-E	Normal operation.	AVR1:*
PC701	Open	A, K	Normal operation.	AVR1:*
		C, E	Normal operation.	AVR1:*
	Short	A-K	Normal operation.	AVR1:*
		C-E	Normal operation.	AVR1:*
PTH201	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
PTH601	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
SCR101	Open	T1	R170 opened, No hazard.	AVR1:0
		T2	R170 opened, No hazard.	AVR1:0
		G	R170 opened, No hazard.	AVR1:0
	Short	T1-T2	Normal operation.	AVR1:*
		T1-G	Normal operation.	AVR1:*
		T2-G	No Hazard.	AVR1:0
SK101	Open		Normal operation.	AVR1:*
	Short		F101 opened, No hazard.	AVR1:0
SS101	Open		Output voltage decreased.	AVR1:decreased
	Short		F101 opened, No hazard.	AVR1:0
SS102	Open		F101 opened, No hazard.	AVR1:0
	Short		F101 opened, No hazard.	AVR1:0
T301	Open	2	Output voltage decreased.	AVR1:decreased



F M E A

Component	Mode		Comment	Output Voltage (V)
T301	Open	3	Output voltage decreased.	AVR1:decreased
		5	Normal operation.	AVR1:**
		7	Normal operation.	AVR1:**
		8	Normal operation.	AVR1:**
		9	Normal operation.	AVR1:**
	Short	2-3	R305 opened, No Hazard.	AVR1:0
		5-7	F101 opened, No hazard.	AVR1:0
		8-9	R305 opened, No Hazard.	AVR1:0
	T401	Open	1	Normal operation.
2			Normal operation.	AVR1:**
3			No Hazard.	AVR1:0
4			No Hazard.	AVR1:0
5			See 37 Page.	
6			No Hazard.	AVR1:**
7			No Hazard.	AVR1:**
8			No Hazard.	AVR1:**
Short		1-2	F101 opened, No hazard.	AVR1:0
		2-3	F101 opened, No hazard.	AVR1:0
		3-4	F101 opened, No hazard.	AVR1:0
		5-6	F101 opened, No hazard.	AVR1:0
		6-7	F101 opened, No hazard.	AVR1:0
		7-8	F101 opened, No hazard.	AVR1:0
TR101	Open	D	See 37 Page.	
		S	See 37 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR101	Open	G	See 37 Page.	
	Short	D-S	See 37 Page.	
		S-G	See 38 Page.	
		G-D	See 38 Page.	
TR151	Open	D(3)	No Hazard.	AVR1:0
		S(4)	No Hazard.	AVR1:0
		G(5)	No Hazard.	AVR1:0
	Short	D-S(3-4)	No Hazard.	AVR1:0
		S-G(4-5)	No Hazard.	AVR1:0
		G-D(5-3)	No Hazard.	AVR1:0
	Open	D(6)	F101 opened, No hazard.	AVR1:0
		S(1)	F101 opened, No hazard.	AVR1:0
		G(2)	F101 opened, No hazard.	AVR1:0
	Short	D-S(6-1)	No Hazard.	AVR1:0
		S-G(1-2)	F101 opened, No hazard.	AVR1:0
		G-D(2-6)	No Hazard.	AVR1:0
	TR171	Open	D	F101 opened, No hazard.
S			F101 opened, No hazard.	AVR1:0
G			F101 opened, No hazard.	AVR1:0
Short		D-S	Normal operation.	AVR1:**
		S-G	Normal operation.	AVR1:**
		G-D	Normal operation.	AVR1:**
TR172	Open	C	F101 opened, No hazard.	AVR1:0
		E	F101 opened, No hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
TR172	Open	B	F101 opened, No hazard.	AVR1:0
	Short	C-E	Normal operation.	AVR1:*
		E-B	Normal operation.	AVR1:*
		B-C	Normal operation.	AVR1:*
TR201	Open	C	Output voltage decreased.	AVR1:decreased
		E	Output voltage decreased.	AVR1:decreased
		B	Output voltage decreased.	AVR1:decreased
	Short	C-E	Output voltage decreased.	AVR1:decreased
		E-B	Output voltage decreased.	AVR1:decreased
		B-C	Output voltage decreased.	AVR1:decreased
TR301	Open	D	Normal operation.	AVR1:*
		S	Normal operation.	AVR1:*
		G	Normal operation.	AVR1:*
	Short	D-S	R305 opened, No Hazard.	AVR1:0
		S-G	Normal operation.	AVR1:*
		G-D	R305 opened, No Hazard.	AVR1:0
TR302	Open	C	No hazard.	AVR1:0
		E	No hazard.	AVR1:0
		B	No hazard.	AVR1:0
	Short	C-E	No hazard.	AVR1:0
		E-B	No hazard.	AVR1:0
		B-C	No hazard.	AVR1:0
TR303	Open	C	Normal operation.	AVR1:*
		E	Normal operation.	AVR1:*

F M E A

Component	Mode		Comment	Output Voltage (V)
TR303	Open	B	Normal operation.	AVR1:*
	Short	C-E	No hazard.	AVR1:0
		E-B	Normal operation.	AVR1:*
		B-C	No hazard.	AVR1:0
TR304	Open	C	Normal operation.	AVR1:*
		E	Normal operation.	AVR1:*
		B	Normal operation.	AVR1:*
	Short	C-E	No hazard.	AVR1:0
		E-B	Normal operation.	AVR1:*
		B-C	No hazard.	AVR1:0
TR320	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	No Hazard.	AVR1:0
	Short	D-S	F101 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	F101 opened, No hazard.	AVR1:0
TR321	Open	D(3)	No Hazard.	AVR1:0
		S(4)	No Hazard.	AVR1:0
		G(5)	No Hazard.	AVR1:0
	Short	D-S(3-4)	No Hazard.	AVR1:0
		S-G(4-5)	No Hazard.	AVR1:0
		G-D(5-3)	No Hazard.	AVR1:0
	Open	D(6)	F101 opened, No hazard.	AVR1:0
S(1)		F101 opened, No hazard.	AVR1:0	



F M E A

Component	Mode		Comment	Output Voltage (V)
TR321	Open	G(2)	F101 opened, No hazard.	AVR1:0
	Short	D-S(6-1)	No Hazard.	AVR1:0
		S-G(1-2)	F101 opened, No hazard.	AVR1:0
		G-D(2-6)	No Hazard.	AVR1:0
TR401	Open	D	See 38 Page.	
		S	See 38 Page.	
		G	See 38 Page.	
	Short	D-S	See 38 Page.	
		S-G	See 38 Page.	
		G-D	See 38 Page.	
TR402	Open	D	See 38 Page.	
		S	See 38 Page.	
		G	See 38 Page.	
	Short	D-S	See 38 Page.	
		S-G	See 38 Page.	
		G-D	See 38 Page.	
TR403	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	No Hazard.	AVR1:0
		E-B	Normal operation.	AVR1:**
		B-C	No Hazard.	AVR1:0
TR430	Open	C(5)	F101 opened, No hazard.	AVR1:0
		E(2)	No Hazard.	AVR1:0





F M E A

Component	Mode		Comment	Output Voltage (V)
TR430	Open	B(1)	F101 opened, No hazard.	AVR1:0
		C(4)	No Hazard.	AVR1:0
		B(3)	No Hazard.	AVR1:0
	Short	B(1)-E(2)	See 38 Page.	
		E(2)-B(3)	F101 opened, No hazard.	AVR1:0
		C(4)-C(5)	R305 opened, No Hazard.	AVR1:0
TR440	Open	C(5)	F101 opened, No hazard.	AVR1:0
		E(2)	No Hazard.	AVR1:0
		B(1)	F101 opened, No hazard.	AVR1:0
		C(4)	No Hazard.	AVR1:0
		B(3)	No Hazard.	AVR1:0
	Short	B(1)-E(2)	See 38 Page.	
		E(2)-B(3)	F101 opened, No hazard.	AVR1:0
		C(4)-C(5)	R305 opened, No Hazard.	AVR1:0
	TR441	Open	C	Normal operation.
E			Normal operation.	AVR1:*
B			Normal operation.	AVR1:*
Short		C-E	No Hazard.	AVR1:0
		E-B	Normal operation.	AVR1:*
		B-C	No Hazard.	AVR1:0
TR450	Open	C	Normal operation.	AVR1:*
		E	Normal operation.	AVR1:*
		B	Normal operation.	AVR1:*
	Short	C-E	R305 opened, No hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
TR450	Short	E-B	Normal operation.	AVR1:*
		B-C	R305 opened, No hazard.	AVR1:0
TR501	Open	D	No Hazard.	AVR1:*
		S	No Hazard.	AVR1:*
		G	No Hazard.	AVR1:*
	Short	D-S	Output voltage decreased.	AVR1:decreased
		S-G	See 38 Page.	
		G-D	Output voltage decreased.	AVR1:decreased
TR502	Open	D	No Hazard.	AVR1:*
		S	No Hazard.	AVR1:*
		G	Output voltage decreased.	AVR1:decreased
	Short	D-S	Output voltage decreased.	AVR1:decreased
		S-G	No Hazard.	AVR1:*
		G-D	Output voltage decreased.	AVR1:decreased
TR530	Open	C	Output voltage decreased.	AVR1:decreased
		E	Output voltage decreased.	AVR1:decreased
		B	Output voltage decreased.	AVR1:decreased
	Short	C-E	Normal operation.	AVR1:*
		E-B	Output voltage decreased.	AVR1:decreased
		B-C	Normal operation.	AVR1:*
TR601	Open	C	Normal operation.	AVR1:*
		E	Normal operation.	AVR1:*
		B	Normal operation.	AVR1:*
	Short	C-E	Output voltage decreased.	AVR1:decreased



F M E A

Component	Mode		Comment	Output Voltage (V)
TR601	Short	E-B	Normal operation.	AVR1:**
		B-C	Output voltage decreased.	AVR1:decreased
TR602	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	Output voltage decreased.	AVR1:decreased
		E-B	Normal operation.	AVR1:**
		B-C	Output voltage decreased.	AVR1:decreased
TR603	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	Normal operation.	AVR1:**
		E-B	Normal operation.	AVR1:**
		B-C	Normal operation.	AVR1:**
TR604	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	Normal operation.	AVR1:**
		E-B	Normal operation.	AVR1:**
		B-C	Normal operation.	AVR1:**
TR605	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	Normal operation.	AVR1:**

F M E A

Component	Mode		Comment	Output Voltage (V)
TR605	Short	E-B	Normal operation.	AVR1:*
		B-C	Normal operation.	AVR1:*
VR551	Open	brush	Output voltage decreased.	AVR1:decreased
			Output voltage decreased.	AVR1:decreased
	Short		Output voltage decreased.	AVR1:decreased
ZD151	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
ZD171	Open		Normal operation.	AVR1:*
	Short		F101 opened, No hazard.	AVR1:0
ZD201	Open		Normal operation.	AVR1:*
	Short		R305 opened, No Hazard.	AVR1:0
ZD302	Open		R305 opened, No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
ZD303	Open		R305 opened, No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
ZD320	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
ZD401	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
ZD402	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
ZD411	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
ZD440	Open		Normal operation.	AVR1:*

F M E A

Component	Mode	Comment	Output Voltage (V)
ZD440	Short	R305 opened, No Hazard.	AVR1:0
ZD450	Open	Normal operation.	AVR1:**
	Short	See 38 Page.	
ZD451	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
ZD530	Open	Normal operation.	AVR1:**
	Short	Output voltage decreased.	AVR1:decreased
ZD601	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
R101	Open	Normal operation.	AVR1:**
R102	Open	Normal operation.	AVR1:**
R103	Open	Normal operation.	AVR1:**
R104	Open	Normal operation.	AVR1:**
R105	Open	Normal operation.	AVR1:**
R150	Open	Normal operation.	AVR1:**
R151	Open	Normal operation.	AVR1:**
R152	Open	Normal operation.	AVR1:**
R153	Open	Normal operation.	AVR1:**
R154	Open	Normal operation.	AVR1:**
R155	Open	Normal operation.	AVR1:**
R156	Open	Normal operation.	AVR1:**
R157	Open	Normal operation.	AVR1:**
R158	Open	Normal operation.	AVR1:**
R159	Open	Normal operation.	AVR1:**

## F M E A

Component	Mode	Comment	Output Voltage (V)
R160	Open	Normal operation.	AVR1:*
R161	Open	Output voltage decreased.	AVR1:decreased
R163	Open	No Hazard.	AVR1:0
R164	Open	Normal operation.	AVR1:*
R170	Open	Normal operation.	AVR1:*
R171	Open	F101 opened, No hazard.	AVR1:0
R172	Open	F101 opened, No hazard.	AVR1:0
R173	Open	F101 opened, No hazard.	AVR1:0
R174	Open	F101 opened, No hazard.	AVR1:0
R175	Open	F101 opened, No hazard.	AVR1:0
R177	Open	Normal operation.	AVR1:*
R178	Open	Normal operation.	AVR1:*
R179	Open	Normal operation.	AVR1:*
R201	Open	No Hazard.	AVR1:0
R202	Open	No Hazard.	AVR1:0
R203	Open	No Hazard.	AVR1:0
R204	Open	No Hazard.	AVR1:0
R205	Open	Normal operation.	AVR1:*
R211	Open	Output voltage decreased.	AVR1:decreased
R212	Open	Output voltage decreased.	AVR1:decreased
R213	Open	Output voltage decreased.	AVR1:decreased
R214	Open	Output voltage decreased.	AVR1:decreased
R215	Open	Normal operation.	AVR1:*
R220	Open	No Hazard.	AVR1:0

## F M E A

Component	Mode	Comment	Output Voltage (V)
R221	Open	Output voltage decreased.	AVR1:decreased
R222	Open	No Hazard.	AVR1:0
R223	Open	Normal operation.	AVR1:**
R224	Open	Normal operation.	AVR1:**
R225	Open	Normal operation.	AVR1:**
R226	Open	Normal operation.	AVR1:**
R227	Open	Normal operation.	AVR1:**
R228	Open	Normal operation.	AVR1:**
R230	Open	No Hazard.	AVR1:0
R231	Open	No Hazard.	AVR1:0
R232	Open	No Hazard.	AVR1:0
R233	Open	No Hazard.	AVR1:0
R234	Open	No Hazard.	AVR1:0
R235	Open	Output voltage decreased.	AVR1:decreased
R238	Open	Normal operation.	AVR1:**
R301	Open	Normal operation.	AVR1:**
R302	Open	Normal operation.	AVR1:**
R303	Open	Normal operation.	AVR1:**
R304	Open	Normal operation.	AVR1:**
R305	Open	Normal operation.	AVR1:**
R306	Open	Normal operation.	AVR1:**
R307	Open	No Hazard.	AVR1:0
R308	Open	No Hazard.	AVR1:0
R309	Open	Normal operation.	AVR1:**

F M E A

Component	Mode	Comment	Output Voltage (V)
R310	Open	No Hazard.	AVR1:0
R311	Open	No Hazard.	AVR1:0
R312	Open	See 38 Page.	
R314	Open	Normal operation.	AVR1:**
R315	Open	Normal operation.	AVR1:**
R316	Open	Normal operation.	AVR1:**
R317	Open	Normal operation.	AVR1:**
R324	Open	Normal operation.	AVR1:**
R325	Open	R305 opened, No Hazard.	AVR1:0
R326	Open	F101 opened, No hazard.	AVR1:0
R327	Open	Normal operation.	AVR1:**
R328	Open	Normal operation.	AVR1:**
R329	Open	No Hazard.	AVR1:0
R330	Open	No Hazard.	AVR1:0
R331	Open	R305 opened, No Hazard.	AVR1:0
R332	Open	No Hazard.	AVR1:0
R333	Open	Normal operation.	AVR1:**
R334	Open	Normal operation.	AVR1:**
R401	Open	Normal operation.	AVR1:**
R402	Open	Normal operation.	AVR1:**
R403	Open	Normal operation.	AVR1:**
R411	Open	Normal operation.	AVR1:**
R412	Open	Normal operation.	AVR1:**
R413	Open	Normal operation.	AVR1:**



## F M E A

Component	Mode	Comment	Output Voltage (V)
R414	Open	Normal operation.	AVR1:**
R415	Open	Output voltage decreased.	AVR1:decreased
R416	Open	No Hazard.	AVR1:0
R417	Open	Output voltage decreased.	AVR1:decreased
R418	Open	No Hazard.	AVR1:0
R419	Open	No Hazard.	AVR1:0
R420	Open	Normal operation.	AVR1:**
R421	Open	Normal operation.	AVR1:**
R422	Open	Normal operation.	AVR1:**
R431	Open	No Hazard.	AVR1:0
R432	Open	Normal operation.	AVR1:**
R433	Open	No Hazard.	AVR1:0
R434	Open	No Hazard.	AVR1:0
R435	Open	No Hazard.	AVR1:0
R437	Open	Normal operation.	AVR1:**
R441	Open	No Hazard.	AVR1:0
R442	Open	Normal operation.	AVR1:**
R443	Open	No Hazard.	AVR1:0
R444	Open	No Hazard.	AVR1:0
R445	Open	Normal operation.	AVR1:**
R446	Open	Normal operation.	AVR1:**
R450	Open	Normal operation.	AVR1:**
R451	Open	Normal operation.	AVR1:**
R452	Open	Normal operation.	AVR1:**

F M E A

Component	Mode	Comment	Output Voltage (V)
R453	Open	Normal operation.	AVR1:**
R454	Open	Normal operation.	AVR1:**
R455	Open	Normal operation.	AVR1:**
R456	Open	Normal operation.	AVR1:**
R457	Open	Normal operation.	AVR1:**
R458	Open	Normal operation.	AVR1:**
R459	Open	R305 opened, No hazard.	AVR1:0
R460	Open	Normal operation.	AVR1:**
R501	Open	Output voltage decreased.	AVR1:decreased
R502	Open	No Hazard.	AVR1:**
R503	Open	No Hazard.	AVR1:**
R504	Open	Normal operation.	AVR1:**
R505	Open	Output voltage decreased.	AVR1:decreased
R506	Open	No Hazard.	AVR1:**
R507	Open	Output voltage decreased.	AVR1:decreased
R508	Open	No Hazard.	AVR1:**
R509	Open	No Hazard.	AVR1:**
R510	Open	Normal operation.	AVR1:**
R511	Open	Output voltage decreased.	AVR1:decreased
R512	Open	No Hazard.	AVR1:**
R538	Open	Output voltage decreased.	AVR1:decreased
R541	Open	Output voltage decreased.	AVR1:decreased
R542	Open	Normal operation.	AVR1:**
R543	Open	Normal operation.	AVR1:**

F M E A

Component	Mode	Comment	Output Voltage (V)
R551	Open	Output voltage decreased.	AVR1:decreased
R553	Open	Output voltage decreased.	AVR1:decreased
R554	Open	Normal operation.	AVR1:*
R555	Open	Output voltage decreased.	AVR1:decreased
R556	Open	Output voltage decreased.	AVR1:decreased
R557	Open	Output voltage decreased.	AVR1:decreased
R558	Open	Output voltage decreased.	AVR1:decreased
R559	Open	Output voltage decreased.	AVR1:decreased
R560	Open	Output voltage decreased.	AVR1:decreased
R561	Open	Normal operation.	AVR1:*
R562	Open	Normal operation.	AVR1:*
R601	Open	Normal operation.	AVR1:*
R602	Open	Normal operation.	AVR1:*
R603	Open	Normal operation.	AVR1:*
R604	Open	Normal operation.	AVR1:*
R605	Open	Output voltage decreased.	AVR1:decreased
R606	Open	Normal operation.	AVR1:*
R607	Open	Normal operation.	AVR1:*
R608	Open	Output voltage decreased.	AVR1:decreased
R609	Open	Output voltage decreased.	AVR1:decreased
R610	Open	Normal operation.	AVR1:*
R611	Open	Normal operation.	AVR1:*
R621	Open	Normal operation.	AVR1:*
R622	Open	Normal operation.	AVR1:*

## F M E A

Component	Mode	Comment	Output Voltage (V)
R624	Open	Normal operation.	AVR1:*
R626	Open	Normal operation.	AVR1:*
R627	Open	Normal operation.	AVR1:*
R628	Open	Normal operation.	AVR1:*
R629	Open	Normal operation.	AVR1:*
R630	Open	Normal operation.	AVR1:*
R631	Open	Normal operation.	AVR1:*
R632	Open	Normal operation.	AVR1:*
R633	Open	Normal operation.	AVR1:*
R701	Open	Normal operation.	AVR1:*
R702	Open	Normal operation.	AVR1:*



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C101	Short		F101 opened, No hazard.	AVR1:0
C103	Open		Normal operation.	AVR1:*
C323	Open		R305 opened, No Hazard.	AVR1:0
C411	Short		R305 opened, No hazard.	AVR1:0
C450	Short		F101 opened, No hazard.	AVR1:0
C541	Short		Output voltage decreased.	AVR1:decreased
C542	Short		Output voltage decreased.	AVR1:decreased
CN501	Short	2-4	Normal operation.	AVR1:*
D321	Short		R305 opened, No Hazard.	AVR1:0
D430	Short		R305 opened, No hazard.	AVR1:0
D530	Short		R305 opened, No Hazard.	AVR1:0
IC101	Short	16-17	F101 opened, No hazard.	AVR1:0
		26-27	Output voltage decreased.	AVR1:decreased
IC401	Short	1-2	R305 opened, No hazard.	AVR1:0
		2-3	No Hazard.	AVR1:0
IC501	Open	2	Output voltage decreased.	AVR1:decreased
		3	Output voltage decreased.	AVR1:decreased
	Short	2-3	No Hazard.	AVR1:*
		7-8	Output voltage decreased.	AVR1:decreased
T401	Open	5	No Hazard.	AVR1:*
TR101	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	F101 opened, No hazard.	AVR1:0
	Short	D-S	F101 opened, No hazard.	AVR1:0



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR101	Short	S-G	No Hazard.	AVR1:0
		G-D	F101 opened, No hazard.	AVR1:0
TR401	Open	D	No hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	F101 opened, No hazard.	AVR1:0
	Short	D-S	F101 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	R170 opened, No hazard.	AVR1:0
TR402	Open	D	No hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	F101 opened, No hazard.	AVR1:0
	Short	D-S	F101 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	F101 opened, No hazard.	AVR1:0
TR430	Short	B(1)-E(2)	F101 opened, No hazard.	AVR1:0
TR440	Short	B(1)-E(2)	F101 opened, No hazard.	AVR1:0
TR501	Short	S-G	No Hazard.	AVR1:*
ZD450	Short		R305 opened, No hazard.	AVR1:0
R312	Open		No Hazard.	AVR1:0