



ABNORMAL TEST RESULT

OF MODEL GHA700F-12-J1

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 : 2/35 ~ 31/35)

(Abnormal Test Result: 32/35 ~ 35/35)

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	F101, F102 opened, No hazard.	AVR1:0
C102	Open	No Hazard.	AVR1:0
	Short	F101, F102 opened, No hazard.	AVR1:0
C103	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C104	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C105	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C106	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C107	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C108	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C109	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C110	Open	Normal operation.	AVR1:**
	Short	See page 32.	
C111	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C112	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**



F M E A

Component	Mode	Comment	Output Voltage (V)
C113	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C114	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C115	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C117	Open	Normal operation.	AVR1:*
	Short	F101, F102 opened, No hazard.	AVR1:0
C118	Open	Normal operation.	AVR1:*
	Short	F101, F102 opened, No hazard.	AVR1:0
C119	Open	Normal operation.	AVR1:*
	Short	F101, F102 opened, No hazard.	AVR1:0
C120	Open	Normal operation.	AVR1:*
	Short	No hazard.	AVR1:0
C121	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C123	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C124	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C125	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C126	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C127	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C128	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C161	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C162	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C163	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C164	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C165	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C166	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C167	Open	Normal operation.	AVR1:**
	Short	Normal operation.	AVR1:**
C168	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C170	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0
C171	Open	Normal operation.	AVR1:**
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C174	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C185	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C186	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C201	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C202	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C204	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C205	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C211	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C212	Open	Normal operation.	AVR1:*
	Short	See page 32.	
C220	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C221	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C222	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C223	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C224	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C226	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C227	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C228	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C229	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C231	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C232	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C233	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C234	Open	No Hazard.	AVR1:0
	Short	See page 32.	
C235	Open	No Hazard.	AVR1:0
	Short	See page 32.	
C241	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C242	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C243	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C244	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C246	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C261	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C262	Open	Normal operation.	AVR1:*
	Short	Normal operation.	AVR1:*
C301	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0
C302	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C304	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C305	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C306	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C307	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C310	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C311	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C312	Open	Normal operation.	AVR1:*
	Short	No hazard.	AVR1:0
C313	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C501	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C502	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C503	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C504	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C505	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C506	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C507	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C508	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C509	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C510	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C511	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C512	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C513	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C514	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C515	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C516	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C517	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C518	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C522	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0
C523	Open	Normal operation.	AVR1:*
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
C531	Open		Normal operation.	AVR1:*
	Short		See page 32.	
C532	Open		Normal operation.	AVR1:*
	Short		See page 32.	
C535	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
C536	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
C541	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
C542	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
C553	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
C554	Open		Normal operation.	AVR1:*
	Short		Output voltage decreased. No hazard.	AVR1:decreased
C555	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
C556	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
C557	Open		Normal operation.	AVR1:*
	Short		Output voltage decreased. No hazard.	AVR1:decreased
CN701	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
CN701	Open	3	See page 32.	
	Short	1-2	Normal operation.	AVR1:**
		2-3	Normal operation.	AVR1:**
D101	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
D102	Open		Normal operation.	AVR1:**
	Short		See page 32.	
D103	Open		Normal operation.	AVR1:**
	Short		No Hazard.	AVR1:0
D104	Open		Normal operation.	AVR1:**
	Short		No Hazard.	AVR1:0
D107	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:**
D171	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
D201	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
D211	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
D212	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
D213	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
D223	Open		Normal operation.	AVR1:**



F M E A

Component	Mode		Comment	Output Voltage (V)
D223	Short		No Hazard.	AVR1:0
D224	Open		No Hazard.	AVR1:0
	Short		F101, F102 opened, No hazard.	AVR1:0
D241	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
D243	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
D301	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
D302	Open		See page 32.	
	Short		F101, F102 opened, No hazard.	AVR1:0
D303	Open		No Hazard.	AVR1:0
	Short		Normal operation.	AVR1:*
D502	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
D512	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
D541	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
D553	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
IC101	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC101	Open	4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
		6	No Hazard.	AVR1:0
		7	No Hazard.	AVR1:0
		8	No Hazard.	AVR1:0
	Short	1-2	No Hazard.	AVR1:0
		2-3	No Hazard.	AVR1:0
		3-4	No Hazard.	AVR1:0
		5-6	No Hazard.	AVR1:0
		6-7	No Hazard.	AVR1:0
		7-8	F101, F102 opened, No hazard.	AVR1:0
IC201	Open	1	Normal operation.	AVR1:*
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
		6	No Hazard.	AVR1:0
		7	Normal operation.	AVR1:*
		8	No Hazard.	AVR1:0
		9	No Hazard.	AVR1:0
		10	No Hazard.	AVR1:0
		11	No Hazard.	AVR1:0
		12	No Hazard.	AVR1:0
		13	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC201	Open	14	No Hazard.	AVR1:0
	Short	3-4	Normal operation.	AVR1:*
		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	Output voltage decreased. No hazard.	AVR1:decreased
		10-11	No Hazard.	AVR1:0
		11-12	No Hazard.	AVR1:0
		12-13	No Hazard.	AVR1:0
		13-14	No Hazard.	AVR1:0
IC202	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	Normal operation.	AVR1:*
		6	Normal operation.	AVR1:*
		7	Normal operation.	AVR1:*
		8	Normal operation.	AVR1:*
		9	No Hazard.	AVR1:0
		10	No Hazard.	AVR1:0
		11	Normal operation.	AVR1:*
		12	No Hazard.	AVR1:0
		13	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC202	Open	14	Normal operation.	AVR1:*
		15	Normal operation.	AVR1:*
		16	Normal operation.	AVR1:*
		17	See page 32.	
		18	Normal operation.	AVR1:*
		19	No Hazard.	AVR1:0
		20	Normal operation.	AVR1:*
	Short	1-2	Normal operation.	AVR1:*
		2-3	No Hazard.	AVR1:0
		3-4	No Hazard.	AVR1:0
		4-5	Normal operation.	AVR1:*
		5-6	Normal operation.	AVR1:*
		6-7	No Hazard.	AVR1:0
		7-8	Normal operation.	AVR1:*
		8-9	No Hazard.	AVR1:0
		9-10	No Hazard.	AVR1:0
		11-12	Normal operation.	AVR1:*
		12-13	No Hazard.	AVR1:0
		13-14	Normal operation.	AVR1:*
		14-15	Normal operation.	AVR1:*
		15-16	Normal operation.	AVR1:*
		16-17	Normal operation.	AVR1:*
		17-18	Normal operation.	AVR1:*
		18-19	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC202	Short	19-20	No Hazard.	AVR1:0
IC301	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	Normal operation.	AVR1:**
		5	Normal operation.	AVR1:**
		6	Normal operation.	AVR1:**
		7	No Hazard.	AVR1:0
	Short	1-2	No hazard.	AVR1:0
		4-5	Normal operation.	AVR1:**
		5-6	Normal operation.	AVR1:**
		6-7	No Hazard.	AVR1:0
IC311	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	No hazard.	AVR1:0
		4	No hazard.	AVR1:0
		5	No hazard.	AVR1:0
	Short	1-2	Normal operation.	AVR1:**
		2-3	No Hazard.	AVR1:0
		3-4	No hazard.	AVR1:0
IC501	Open	1	Normal operation.	AVR1:**
		2	See page 32.	
		3	See page 33.	
		4	See page 33.	



F M E A

Component	Mode		Comment	Output Voltage (V)
IC501	Open	5	See page 33.	
		6	See page 33.	
		7	See page 33.	
		8	See page 33.	
	Short	1-2	Normal operation.	AVR1:*
		2-3	See page 33.	
		3-4	Normal operation.	AVR1:*
		5-6	See page 33.	
		6-7	See page 33.	
		7-8	See page 33.	
IC511	Open	1	Normal operation.	AVR1:*
		2	See page 33.	
		3	See page 33.	
		4	See page 33.	
		5	See page 33.	
		6	See page 33.	
		7	See page 33.	
		8	See page 33.	
	Short	1-2	Normal operation.	AVR1:*
		2-3	See page 33.	
		3-4	Normal operation.	AVR1:*
		5-6	See page 33.	
		6-7	See page 33.	
		7-8	See page 33.	



F M E A

Component	Mode		Comment	Output Voltage (V)
IC551	Open	1	Normal operation.	AVR1:**
		2	Normal operation.	AVR1:**
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
	Short	1-2	Normal operation.	AVR1:**
		2-3	No Hazard.	AVR1:0
		4-5	No Hazard.	AVR1:0
L101	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
	Short	1-2	Normal operation.	AVR1:**
		2-3	F101, F102 opened, No hazard.	AVR1:0
		3-4	Normal operation.	AVR1:**
L102	Open		No Hazard.	AVR1:0
	Short		F101, F102 opened, No hazard.	AVR1:0
L180	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**
L501	Open		No Hazard.	AVR1:0
	Short		See page 33.	
PC101	Open	A, K	See page 33.	
		C, E	See page 33.	
	Short	A-K	See page 34.	



F M E A

Component	Mode		Comment	Output Voltage (V)
PC101	Short	C-E	Normal operation.	AVR1:**
PC201	Open	A, K	No Hazard.	AVR1:0
		C, E	No Hazard.	AVR1:0
	Short	A-K	No Hazard.	AVR1:0
		C-E	No Hazard.	AVR1:0
PC202	Open	A, K	Normal operation.	AVR1:**
		C, E	Normal operation.	AVR1:**
	Short	A-K	Normal operation.	AVR1:**
		C-E	No Hazard.	AVR1:0
PTH541	Open		No Hazard.	AVR1:0
	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:**
R106	Open		No Hazard.	AVR1:0
R110	Open		Normal operation.	AVR1:**
R111	Open		See page 34.	
R112	Open		Normal operation.	AVR1:**
R113	Open		Normal operation.	AVR1:**
R114	Open		See page 34.	
R120	Open		No Hazard.	AVR1:0
R121	Open		No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
R123	Open	No Hazard.	AVR1:0
R125	Open	No Hazard.	AVR1:0
R126	Open	No Hazard.	AVR1:0
R127	Open	Normal operation.	AVR1:*
R128	Open	Normal operation.	AVR1:*
R129	Open	No Hazard.	AVR1:0
R130	Open	No Hazard.	AVR1:0
R131	Open	No Hazard.	AVR1:0
R132	Open	No Hazard.	AVR1:0
R133	Open	No Hazard.	AVR1:0
R134	Open	No Hazard.	AVR1:0
R135	Open	No Hazard.	AVR1:0
R136	Open	No Hazard.	AVR1:0
R137	Open	No Hazard.	AVR1:0
R138	Open	No Hazard.	AVR1:0
R161	Open	No Hazard.	AVR1:0
R162	Open	No Hazard.	AVR1:0
R163	Open	No Hazard.	AVR1:0
R164	Open	No Hazard.	AVR1:0
R165	Open	No Hazard.	AVR1:0
R166	Open	Normal operation.	AVR1:*
R167	Open	Normal operation.	AVR1:*
R168	Open	See page 34.	
R169	Open	Normal operation.	AVR1:*



F M E A

Component	Mode	Comment	Output Voltage (V)
R170	Open	Normal operation.	AVR1:**
R171	Open	Normal operation.	AVR1:**
R172	Open	No Hazard.	AVR1:0
R173	Open	Normal operation.	AVR1:**
R174	Open	Normal operation.	AVR1:**
R177	Open	Normal operation.	AVR1:**
R179	Open	No Hazard.	AVR1:0
R191	Open	Normal operation.	AVR1:**
R201	Open	No Hazard.	AVR1:0
R202	Open	No Hazard.	AVR1:0
R203	Open	Normal operation.	AVR1:**
R211	Open	No Hazard.	AVR1:0
R212	Open	No Hazard.	AVR1:0
R213	Open	Normal operation.	AVR1:**
R221	Open	No Hazard.	AVR1:0
R223	Open	No Hazard.	AVR1:0
R224	Open	Normal operation.	AVR1:**
R225	Open	Normal operation.	AVR1:**
R226	Open	Normal operation.	AVR1:**
R227	Open	No Hazard.	AVR1:0
R228	Open	No Hazard.	AVR1:0
R229	Open	Normal operation.	AVR1:**
R231	Open	No Hazard.	AVR1:0
R240	Open	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
R241	Open	No Hazard.	AVR1:0
R242	Open	No Hazard.	AVR1:0
R243	Open	No Hazard.	AVR1:0
R244	Open	Normal operation.	AVR1:*
R247	Open	No Hazard.	AVR1:0
R249	Open	No Hazard.	AVR1:0
R251	Open	Normal operation.	AVR1:*
R252	Open	Normal operation.	AVR1:*
R253	Open	No Hazard.	AVR1:0
R261	Open	Normal operation.	AVR1:*
R262	Open	No Hazard.	AVR1:0
R301	Open	No Hazard.	AVR1:0
R302	Open	No Hazard.	AVR1:0
R303	Open	No Hazard.	AVR1:0
R304	Open	Normal operation.	AVR1:*
R305	Open	Normal operation.	AVR1:*
R311	Open	No Hazard.	AVR1:0
R312	Open	Normal operation.	AVR1:*
R313	Open	No hazard.	AVR1:0
R314	Open	No Hazard.	AVR1:0
R501	Open	Normal operation.	AVR1:*
R502	Open	See page 34.	
R503	Open	Normal operation.	AVR1:*
R504	Open	Normal operation.	AVR1:*



F M E A

Component	Mode	Comment	Output Voltage (V)
R505	Open	Normal operation.	AVR1:**
R506	Open	See page 34.	
R508	Open	Normal operation.	AVR1:**
R511	Open	Normal operation.	AVR1:**
R512	Open	See page 34.	
R513	Open	Normal operation.	AVR1:**
R514	Open	Normal operation.	AVR1:**
R515	Open	Normal operation.	AVR1:**
R516	Open	See page 34.	
R518	Open	Normal operation.	AVR1:**
R520	Open	Normal operation.	AVR1:**
R521	Open	Normal operation.	AVR1:**
R531	Open	Normal operation.	AVR1:**
R532	Open	See page 34.	
R533	Open	See page 34.	
R541	Open	Normal operation.	AVR1:**
R542	Open	Normal operation.	AVR1:**
R543	Open	Normal operation.	AVR1:**
R546	Open	Normal operation.	AVR1:**
R551	Open	No Hazard.	AVR1:0
R552	Open	No Hazard.	AVR1:0
R553	Open	Output voltage decreased. No hazard.	AVR1:decreased
R557	Open	No Hazard.	AVR1:0
R558	Open	Normal operation.	AVR1:**



F M E A

Component	Mode		Comment	Output Voltage (V)
R560	Open		Normal operation.	AVR1:**
R562	Open		No Hazard.	AVR1:0
R563	Open		No Hazard.	AVR1:0
R565	Open		Normal operation.	AVR1:**
R566	Open		Normal operation.	AVR1:**
R572	Open		Normal operation.	AVR1:**
R573	Open		Normal operation.	AVR1:**
R574	Open		No Hazard.	AVR1:0
R575	Open		Normal operation.	AVR1:**
R576	Open		Normal operation.	AVR1:**
R580	Open		Normal operation.	AVR1:**
SCR101	Open	A	See page 34.	
		K	See page 34.	
		G	See page 34.	
	Short	A-K	Normal operation.	AVR1:**
		A-G	Normal operation.	AVR1:**
		K-G	See page 34.	
SS101	Open		No Hazard.	AVR1:0
	Short		F101, F102 opened, No hazard.	AVR1:0
T201	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	See page 34.	
		4	See page 34.	
		5	See page 34.	



F M E A

Component	Mode		Comment	Output Voltage (V)
T201	Open	6	See page 34.	
	Short	1-2	No Hazard.	AVR1:0
		3-4	No Hazard.	AVR1:0
		4-5	Normal operation.	AVR1:*
		5-6	No Hazard.	AVR1:0
T301	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	Normal operation.	AVR1:*
		6	Normal operation.	AVR1:*
		7	Normal operation.	AVR1:*
		8	Normal operation.	AVR1:*
	Short	1-2	No Hazard.	AVR1:0
		2-3	F101, F102 opened, No hazard.	AVR1:0
		3-4	F101, F102 opened, No hazard.	AVR1:0
		5-6	No Hazard.	AVR1:0
		6-7	Normal operation.	AVR1:*
		7-8	No Hazard.	AVR1:0
TH101	Open		Normal operation.	AVR1:*
	Short		Normal operation.	AVR1:*
TH161	Open		Normal operation.	AVR1:*
	Short		No Hazard.	AVR1:0
TR101	Open	D	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
TR101	Open	S	No Hazard.	AVR1:0
		G	F101, F102 opened, No hazard.	AVR1:0
	Short	D-S	F101, F102 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	F101, F102 opened, No hazard.	AVR1:0
TR103	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
TR104	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
TR106	Open	C	Normal operation.	AVR1:**
		E	Normal operation.	AVR1:**
		B	Normal operation.	AVR1:**
	Short	C-E	No Hazard.	AVR1:0
		E-B	No Hazard.	AVR1:0
		B-C	Normal operation.	AVR1:**
TR111	Open	D	See page 34.	



F M E A

Component	Mode		Comment	Output Voltage (V)
TR111	Open	S	See page 34.	
		G	See page 34.	
	Short	D-S	Normal operation.	AVR1:*
		S-G	See page 34.	
		G-D	Normal operation.	AVR1:*
TR201	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	F101, F102 opened, No hazard.	AVR1:0
	Short	D-S	F101, F102 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	F101, F102 opened, No hazard.	AVR1:0
TR211	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	F101, F102 opened, No hazard.	AVR1:0
	Short	D-S	F101, F102 opened, No hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	F101, F102 opened, No hazard.	AVR1:0
TR220	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:*
TR221	Open	C	Normal operation.	AVR1:*



F M E A

Component	Mode		Comment	Output Voltage (V)
TR221	Open	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
TR222	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
TR251	Open	C	No Hazard.	AVR1:0
		E	No Hazard.	AVR1:0
		B	No Hazard.	AVR1:0
	Short	C-E	Normal operation.	AVR1:**
		E-B	No Hazard.	AVR1:0
		B-C	No Hazard.	AVR1:0
TR301	Open	C	No Hazard.	AVR1:0
		E	No Hazard.	AVR1:0
		B	No Hazard.	AVR1:0
	Short	C-E	Normal operation.	AVR1:**
		E-B	No Hazard.	AVR1:0
		B-C	No Hazard.	AVR1:0
TR311	Open	C	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
TR311	Open	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
TR501	Open	D	See page 34.	
		S	See page 34.	
		G	See page 35.	
	Short	D-S	No hazard.	AVR1:0
		S-G	See page 35.	
		G-D	No hazard.	AVR1:0
TR502	Open	D	See page 35.	
		S	See page 35.	
		G	See page 35.	
	Short	D-S	No hazard.	AVR1:0
		S-G	See page 35.	
		G-D	No hazard.	AVR1:0
TR511	Open	D	See page 35.	
		S	See page 35.	
		G	See page 35.	
	Short	D-S	No hazard.	AVR1:0
		S-G	See page 35.	
		G-D	No hazard.	AVR1:0
TR512	Open	D	See page 35.	



F M E A

Component	Mode		Comment	Output Voltage (V)
TR512	Open	S	See page 35.	
		G	See page 35.	
	Short	D-S	No hazard.	AVR1:0
		S-G	See page 35.	
		G-D	No hazard.	AVR1:0
TR541	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
TR542	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
VR501	Open	brush	Output voltage decreased. No hazard.	AVR1:decreased
			Output voltage decreased. No hazard.	AVR1:decreased
	Short		Output voltage increased. No hazard.	AVR1:increased
ZD251	Open		Normal operation.	AVR1:**
	Short		No Hazard.	AVR1:0
ZD252	Open		Normal operation.	AVR1:**
	Short		No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
ZD301	Open	See page 35.	
	Short	See page 35.	
ZD542	Open	No Hazard.	AVR1:0
	Short	No Hazard.	AVR1:0



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C103	Short		F101, F102 opened, No hazard.	AVR1:0
C104	Short		F101, F102 opened, No hazard.	AVR1:0
C105	Short		F101, F102 opened, No hazard.	AVR1:0
C106	Short		F101, F102 opened, No hazard.	AVR1:0
C107	Short		F101, F102 opened, No hazard.	AVR1:0
C108	Short		F101, F102 opened, No hazard.	AVR1:0
C109	Short		F101, F102 opened, No hazard.	AVR1:0
C110	Short		F101, F102 opened, No hazard.	AVR1:0
C113	Short		Normal operation.	AVR1:*
C114	Short		Normal operation.	AVR1:*
C115	Short		Normal operation.	AVR1:*
C201	Short		F101, F102 opened, No hazard.	AVR1:0
C202	Short		F101, F102 opened, No hazard.	AVR1:0
C211	Short		F101, F102 opened, No hazard.	AVR1:0
C212	Short		F101, F102 opened, No hazard.	AVR1:0
C234	Short		No Hazard.	AVR1:0
C235	Short		No Hazard.	AVR1:0
C531	Short		Normal operation.	AVR1:*
C532	Short		Normal operation.	AVR1:*
CN701	Open	3	No Hazard.	AVR1:0
D102	Short		No Hazard.	AVR1:0
D302	Open		Normal operation.	AVR1:*
IC202	Open	17	Normal operation.	AVR1:*
IC501	Open	2	Normal operation.	AVR1:*



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
IC501	Open	3	No Hazard.	AVR1:0
		4	Normal operation.	AVR1:**
		5	Normal operation.	AVR1:**
		6	Normal operation.	AVR1:**
		7	Normal operation.	AVR1:**
		8	Normal operation.	AVR1:**
	Short	2-3	Normal operation.	AVR1:**
		5-6	Normal operation.	AVR1:**
		6-7	Normal operation.	AVR1:**
		7-8	Normal operation.	AVR1:**
IC511	Open	2	Normal operation.	AVR1:**
		3	No Hazard.	AVR1:0
		4	Normal operation.	AVR1:**
		5	Normal operation.	AVR1:**
		6	Normal operation.	AVR1:**
		7	Normal operation.	AVR1:**
		8	Normal operation.	AVR1:**
	Short	2-3	Normal operation.	AVR1:**
		5-6	Normal operation.	AVR1:**
		6-7	Normal operation.	AVR1:**
L501	Short		Normal operation.	AVR1:**
PC101	Open	A, K	Normal operation.	AVR1:**
		C, E	Normal operation.	AVR1:**



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
PC101	Short	A-K	Normal operation.	AVR1:**
R111	Open		Normal operation.	AVR1:**
R114	Open		Normal operation.	AVR1:**
R168	Open		Normal operation.	AVR1:**
R502	Open		Normal operation.	AVR1:**
R506	Open		Normal operation.	AVR1:**
R512	Open		Normal operation.	AVR1:**
R516	Open		Normal operation.	AVR1:**
R532	Open		Normal operation.	AVR1:**
R533	Open		Normal operation.	AVR1:**
SCR101	Open	A	Normal operation.	AVR1:**
		K	Normal operation.	AVR1:**
		G	Normal operation.	AVR1:**
	Short	K-G	Normal operation.	AVR1:**
T201	Open	3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
		6	No Hazard.	AVR1:0
TR111	Open	D	Normal operation.	AVR1:**
		S	Normal operation.	AVR1:**
		G	Normal operation.	AVR1:**
	Short	S-G	Normal operation.	AVR1:**
TR501	Open	D	Normal operation.	AVR1:**
		S	Normal operation.	AVR1:**



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR501	Open	G	Normal operation.	AVR1:**
	Short	S-G	Normal operation.	AVR1:**
TR502	Open	D	Normal operation.	AVR1:**
		S	Normal operation.	AVR1:**
		G	Normal operation.	AVR1:**
	Short	S-G	Normal operation.	AVR1:**
TR511	Open	D	Normal operation.	AVR1:**
		S	Normal operation.	AVR1:**
		G	Normal operation.	AVR1:**
	Short	S-G	Normal operation.	AVR1:**
TR512	Open	D	Normal operation.	AVR1:**
		S	Normal operation.	AVR1:**
		G	Normal operation.	AVR1:**
	Short	S-G	Normal operation.	AVR1:**
ZD301	Open		Normal operation.	AVR1:**
	Short		Normal operation.	AVR1:**