

ABNORMAL TEST RESULT

OF MODEL KHEA60F/KHNA60F

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 : 2/18 ~ 15/18)

(Abnormal Test Result: 16/18 ~ 18/18)

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.	
	Short		No Hazard.	AVR1:0
C106	Open		Normal operation.	
	Short		See 16 Page.	
C107	Open		Normal operation.	
	Short		See 16 Page.	
C201	Open		See 16 Page.	
	Short		See 16 Page.	
C202	Open		See 16 Page.	
	Short		See 16 Page.	
C205	Open		Normal operation.	
	Short		See 16 Page.	
C211	Open	only 12	Normal operation.	
	Short	only 12	Output voltage decreased. No hazard.	AVR1:decreased
C212	Open		See 16 Page.	
	Short		No Hazard.	AVR1:0
C213	Open		Normal operation.	
	Short		Output voltage decreased. No hazard.	AVR1:decreased
C214	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C215	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C216	Open		Normal operation.	
	Short		No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C217	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C218	Open	Output voltage increased. No hazard.	AVR1:increased
	Short	No Hazard.	AVR1:0
C221	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C251	Open	Normal operation.	
	Short	Normal operation.	
C255	Open	Normal operation.	
	Short	Normal operation.	
C256	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C257	Open	Normal operation.	
	Short	Normal operation.	
C258	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C501	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C502	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C503	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C504	Open	Normal operation.	
	Short	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
C505	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C506	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C507	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C508	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C515	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C516	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C517	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C601	Open	only 12	Normal operation.	
	Short	only 12	See 16 Page.	
C602	Open		See 16 Page.	
	Short		See 16 Page.	
C631	Open	only 12	Normal operation.	
	Short	only 12	Normal operation.	
C633	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		Output voltage decreased. No hazard.	AVR1:decreased
C634	Open	only 12	Output voltage decreased. No hazard.	AVR1:decreased
	Short	only 12	Output voltage decreased. No hazard.	AVR1:decreased

F M E A

Component	Mode		Comment	Output Voltage (V)
C635	Open	only 24	Normal operation.	
	Short	only 24	No Hazard.	AVR1:0
CN601	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
D201	Open		Normal operation.	
	Short		See 16 Page.	
D202	Open		See 16 Page.	
	Short		See 16 Page.	
D203	Open		See 16 Page.	
	Short		See 16 Page.	
D204	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
D211	Open		Normal operation.	
	Short		Normal operation.	
D212	Open		Normal operation.	
	Short		Normal operation.	
D213	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		Output voltage decreased. No hazard.	AVR1:decreased
D214	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
D215	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		Normal operation.	
D216	Open		Normal operation.	
	Short		Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
D218	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
D221	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
D222	Open	Normal operation.	
	Short	Normal operation.	
D223	Open	Normal operation.	
	Short	Normal operation.	
D231	Open	Normal operation.	
	Short	Normal operation.	
D252	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
D253	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
D254	Open	Normal operation.	
	Short	Normal operation.	
D255	Open	Normal operation.	
	Short	Normal operation.	
D601	Open	See 16 Page.	
	Short	See 16 Page.	
D602	Open	Normal operation.	
	Short	Normal operation.	
D603	Open	Normal operation.	
	Short	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC201	Open	1	See 16 Page.	
		2	See 16 Page.	
		3	See 16 Page.	
		4	See 16 Page.	
		5	See 16 Page.	
		6	See 16 Page.	
		8	See 17 Page.	
	Short	1-2	See 17 Page.	
		2-3	See 17 Page.	
		3-4	See 17 Page.	
		5-6	See 17 Page.	
IC251	Open	3	Normal operation.	
		4	Normal operation.	
		5	Normal operation.	
	Short	4-5	Normal operation.	
IC252	Open	3	Normal operation.	
		4	Normal operation.	
		5	Normal operation.	
	Short	4-5	Normal operation.	
IC601	Open	2	See 17 Page.	
		3	See 17 Page.	
		4	See 17 Page.	
		5	See 17 Page.	
		6	See 17 Page.	



F M E A

Component	Mode		Comment	Output Voltage (V)
IC601	Open	7	See 17 Page.	
		8	See 17 Page.	
	Short	2-3	See 17 Page.	
		5-6	See 17 Page.	
		6-7	See 17 Page.	
		7-8	See 17 Page.	
IC631	Open	3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
	Short	4-5	No Hazard.	AVR1:0
L101	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
L601	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
L602	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
LED601	Open		Normal operation.	
	Short		Normal operation.	
PC211	Open	A, K	No Hazard.	AVR1:0
		C, E	No Hazard.	AVR1:0
	Short	A-K	Output voltage decreased. No hazard.	AVR1:decreased
		C-E	No Hazard.	AVR1:0
PC251	Open	A, K	Normal operation.	
		C, E	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
PC251	Short	A-K	Normal operation.	
		C-E	No Hazard.	AVR1:0
PTH251	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
SK101	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
SS101	Open		No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
T201	Open	2, 3	Output voltage decreased. No hazard.	AVR1:decreased
		5, 6	No Hazard.	AVR1:0
		7, 8	See 17 Page.	
		9, 10, 11, 12	No Hazard.	AVR1:0
	Short	1-2	Output voltage decreased. No hazard.	AVR1:decreased
		2-3	Output voltage decreased. No hazard.	AVR1:decreased
		5-6	No Hazard.	AVR1:0
		7-8	See 17 Page.	
		10-11	No Hazard.	AVR1:0
TH101	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
TR201	Open	D	See 17 Page.	
		S	See 17 Page.	
		G	See 17 Page.	
	Short	D-S	See 17 Page.	
		S-G	See 17 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR201	Short	G-D	See 17 Page.	
TR202	Open	D	See 18 Page.	
		S	See 18 Page.	
		G	See 18 Page.	
	Short	D-S	See 18 Page.	
		S-G	See 18 Page.	
		G-D	See 18 Page.	
TR211	Open	C	Output voltage decreased. No hazard.	AVR1:decreased
		E	Output voltage decreased. No hazard.	AVR1:decreased
		B	Output voltage decreased. No hazard.	AVR1:decreased
	Short	C-E	Normal operation.	
		E-B	Normal operation.	
		B-C	Normal operation.	
TR231	Open	1	No Hazard.	AVR1:0
		2	No Hazard.	AVR1:0
		3	Normal operation.	
		4	No Hazard.	AVR1:0
		5	No Hazard.	AVR1:0
		6	No Hazard.	AVR1:0
	Short	1-2	No Hazard.	AVR1:0
		2-3	Normal operation.	
		4-5	Normal operation.	
		5-6	No Hazard.	AVR1:0
TR232	Open	3	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR232	Open	4	Normal operation.	
		5	Normal operation.	
	Short	4-5	Normal operation.	
TR251	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No Hazard.	AVR1:0
		E-B	Normal operation.	
		B-C	Normal operation.	
TR601	Open	D	See 18 Page.	
		S	See 18 Page.	
		G	See 18 Page.	
	Short	D-S	See 18 Page.	
		S-G	See 18 Page.	
		G-D	See 18 Page.	
VR601	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		No Hazard.	AVR1:0
ZD211	Open		Normal operation.	
	Short		Output voltage decreased. No hazard.	AVR1:decreased
ZD231	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
ZD251	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
ZD252	Open		Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
ZD252	Short	Normal operation.	
ZD253	Open	Normal operation.	
	Short	Normal operation.	
ZD601	Open	See 18 Page.	
	Short	Normal operation.	
ZD611	Open	Normal operation.	
	Short	Normal operation.	
ZD612	Open	Normal operation.	
	Short	Normal operation.	
ZD621	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
R101	Open	Normal operation.	
R102	Open	Normal operation.	
R103	Open	Normal operation.	
R104	Open	Normal operation.	
R105	Open	Normal operation.	
R106	Open	Normal operation.	
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.	
R201	Open	Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R202	Open	Normal operation.	
R203	Open	Normal operation.	
R204	Open	Normal operation.	
R205	Open	Normal operation.	
R206	Open	Normal operation.	
R207	Open	Normal operation.	
R208	Open	Normal operation.	
R211	Open	Normal operation.	
R213	Open	No Hazard.	AVR1:0
R214	Open	No Hazard.	AVR1:0
R215	Open	No Hazard.	AVR1:0
R216	Open	Output voltage decreased. No hazard.	AVR1:decreased
R217	Open	Output voltage decreased. No hazard.	AVR1:decreased
R218	Open	Output voltage decreased. No hazard.	AVR1:decreased
R219	Open	Output voltage increased. No hazard.	AVR1:increased
R221	Open	No Hazard.	AVR1:0
R222	Open	No Hazard.	AVR1:0
R223	Open	Normal operation.	
R224	Open	No Hazard.	AVR1:0
R225	Open	No Hazard.	AVR1:0
R226	Open	Normal operation.	
R231	Open	Normal operation.	
R232	Open	Normal operation.	
R233	Open	Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R241	Open	Normal operation.	
R242	Open	Normal operation.	
R243	Open	Normal operation.	
R251	Open	Normal operation.	
R252	Open	Normal operation.	
R253	Open	Normal operation.	
R254	Open	Normal operation.	
R255	Open	No Hazard.	AVR1:0
R256	Open	Normal operation.	
R257	Open	Normal operation.	
R258	Open	No Hazard.	AVR1:0
R601	Open	Normal operation.	
R602	Open	See 18 Page.	
R603	Open	Normal operation.	
R604	Open	See 18 Page.	
R605	Open	See 18 Page.	
R606	Open	See 18 Page.	
R611	Open	Normal operation.	
R612	Open	Normal operation.	
R621	Open	Normal operation.	
R622	Open	Normal operation.	
R623	Open	Normal operation.	
R633	Open	Normal operation.	
R634	Open	No Hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
R635	Open	No Hazard.	AVR1:0
R636	Open	No Hazard.	AVR1:0
R637	Open	Output voltage decreased. No hazard.	AVR1:decreased
R638	Open	No Hazard.	AVR1:0
R639	Open	No Hazard.	AVR1:0
R640	Open	Output voltage decreased. No hazard.	AVR1:decreased

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C106	Short		No Hazard.	AVR1:0
C107	Short		No Hazard.	AVR1:0
C201	Open		Normal operation.	
	Short		Normal operation.	
C202	Open		Normal operation.	
	Short		Normal operation.	
C205	Short		No Hazard.	AVR1:0
C212	Open		Normal operation.	
C601	Short	only 12	Normal operation.	
C602	Open		Normal operation.	
	Short		Normal operation.	
D201	Short		Normal operation.	
D202	Open		Normal operation.	
	Short		Normal operation.	
D203	Open		Normal operation.	
	Short		Normal operation.	
D601	Open		Normal operation.	
	Short		Normal operation.	
IC201	Open	1	No Hazard.	AVR1:0
		2	Output voltage increased. No hazard.	AVR1:Increased
		3	No Hazard.	AVR1:0
		4	F101 opened, No hazard.	AVR1:0
		5	No Hazard.	AVR1:0
		6	No Hazard.	AVR1:0

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
IC201	Open	8	Normal operation.	
	Short	1-2	No Hazard.	AVR1:0
		2-3	No Hazard.	AVR1:0
		3-4	F101 opened, No hazard.	AVR1:0
		5-6	No Hazard.	AVR1:0
IC601	Open	2	No Hazard.	AVR1:0
		3	No Hazard.	AVR1:0
		4	No Hazard.	AVR1:0
		5	Normal operation.	
		6	No Hazard.	AVR1:0
		7	Normal operation.	
		8	Normal operation.	
	Short	2-3	Normal operation.	
		5-6	Normal operation.	
		6-7	Normal operation.	
		7-8	No Hazard.	AVR1:0
T201	Open	7, 8	Normal operation.	
	Short	7-8	Normal operation.	
TR201	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	No Hazard.	AVR1:0
	Short	D-S	No Hazard.	AVR1:0
		S-G	No Hazard.	AVR1:0
		G-D	No Hazard.	AVR1:0

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR202	Open	D	Normal operation.	
		S	Normal operation.	
		G	Normal operation.	
	Short	D-S	No Hazard.	AVR1:0
		S-G	Normal operation.	
		G-D	No Hazard.	AVR1:0
TR601	Open	D	No Hazard.	AVR1:0
		S	No Hazard.	AVR1:0
		G	Normal operation.	
	Short	D-S	No Hazard.	AVR1:0
		S-G	Normal operation.	
		G-D	No Hazard.	AVR1:0
ZD601	Open		Normal operation.	
R602	Open		Normal operation.	
R604	Open		Normal operation.	
R605	Open		Normal operation.	
R606	Open		Normal operation.	