

## ABNORMAL TEST RESULT

## OF MODEL LFA150F

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 : 2/21 ~ 18/21)

( Abnormal Test Result: 19/21 ~ 21/21)

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	F101 Opened, No Hazard.	AVR1:0
C102	Open	Normal operation.	
	Short	F101 Opened, No Hazard.	AVR1:0
C103	Open	Normal operation.	
	Short	F101 Opened, No Hazard.	AVR1:0
C110	Open	Normal operation.	
	Short	Normal operation.	
C111	Open	Normal operation.	
	Short	Normal operation.	
C113	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C114	Open	Normal operation.	
	Short	Normal operation.	
C115	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C116	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C117	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C118	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C119	Open	Normal operation.	
	Short	Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
C120	Open	Normal operation.	
	Short	Normal operation.	
C121	Open	Normal operation.	
	Short	Normal operation.	
C122	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C127	Open	Output voltage decreased. No hazard.	AVR1:decreased
	Short	F101 Opened, No Hazard.	AVR1:0
C201	Open	Normal operation.	
	Short	Output voltage decreased. No hazard.	AVR1:decreased
C202	Open	Normal operation.	
	Short	Output voltage decreased. No hazard.	AVR1:decreased
C203	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C204	Open	Normal operation.	
	Short	Normal operation.	
C205	Open	Normal operation.	
	Short	Normal operation.	
C206	Open	Normal operation.	
	Short	No Hazard.	AVR1:0
C211	Open	Normal operation.	
	Short	Normal operation.	
C212	Open	Normal operation.	
	Short	Output voltage decreased.	AVR1:decreased

## F M E A

Component	Mode		Comment	Output Voltage (V)
C216	Open		Normal operation.	
	Short		See 19 Page.	
C217	Open		Normal operation.	
	Short		See 19 Page.	
C501	Open		Normal operation.	
	Short		See 19 Page.	
C502	Open		Normal operation.	
	Short		See 19 Page.	
C503	Open		Normal operation.	
	Short		See 19 Page.	
C504	Open		Normal operation.	
	Short		See 19 Page.	
C505	Open	except 12, 15, 24	Normal operation.	
	Short	except 12, 15, 24	Normal operation.	
C506	Open	except 12, 15, 24	Normal operation.	
	Short	except 12, 15, 24	Normal operation.	
C511	Open	only 3R3, 5	See 19 Page.	
	Short	only 3R3, 5	Normal operation.	
C512	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C513	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
C514	Open		Normal operation.	
	Short		No Hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
C522	Open	only 3R3, 5	See 19 Page.	
	Short	only 3R3, 5	Normal operation.	
C601	Open	except 24, 36, 48	Output voltage decreased.	AVR1:decreased
	Short	except 24, 36, 48	Output voltage decreased.	AVR1:decreased
C602	Open	only 24, 36, 48	Output voltage decreased.	AVR1:decreased
	Short	only 24, 36, 48	Output voltage decreased.	AVR1:decreased
C603	Open		Output voltage decreased.	AVR1:decreased
	Short		Output voltage decreased.	AVR1:decreased
D101	Open		No Hazard.	AVR1:0
	Short		F101 Opened, No Hazard.	AVR1:0
D103	Open		Normal operation.	
	Short		Normal operation.	
D104	Open		Normal operation.	
	Short		Normal operation.	
D105	Open		Normal operation.	
	Short		Normal operation.	
D106	Open		Normal operation.	
	Short		Normal operation.	
D107	Open		Normal operation.	
	Short		Normal operation.	
D108	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
D109	Open		Normal operation.	
	Short		No Hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
D111	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
D112	Open		Normal operation.	
	Short		Normal operation.	
D201	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		Normal operation.	
D202	Open		Output voltage decreased. No hazard.	AVR1:decreased
	Short		Normal operation.	
D203	Open		Normal operation.	
	Short		Normal operation.	
D204	Open		Normal operation.	
	Short		Normal operation.	
D205	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
D206	Open		Normal operation.	
	Short		Normal operation.	
D209	Open		Normal operation.	
	Short		See 19 Page.	
D501	Open	only 3R3, 5	No Hazard.	AVR1:0
	Short	only 3R3, 5	Normal operation.	
D502	Open	only 3R3, 5	See 19 Page.	
	Short	only 3R3, 5	Normal operation.	
IC101	Open	1	No Hazard.	AVR1:0
		2	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC101	Open	3	Normal operation.	
		4	No Hazard.	AVR1:0
		5	Normal operation.	
		6	No Hazard.	AVR1:0
		7	No Hazard.	AVR1:0
		8	No Hazard.	AVR1:0
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		3-4	Normal operation.	
		5-6	No Hazard.	AVR1:0
		6-7	No Hazard.	AVR1:0
		7-8	F101 Opened, No Hazard.	AVR1:0
IC201	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
		7	Normal operation.	
		8	Output voltage decreased. No hazard.	AVR1:decreased
	Short	1-2	No Hazard.	AVR1:0
		2-3	No Hazard.	AVR1:0
		3-4	Normal operation.	
		5-6	F101 Opened, No Hazard.	AVR1:0

## F M E A

Component	Mode		Comment	Output Voltage (V)
IC201	Short	6-7	Normal operation.	
		7-8	Normal operation.	
IC601	Open	K	No Hazard.	AVR1:0
		A	No Hazard.	AVR1:0
		R	No Hazard.	AVR1:0
	Short	A-K	Output voltage decreased.	AVR1:decreased
		K-R	Output voltage decreased.	AVR1:decreased
		R-A	No Hazard.	AVR1:0
J501	Open	except 24, 36, 48	Normal operation.	
	Short	except 24, 36, 48	Normal operation.	
J601	Open	except 36, 48	No Hazard.	AVR1:0
	Short	except 36, 48	Normal operation.	
L101	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
L102	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
L104	Open	1	Normal operation.	
		5	No Hazard.	AVR1:0
		6	No Hazard.	
		10	Normal operation.	
	Short	5-6	See 19 Page.	
L507	Open	only 48	F101 Opened, No Hazard.	AVR1:0
	Short		No Hazard.	AVR1:0
PC201	Open	A, K	No Hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
PC201	Open	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.	
		C, E	Normal operation.	
	Short	A-K	Normal operation.	
		C-E	No Hazard.	AVR1:0
SS101	Open		No Hazard.	AVR1:0
	Short		F101 Opened, No Hazard.	AVR1:0
SS501	Open	Cathode	No Hazard.	AVR1:0
		Alternative	See 19 Page.	
	Short	except 3R3, 5	No Hazard.	AVR1:0
SS502	Open	Cathode	See 19 Page.	
		Alternative	See 19 Page.	
	Short	except 3R3, 5	No Hazard.	AVR1:0
SS503	Open	Cathode	See 19 Page.	
		Alternative	See 19 Page.	
	Short	except 3R3, 5	No Hazard.	AVR1:0
T201	Open	1	No Hazard.	AVR1:0
		3	Normal operation.	
		4	Output voltage decreased. No hazard.	AVR1:decreased
		5	Output voltage decreased. No hazard.	AVR1:decreased
		6	No Hazard.	AVR1:0
		7 only 3R3, 5	See 19 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
T201	Open	8 only 3R3, 5	See 19 Page.	
		9	Normal operation.	
		10	Normal operation.	
		11	Normal operation.	
		12	Normal operation.	
	Short	1-6	See 19 Page.	
		3-4	No Hazard.	AVR1:0
		4-5	No Hazard.	AVR1:0
		5-6	See 19 Page.	
		7-8 only 3R3, 5	No Hazard.	AVR1:0
		8-9 only 3R3, 5	No Hazard.	AVR1:0
		10-11	No Hazard.	AVR1:0
TH101	Open		No Hazard.	AVR1:0
	Short		Normal operation.	
TR101	Open	D	See 19 Page.	AVR1:0
		S	See 19 Page.	AVR1:0
		G	See 19 Page.	AVR1:0
	Short	D-S	See 19 Page.	AVR1:0
		S-G	See 20 Page.	AVR1:0
		G-D	See 20 Page.	
TR103	Open	D	Normal operation.	
		S	Normal operation.	
		G	Normal operation.	
	Short	D-S	No Hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
TR103	Short	S-G	Normal operation.	
		G-D	No Hazard.	AVR1:0
TR104	Open	D	Normal operation.	
		S	Normal operation.	
		G	Normal operation.	
	Short	D-S	Normal operation.	
		S-G	Normal operation.	
		G-D	Normal operation.	
TR105	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	Normal operation.	
		E-B	Normal operation.	
		B-C	Normal operation.	
TR201	Open	D	See 20 Page.	
		S	See 20 Page.	
		G	See 20 Page.	
	Short	D-S	See 20 Page.	
		S-G	See 20 Page.	
		G-D	See 20 Page.	
TR501	Open	D only 3R3, 5	See 20 Page.	
		S only 3R3, 5	See 20 Page.	
		G only 3R3, 5	See 20 Page.	
	Short	D-S only 3R3, 5	See 20 Page.	

## F M E A

Component	Mode		Comment	Output Voltage (V)
TR501	Short	S-G only 3R3, 5	See 20 Page.	
		G-D only 3R3, 5	See 20 Page.	
TR502	Open	D only 3R3, 5	See 20 Page.	
		S only 3R3, 5	See 20 Page.	
		G only 3R3, 5	See 20 Page.	
	Short	D-S only 3R3, 5	See 20 Page.	
		S-G only 3R3, 5	See 20 Page.	
		G-D only 3R3, 5	See 20 Page.	
TR503	Open	D only 3R3, 5	See 20 Page.	
		S only 3R3, 5	See 20 Page.	
		G only 3R3, 5	See 20 Page.	
	Short	D-S only 3R3, 5	See 20 Page.	
		S-G only 3R3, 5	See 21 Page.	
		G-D only 3R3, 5	See 21 Page.	
TR504	Open	D only 3R3, 5	See 21 Page.	
		S only 3R3, 5	See 21 Page.	
		G only 3R3, 5	See 21 Page.	
	Short	D-S only 3R3, 5	Normal operation.	
		S-G only 3R3, 5	Normal operation.	
		G-D only 3R3, 5	Normal operation.	
VR601	Open	brush only 3R3, 5	Output voltage decreased.	AVR1:decreased
		only 3R3, 5	No Hazard.	AVR1:0
	Short	only 3R3, 5	No Hazard.	AVR1:0
ZD101	Open		Normal operation.	

# F M E A

Component	Mode		Comment	Output Voltage (V)
ZD101	Short		Normal operation.	
ZD102	Open		Normal operation.	
	Short		Normal operation.	
ZD103	Open		Normal operation.	
	Short		Normal operation.	
ZD104	Open		Normal operation.	
	Short		Normal operation.	
ZD105	Open		Normal operation.	
	Short		Normal operation.	
ZD201	Open	except 3R3, 5	Normal operation.	
	Short	except 3R3, 5	Normal operation.	
ZD202	Open		Normal operation.	
	Short		Output voltage decreased.	AVR1:decreased
ZD501	Open		Normal operation.	
	Short		No Hazard.	AVR1:0
ZD502	Open	only 24, 36, 48	Normal operation.	
	Short	only 24, 36, 48	No Hazard.	AVR1:0
ZD503	Open	only 3R3, 5	No Hazard.	AVR1:0
	Short	only 3R3, 5	See 21 Page.	
ZD601	Open	only 36, 48	No Hazard.	
	Short	only 36, 48	Output voltage decreased.	AVR1:decreased
R101	Open		Normal operation.	
R102	Open		Normal operation.	
R103	Open		Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R104	Open	Normal operation.	
R105	Open	Normal operation.	
R114	Open	No Hazard.	AVR1:0
R118	Open	No Hazard.	AVR1:0
R119	Open	No Hazard.	AVR1:0
R120	Open	No Hazard.	AVR1:0
R121	Open	No Hazard.	AVR1:0
R122	Open	No Hazard.	AVR1:0
R123	Open	Normal operation.	
R124	Open	Normal operation.	
R125	Open	Normal operation.	
R126	Open	Normal operation.	
R127	Open	Normal operation.	
R128	Open	Normal operation.	
R129	Open	Normal operation.	
R130	Open	Normal operation.	
R131	Open	Normal operation.	
R132	Open	Normal operation.	
R133	Open	Normal operation.	
R134	Open	Normal operation.	
R135	Open	Normal operation.	
R136	Open	Normal operation.	
R137	Open	Normal operation.	
R143	Open	No Hazard.	AVR1:0

## F M E A

Component	Mode	Comment	Output Voltage (V)
R146	Open	Normal operation.	
R148	Open	Normal operation.	
R149	Open	Normal operation.	
R150	Open	Normal operation.	
R151	Open	Normal operation.	
R152	Open	No Hazard.	AVR1:0
R153	Open	No Hazard.	AVR1:0
R155	Open	Normal operation.	
R156	Open	Normal operation.	
R157	Open	No Hazard.	AVR1:0
R158	Open	No Hazard.	AVR1:0
R159	Open	No Hazard.	AVR1:0
R160	Open	No Hazard.	AVR1:0
R161	Open	No Hazard.	AVR1:0
R162	Open	No Hazard.	AVR1:0
R170	Open	Normal operation.	
R201	Open	Normal operation.	
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.	

## F M E A

Component	Mode		Comment	Output Voltage (V)
R211	Open		Normal operation.	
R212	Open		Normal operation.	
R214	Open	except 3R3, 5	Normal operation.	
R216	Open		No Hazard.	AVR1:0
R217	Open		No Hazard.	AVR1:0
R221	Open		Normal operation.	
R222	Open		Normal operation.	
R226	Open		Normal operation.	
R227	Open		Normal operation.	
R230	Open		Normal operation.	
R231	Open		Normal operation.	
R233	Open		Normal operation.	
R234	Open		Normal operation.	
R236	Open		Normal operation.	
R237	Open		Normal operation.	
R241	Open		Normal operation.	
R242	Open		Normal operation.	
R501	Open		Normal operation.	
R502	Open		Normal operation.	
R503	Open	except 3R3, 5	Normal operation.	
R505	Open		Normal operation.	
R506	Open		Normal operation.	
R507	Open		Normal operation.	
R508	Open	except 3R3, 5	Normal operation.	



## F M E A

Component	Mode		Comment	Output Voltage (V)
R509	Open	except 3R3, 5	Normal operation.	
R510	Open		Normal operation.	
R511	Open		Normal operation.	
R512	Open		Normal operation.	
R513	Open	only 3R3, 5	Normal operation.	
R514	Open	only 3R3, 5	Normal operation.	
R515	Open	only 3R3, 5	Normal operation.	
R516	Open	only 3R3, 5	Normal operation.	
R517	Open	only 3R3, 5	Normal operation.	
R518	Open	only 3R3, 5	Normal operation.	
R519	Open	only 3R3, 5	Normal operation.	
R520	Open	only 3R3, 5	Normal operation.	
R521	Open	only 3R3, 5	Normal operation.	
R522	Open		Normal operation.	
R523	Open		Normal operation.	
R524	Open		Normal operation.	
R525	Open		Normal operation.	
R526	Open	except 3R3, 5	Normal operation.	
R528	Open	only 3R3, 5	Normal operation.	
R529	Open	only 3R3, 5	Normal operation.	
R530	Open	only 3R3, 5	Normal operation.	
R531	Open		Normal operation.	
R532	Open		Normal operation.	
R533	Open		Normal operation.	

## F M E A

Component	Mode		Comment	Output Voltage (V)
R534	Open		Normal operation.	
R535	Open		Normal operation.	
R536	Open		Normal operation.	
R537	Open		Normal operation.	
R538	Open		Normal operation.	
R539	Open		Normal operation.	
R540	Open		Normal operation.	
R541	Open		Normal operation.	
R542	Open	except 3R3, 5	Normal operation.	
R543	Open	except 3R3, 5	Normal operation.	
R544	Open	except 3R3, 5	Normal operation.	
R545	Open	except 3R3, 5	Normal operation.	
R546	Open	except 3R3, 5	Normal operation.	
R560	Open	except 3R3, 5	Normal operation.	
R561	Open	except 3R3, 5	Normal operation.	
R570	Open	only 3R3, 5	Normal operation.	
R601	Open		Output voltage decreased.	AVR1:decreased
R602	Open		Output voltage decreased.	AVR1:decreased
R603	Open		Normal operation.	
R604	Open		Output voltage decreased.	AVR1:decreased
R605	Open		No Hazard.	AVR1:0
R606	Open		No Hazard.	AVR1:0
R607	Open		Output voltage decreased.	AVR1:decreased
R608	Open	except 3R3, 5	Output voltage decreased.	AVR1:decreased

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C216	Short		Normal operation.	
C217	Short		Normal operation.	
C501	Short		Normal operation.	
C502	Short		Normal operation.	
C503	Short		Normal operation.	
C504	Short		Normal operation.	
C511	Open	only 3R3, 5	Normal operation.	
C522	Open	only 3R3, 5	Normal operation.	
D209	Short		Normal operation.	
D502	Open	only 3R3, 5	Normal operation.	
L104	Short	5-6	F101 Opened, No Hazard.	AVR1:0
SS501	Open	Alternative	Normal operation.	
SS502	Open	Cathode	Normal operation.	
		Alternative	Normal operation.	
SS503	Open	Cathode	Normal operation.	
		Alternative	Normal operation.	
T201	Open	7 only 3R3, 5	Normal operation.	
		8 only 3R3, 5	Normal operation.	
	Short	1-6	No Hazard.	AVR1:0
		5-6	F101 Opened, No Hazard.	AVR1:0
TR101	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

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
TR201	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
TR501	Open	D only 3R3, 5	No Hazard.	AVR1:0
		S only 3R3, 5	No Hazard.	AVR1:0
		G only 3R3, 5	Normal operation.	
	Short	D-S only 3R3, 5	No Hazard.	AVR1:0
		S-G only 3R3, 5	Normal operation.	
		G-D only 3R3, 5	No Hazard.	AVR1:0
TR502	Open	D only 3R3, 5	Normal operation.	
		S only 3R3, 5	Normal operation.	
		G only 3R3, 5	Normal operation.	
	Short	D-S only 3R3, 5	No Hazard.	AVR1:0
		S-G only 3R3, 5	Normal operation.	
		G-D only 3R3, 5	No Hazard.	AVR1:0
TR503	Open	D only 3R3, 5	Normal operation.	
		S only 3R3, 5	Normal operation.	
		G only 3R3, 5	Normal operation.	
	Short	D-S only 3R3, 5	No Hazard.	AVR1:0

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR503	Short	S-G only 3R3, 5	Normal operation.	
		G-D only 3R3, 5	No Hazard.	AVR1:0
TR504	Open	D only 3R3, 5	Normal operation.	
		S only 3R3, 5	Normal operation.	
		G only 3R3, 5	Normal operation.	
ZD503	Short	only 3R3, 5	Normal operation.	