

ABNORMAL TEST RESULT

OF MODEL LEP240F

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 : 2/25 ~ 22/25)

(Abnormal Test Result: 23/25 ~ 25/25)

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.	0V
C102	Open	Normal operation.	
	Short	F101 opened, No hazard.	0V
C103	Open	Normal operation.	
	Short	F101 opened, No hazard.	0V
C104	Open	Normal operation.	
	Short	F101 opened, No hazard.	0V
C108	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C109	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C110	Open	Normal operation.	
	Short	Normal operation.	
C111	Open	See 23 Page.	
	Short	See 23 Page.	
C112	Open	See 23 Page.	
	Short	See 23 Page.	
C113	Open	Normal operation.	
	Short	R122, R151, R152 opened, No hazard.	0V
C114	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C115	Open	F101 opened, No hazard.	0V
	Short	R151, R152 opened, No hazard.	0V

F M E A

Component	Mode	Comment	Output Voltage (V)
C116	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C117	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C118	Open	Normal operation.	
	Short	Normal operation.	
C119	Open	Normal operation.	
	Short	F101 opened, No hazard.	0V
C120	Open	Normal operation.	
	Short	F101 opened, No hazard.	0V
C121	Open	Normal operation.	
	Short	Normal operation.	
C122	Open	Normal operation.	
	Short	Normal operation.	
C123	Open	Normal operation.	
	Short	Normal operation.	
C124	Open	Normal operation.	
	Short	Normal operation.	
C131	Open	Normal operation.	
	Short	Normal operation.	
C151	Open	R151, R152 opened, No hazard.	0V
	Short	R151, R152 opened, No hazard.	0V
C152	Open	R151, R152 opened, No hazard.	0V
	Short	Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
C170	Open	Normal operation.	
	Short	R151, R152 opened, No hazard.	0V
C201	Open	See 23 Page.	
	Short	No hazard.	0V
C202	Open	Normal operation.	
	Short	Normal operation.	
C203	Open	See 23 Page.	
	Short	No hazard.	0V
C204	Open	Normal operation.	
	Short	Normal operation.	
C205	Open	No hazard.	Decreased
	Short	Normal operation.	
C206	Open	Normal operation.	
	Short	Normal operation.	
C207	Open	Normal operation.	
	Short	Normal operation.	
C208	Open	Normal operation.	
	Short	Normal operation.	
C231	Open	Normal operation.	
	Short	Normal operation.	
C232	Open	Normal operation.	
	Short	Normal operation.	
C233	Open	Normal operation.	
	Short	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
C234	Open		Normal operation.	
	Short		Normal operation.	
C235	Open		Normal operation.	
	Short		Normal operation.	
C251	Open		No hazard.	Decreased
	Short		Normal operation.	
C252	Open		Normal operation.	
	Short		Normal operation.	
C501	Open		Normal operation.	
	Short		Normal operation.	
C502	Open		Normal operation.	
	Short		Normal operation.	
C503	Open	only -24	Normal operation.	
	Short	only -24	Normal operation.	
C504	Open	only -24	Normal operation.	
	Short	only -24	Normal operation.	
C505	Open		Normal operation.	
	Short		Normal operation.	
C506	Open		Normal operation.	
	Short		Normal operation.	
C507	Open		Normal operation.	
	Short		No hazard.	0V
C508	Open		Normal operation.	
	Short		No hazard.	0V

F M E A

Component	Mode		Comment	Output Voltage (V)
C510	Open	Except -48	No hazard.	Decreased
	Short	Except -48	No hazard.	Decreased
C515	Open		Normal operation.	
	Short		Normal operation.	
C516	Open		Normal operation.	
	Short		Normal operation.	
C518	Open	only -48	No hazard.	Decreased
	Short	only -48	No hazard.	Decreased
D103	Open		R151, R152 opened, No hazard.	0V
	Short		Normal operation.	
D104	Open		Normal operation.	
	Short		Normal operation.	
D105	Open		Normal operation.	
	Short		Normal operation.	
D106	Open		See 23 Page.	
	Short		See 23 Page.	
D107	Open		See 23 Page.	
	Short		See 23 Page.	
D108	Open		Normal operation.	
	Short		R122, R151, R152 opened, No hazard.	0V
D109	Open		Normal operation.	
	Short		Normal operation.	
D110	Open		Normal operation.	
	Short		Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
D151	Open	R151, R152 opened, No hazard.	0V
	Short	R151, R152 opened, No hazard.	0V
D152	Open	R151, R152 opened, No hazard.	0V
	Short	R151, R152 opened, No hazard.	0V
D201	Open	No hazard.	0V
	Short	Normal operation.	
D202	Open	No hazard.	0V
	Short	Normal operation.	
D203	Open	Normal operation.	
	Short	No hazard.	0V
D204	Open	Normal operation.	
	Short	Normal operation.	
D205	Open	Normal operation.	
	Short	Normal operation.	
D230	Open	Normal operation.	
	Short	Normal operation.	
D231	Open	Normal operation.	
	Short	Normal operation.	
D232	Open	Normal operation.	
	Short	Normal operation.	
D233	Open	Normal operation.	
	Short	Normal operation.	
D251	Open	Normal operation.	
	Short	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC101	Open	1	Normal operation.	
		2	Normal operation.	
		3	Normal operation.	
		4	Normal operation.	
		5	Normal operation.	
		6	Normal operation.	
		7	F101 opened, No hazard.	0V
		8	F101 opened, No hazard.	0V
		9	R151, R152 opened, No hazard.	0V
		10	R151, R152 opened, No hazard.	0V
		11	Normal operation.	
		12	R151, R152 opened, No hazard.	0V
		13	F101 opened, No hazard.	0V
		14	Normal operation.	
		15	F101 opened, No hazard.	0V
		16	F101 opened, No hazard.	0V
	Short	1-2	R151, R152 opened, No hazard.	0V
		2-3	Normal operation.	
		3-4	Normal operation.	
		4-5	R151, R152 opened, No hazard.	0V
		5-6	R151, R152 opened, No hazard.	0V
		6-7	Normal operation.	
		7-8	R151, R152 opened, No hazard.	0V
		9-10	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC101	Short	10-11	R151, R152 opened, No hazard.	0V
		11-12	Normal operation.	
		12-13	Normal operation.	
		13-14	R151, R152 opened, No hazard.	0V
		14-15	F101 opened, No hazard.	0V
		15-16	F101 opened, No hazard.	0V
IC201	Open	1	No hazard.	0V
		2	F101 opened, No hazard.	0V
		3	F101 opened, No hazard.	0V
		4	Normal operation.	
		5	Normal operation.	
		6	Normal operation.	
		7	Normal operation.	
		8	Normal operation.	
		9	Normal operation.	
		10	No hazard.	0V
		11	No hazard.	0V
		12	See 23 Page.	
		13	See 23 Page.	
		14	Normal operation.	
		15	Normal operation.	
		16	Normal operation.	
		17	No hazard.	0V
		18	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC201	Open	19	Normal operation.	
		20	No hazard.	0V
	Short	1-2	See 23 Page.	
		2-3	No hazard.	0V
		3-4	Normal operation.	
		4-5	Normal operation.	
		5-6	Normal operation.	
		6-7	Normal operation.	
		7-8	Normal operation.	
		8-9	Normal operation.	
		9-10	No hazard.	0V
		11-12	No hazard.	0V
		12-13	No hazard.	0V
		13-14	Normal operation.	
		14-15	Normal operation.	
		15-16	Normal operation.	
		16-17	Normal operation.	
		17-18	Normal operation.	
		18-19	Normal operation.	
		19-20	No hazard.	0V
IC231	Open	K	Normal operation.	
		A	Normal operation.	
		R	Normal operation.	
	Short	A-K	No hazard.	0V

F M E A

Component	Mode		Comment	Output Voltage (V)
IC231	Short	K-R	No hazard.	0V
		R-A	Normal operation.	
IC501	Open	K	No hazard.	0V
		A	No hazard.	0V
		R	No hazard.	0V
	Short	A-K	No hazard.	Decreased
		K-R	No hazard.	Decreased
		R-A	No hazard.	0V
J201	Open		No hazard.	0V
J502	Open	only -24	No hazard.	0V
L101	Open		No hazard.	0V
	Short		Normal operation.	
L102	Open		No hazard.	0V
	Short		Normal operation.	
L103	Open	2, 3or4, 5	No hazard.	0V
		7or8	See 23 Page.	
		9or10	R151, R152 opened, No hazard.	0V
	Short	2, 3-4, 5	F101 opened, No hazard.	0V
		7-8	See 23 Page.	
		9-10	R151, R152 opened, No hazard.	0V
L110	Open		F101 opened, No hazard.	0V
	Short		Normal operation.	
L111	Open		F101 opened, No hazard.	0V
	Short		Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
L507	Open		See 23 Page.	
	Short		See 23 Page.	
PC201	Open	A, K	No hazard.	0V
		C, E	No hazard.	0V
	Short	A-K	No hazard.	0V
		C-E	No hazard.	0V
PC202	Open	A, K	Normal operation.	
		C, E	Normal operation.	
	Short	A-K	Normal operation.	
		C-E	No hazard.	0V
R101	Open		Normal operation.	
R102	Open		Normal operation.	
R103	Open		Normal operation.	
R104	Open		Normal operation.	
R105	Open		Normal operation.	
R106	Open		R151, R152 opened, No hazard.	0V
R107	Open		R151, R152 opened, No hazard.	0V
R108	Open		R151, R152 opened, No hazard.	0V
R109	Open		R151, R152 opened, No hazard.	0V
R110	Open		Normal operation.	
R111	Open		R151, R152 opened, No hazard.	0V
R112	Open		Normal operation.	
R113	Open		Normal operation.	
R114	Open		Normal operation.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R115	Open	Normal operation.	
R116	Open	R151, R152 opened, No hazard.	0V
R117	Open	R151, R152 opened, No hazard.	0V
R118	Open	R151, R152 opened, No hazard.	0V
R119	Open	Normal operation.	
R120	Open	Normal operation.	
R121	Open	Normal operation.	
R122	Open	Normal operation.	
R123	Open	Normal operation.	
R124	Open	See 23 Page.	
R125	Open	See 23 Page.	
R126	Open	R151, R152 opened, No hazard.	0V
R127	Open	R151, R152 opened, No hazard.	0V
R128	Open	Normal operation.	
R129	Open	Normal operation.	
R130	Open	Normal operation.	
R131	Open	Normal operation.	
R132	Open	F101 opened, No hazard.	0V
R133	Open	Normal operation.	
R134	Open	Normal operation.	
R135	Open	Normal operation.	
R136	Open	Normal operation.	
R137	Open	Normal operation.	
R138	Open	R151, R152 opened, No hazard.	0V

F M E A

Component	Mode	Comment	Output Voltage (V)
R139	Open	Normal operation.	
R140	Open	Normal operation.	
R141	Open	Normal operation.	
R142	Open	Normal operation.	
R143	Open	R151, R152 opened, No hazard.	0V
R144	Open	Normal operation.	
R146	Open	Normal operation.	
R147	Open	Normal operation.	
R148	Open	F101 opened, No hazard.	0V
R149	Open	F101 opened, No hazard.	0V
R151	Open	Normal operation.	
R152	Open	Normal operation.	
R153	Open	Normal operation.	
R156	Open	R151, R152 opened, No hazard.	0V
R170	Open	Normal operation.	
R171	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	No hazard.	0V
R207	Open	No hazard.	0V
R208	Open	See 23 Page.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R209	Open	No hazard.	0V
R210	Open	No hazard.	0V
R211	Open	Normal operation.	
R212	Open	Normal operation.	
R213	Open	See 23 Page.	
R214	Open	Normal operation.	
R215	Open	No hazard.	Decreased
R216	Open	Normal operation.	
R217	Open	No hazard.	Decreased
R218	Open	Normal operation.	
R219	Open	Normal operation.	
R220	Open	No hazard.	Decreased
R231	Open	Normal operation.	
R232	Open	Normal operation.	
R233	Open	Normal operation.	
R234	Open	Normal operation.	
R235	Open	No hazard.	0V
R236	Open	No hazard.	0V
R237	Open	Normal operation.	
R238	Open	Normal operation.	
R239	Open	Normal operation.	
R240	Open	No hazard.	0V
R241	Open	Normal operation.	
R242	Open	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
R243	Open		Normal operation.	
R251	Open		Normal operation.	
R252	Open		No hazard.	Decreased
R254	Open		Normal operation.	
R501	Open		Normal operation.	
R502	Open		Normal operation.	
R503	Open		No hazard.	0V
R504	Open		Normal operation.	
R505	Open		No hazard.	Decreased
R506	Open		No hazard.	0V
R507	Open		No hazard.	Decreased
R508	Open	only -48	No hazard.	0V
R509	Open		No hazard.	0V
R510	Open		Normal operation.	
R511	Open		Normal operation.	
R512	Open		Normal operation.	
R513	Open		Normal operation.	
R514	Open		Normal operation.	
R515	Open		Normal operation.	
R521	Open		Normal operation.	
R522	Open		Normal operation.	
R523	Open		Normal operation.	
R524	Open		Normal operation.	
R525	Open		Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
R526	Open		Normal operation.	
R527	Open		Normal operation.	
R528	Open		Normal operation.	
R529	Open		Normal operation.	
R530	Open		Normal operation.	
R531	Open		Normal operation.	
R532	Open		Normal operation.	
R533	Open		Normal operation.	
R534	Open		Normal operation.	
R535	Open		Normal operation.	
R536	Open		Normal operation.	
R537	Open		Normal operation.	
R538	Open	Except -48	Normal operation.	
R539	Open	Except -48	Normal operation.	
R540	Open	Except -48	Normal operation.	
R543	Open	Except -48	Normal operation.	
R544	Open	Except -48	Normal operation.	
R545	Open	Except -48	Normal operation.	
R546	Open	Except -48	Normal operation.	
R547	Open	Except -48	Normal operation.	
R548	Open	Except -48	Normal operation.	
SCR151	Open	A	R151, R152 opened, No hazard.	0V
		C	R151, R152 opened, No hazard.	0V
		G	R151, R152 opened, No hazard.	0V

F M E A

Component	Mode		Comment	Output Voltage (V)
SCR151	Short	A-C	Normal operation.	
		A-G	Normal operation.	
		C-G	R151, R152 opened, No hazard.	0V
SS101	Open		No hazard.	0V
	Short		F101 opened, No hazard.	0V
SS102	Open	Cathode	F101 opened, No hazard.	0V
		Alternative anodes	Normal operation.	
	Short		F101 opened, No hazard.	0V
SS501	Open	Forward side	See 23 Page.	
		Flyback side	See 23 Page.	
		Cathode side	See 23 Page.	
	Short	Forward side	See 24 Page.	
		Flyback side	See 24 Page.	
SS502	Open	Forward side	See 24 Page.	
		Flyback side	See 24 Page.	
		Cathode side	See 24 Page.	
	Short	Forward side	See 24 Page.	
		Flyback side	See 24 Page.	
T201	Open	9or10	No hazard.	0V
		7or8	No hazard.	Decreased
		2, 3or4, 5	See 24 Page.	
	Short	9-10	F101 opened, No hazard.	0V
		7-8	F101 opened, No hazard.	0V
		2, 3-4, 5	See 24 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR101	Open	C	R151, R152 opened, No hazard.	0V
		E	R151, R152 opened, No hazard.	0V
		B	R151, R152 opened, No hazard.	0V
	Short	C-E	Normal operation.	
		E-B	R151, R152 opened, No hazard.	0V
		B-C	Normal operation.	
TR102	Open	C	R151, R152 opened, No hazard.	0V
		E	R151, R152 opened, No hazard.	0V
		B	R151, R152 opened, No hazard.	0V
	Short	C-E	Normal operation.	
		E-B	R151, R152 opened, No hazard.	0V
		B-C	Normal operation.	
TR103	Open	D	Normal operation.	
		S	Normal operation.	
		G	Normal operation.	
	Short	D-S	See 24 Page.	
		S-G	Normal operation.	
		G-D	See 24 Page.	
TR104	Open	C	See 24 Page.	
		E	See 24 Page.	
		B	See 24 Page.	
	Short	C-E	Normal operation.	
		E-B	See 24 Page.	
		B-C	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR105	Open	D	See 24 Page.	
		S	See 24 Page.	
		G	See 24 Page.	
	Short	D-S	See 24 Page.	
		S-G	See 24 Page.	
		G-D	See 24 Page.	
TR106	Open	C	R151, R152 opened, No hazard.	0V
		E	R151, R152 opened, No hazard.	0V
		B	R151, R152 opened, No hazard.	0V
	Short	C-E	See 24 Page.	
		E-B	R151, R152 opened, No hazard.	0V
		B-C	See 24 Page.	
TR107	Open	C	See 24 Page.	
		E	See 25 Page.	
		B	See 25 Page.	
	Short	C-E	R151, R152 opened, No hazard.	0V
		E-B	See 25 Page.	
		B-C	R151, R152 opened, No hazard.	0V
TR108	Open	D	See 25 Page.	
		S	See 25 Page.	
		G	See 25 Page.	
	Short	D-S	See 25 Page.	
		S-G	See 25 Page.	
		G-D	See 25 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR201	Open	D	See 25 Page.	
		S	See 25 Page.	
		G	See 25 Page.	
	Short	D-S	See 25 Page.	
		S-G	See 25 Page.	
		G-D	See 25 Page.	
TR231	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No hazard.	0V
		E-B	Normal operation.	
		B-C	No hazard.	0V
TR232	Open	C	No hazard.	0V
		E	No hazard.	0V
		B	No hazard.	0V
	Short	C-E	Normal operation.	
		E-B	No hazard.	0V
		B-C	Normal operation.	
VR201	Open	brush	No hazard.	Decreased
			No hazard.	Decreased
VR501	Open	brush	No hazard.	Decreased
			No hazard.	Decreased
ZD101	Open		R151, R152 opened, No hazard.	0V
	Short		Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
ZD102	Open		Normal operation.	
	Short		Normal operation.	
ZD103	Open		See 25 Page.	
	Short		Normal operation.	
ZD104	Open		Normal operation.	
	Short		R122, R151, R152 opened, No hazard.	0V
ZD231	Open		Normal operation.	
	Short		Normal operation.	
ZD232	Open		Normal operation.	
	Short		Normal operation.	
ZD251	Open		Normal operation.	
	Short		No hazard.	Decreased
ZD501	Open		Normal operation.	
	Short		No hazard.	0V
ZD502	Open		Normal operation.	
	Short		No hazard.	0V
ZD503	Open	Except -24	No hazard.	0V
	Short	Except -24	Normal operation.	

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C111	Open		No hazard.	0V
	Short		R122 opened, No hazard.	0V
C112	Open		Normal operation.	
	Short		Normal operation.	
C201	Open		No hazard.	0V
C203	Open		No hazard.	0V
D106	Open		Normal operation.	
	Short		Normal operation.	
D107	Open		Normal operation.	
	Short		Normal operation.	
IC201	Open	12	No hazard.	0V
		13	No hazard.	Decreased
	Short	1-2	Normal operation.	
L103	Open	7or8	Normal operation.	
	Short	7-8	F101 opened, No hazard.	0V
L507	Open		No hazard.	0V
	Short		No hazard.	0V
R124	Open		Normal operation.	
R125	Open		Normal operation.	
R208	Open		No hazard.	Decreased
R213	Open		F101 opened, No hazard.	0V
SS501	Open	Forward side	Normal operation.	
		Flyback side	Normal operation.	
		Cathode side	Normal operation.	

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
SS501	Short	Forward side	No hazard.	0V
		Flyback side	No hazard.	0V
SS502	Open	Forward side	Normal operation.	
		Flyback side	Normal operation.	
		Cathode side	Normal operation.	
	Short	Forward side	No hazard.	0V
		Flyback side	No hazard.	0V
T201	Open	2, 3 or 4, 5	No hazard.	0V
	Short	2, 3-4, 5	No hazard.	0V
TR103	Short	D-S	R122 opened, No hazard.	0V
		G-D	R122 opened, No hazard.	0V
TR104	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	E-B	Normal operation.	
TR105	Open	D	Normal operation.	
		S	Normal operation.	
		G	F101 opened, No hazard.	0V
	Short	D-S	F101 opened, No hazard.	0V
		S-G	No hazard.	0V
		G-D	F101 opened, No hazard.	0V
TR106	Short	C-E	R122 opened, No hazard.	0V
		B-C	F101 opened, No hazard.	0V
TR107	Open	C	F101 opened, No hazard.	0V

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR107	Open	E	F101 opened, No hazard.	0V
		B	F101 opened, No hazard.	0V
	Short	E-B	F101 opened, No hazard.	0V
TR108	Open	D	Normal operation.	
		S	Normal operation.	
		G	F101 opened, No hazard.	0V
	Short	D-S	F101 opened, No hazard.	0V
		S-G	No hazard.	0V
		G-D	F101 opened, No hazard.	0V
TR201	Open	D	No hazard.	0V
		S	No hazard.	0V
		G	F101 opened, No hazard.	0V
	Short	D-S	F101 opened, No hazard.	0V
		S-G	No hazard.	0V
		G-D	F101 opened, No hazard.	0V
ZD103	Open		Normal operation.	