

ABNORMAL TEST RESULT

OF MODEL BRDS60S

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 : 2/23 ~ 21/23)

(Abnormal Test Result: 22/23 ~ 23/23)

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	External Fuse opened, No hazard.	AVR1:0
C102	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0
C103	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C104	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C105	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C106	Open	Normal operation.	
	Short	Normal operation.	
C111	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0
C112	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0
C113	Open	Normal operation.	
	Short	External Fuse opened, No hazard.	AVR1:0
C121	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C122	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C123	Open	No hazard.	AVR1:0
	Short	No hazard.	AVR1:0



F M E A

Component	Mode	Comment	Output Voltage (V)
C131	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C132	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C133	Open	No hazard.	AVR1:0
	Short	No hazard.	AVR1:0
C134	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C141	Open	Normal operation.	
	Short	See 22 Page.	
C151	Open	Normal operation.	
	Short	See 22 Page.	
C201	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C202	Open	Normal operation.	
	Short	Normal operation.	
C203	Open	Normal operation.	
	Short	Normal operation.	
C204	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C205	Open	Normal operation.	
	Short	Normal operation.	
C206	Open	Normal operation.	
	Short	Normal operation.	



F M E A

Component	Mode	Comment	Output Voltage (V)
C207	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C301	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C302	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C303	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C304	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C305	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C306	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C307	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C308	Open	Normal operation.	
	Short	Normal operation.	
C309	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C310	Open	Normal operation.	
	Short	Output voltage increased. No hazard.	AVR1:Increased
C311	Open	Normal operation.	
	Short	Output voltage increased. No hazard.	AVR1:Increased

F M E A

Component	Mode	Comment	Output Voltage (V)
C312	Open	Normal operation.	
	Short	Output voltage increased. No hazard.	AVR1:Increased
C313	Open	Normal operation.	
	Short	Normal operation.	
C314	Open	Normal operation.	
	Short	Output voltage increased. No hazard.	AVR1:Increased
C401	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C403	Open	No hazard.	AVR1:0
	Short	Normal operation.	
C404	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C405	Open	No hazard.	AVR1:0
	Short	Normal operation.	
C406	Open	Output voltage decreased. No hazard.	AVR1:decreased
	Short	Normal operation.	
C407	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C501	Open	Normal operation.	
	Short	No hazard.	AVR1:0
C503	Open	No hazard.	AVR1:0
	Short	Normal operation.	
C504	Open	Normal operation.	
	Short	No hazard.	AVR1:0

F M E A

Component	Mode	Comment	Output Voltage (V)
C505	Open	No hazard.	AVR1:0
	Short	Normal operation.	
C506	Open	Output voltage decreased. No hazard.	AVR1:decreased
	Short	Normal operation.	
C603	Open	Normal operation.	
	Short	Normal operation.	
CN1	Open	No hazard.	AVR1:0
CN2	Open	No hazard.	AVR1:0
CN3	Open	Normal operation.	
CN4	Open	Normal operation.	
CN5	Open	No hazard.	AVR1:0
CN6	Open	Output voltage decreased. No hazard.	AVR1:decreased
CN7	Open	Normal operation.	
CN8	Open	Normal operation.	
CN9	Open	Normal operation.	
CN10	Open	Normal operation.	
CN11	Open	Normal operation.	
CN12	Open	Normal operation.	
CN13	Open	Normal operation.	
CN14	Open	Normal operation.	
CN15	Open	Normal operation.	
CN16	Open	Normal operation.	
CN17	Open	Normal operation.	
CN18	Open	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
CN19	Open		Normal operation.	
D201	Open	1	Normal operation.	
		2	Normal operation.	
		3	Normal operation.	
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		1-3	Normal operation.	
IC101	Open	1	Normal operation.	
		2	No hazard.	AVR1:0
		3	Normal operation.	
		4	Normal operation.	
		5	Normal operation.	
		6	No hazard.	AVR1:0
		7	No hazard.	AVR1:0
		8	Normal operation.	
	Short	1-2	No hazard.	AVR1:0
		2-3	Normal operation.	
		3-4	No hazard.	AVR1:0
		5-6	No hazard.	AVR1:0
		6-7	No hazard.	AVR1:0
		7-8	Normal operation.	
IC102	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)
IC102	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	Normal operation.	
		2-3	No hazard.	AVR1:0
		3-4	Normal operation.	
		4-5	No hazard.	AVR1:0
		5-6	Normal operation.	
		6-7	Normal operation.	
		7-8	Normal operation.	
IC121	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	See 22 Page.	
		7	No hazard.	AVR1:0
		8	Normal operation.	
		9	No hazard.	AVR1:0
		10	No hazard.	AVR1:0
	Short	1-2	External Fuse opened, No hazard.	AVR1:0
		2-3	No hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
IC121	Short	3-4	Normal operation.	
		4-5	No hazard.	AVR1:0
		5-6	See 22 Page.	
		6-7	External Fuse opened, No hazard.	AVR1:0
		7-8	No hazard.	AVR1:0
		8-9	No hazard.	AVR1:0
		9-10	No hazard.	AVR1:0
IC131	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	See 22 Page.	
		7	No hazard.	AVR1:0
		8	Normal operation.	
		9	No hazard.	AVR1:0
		10	No hazard.	AVR1:0
	Short	1-2	External Fuse opened, No hazard.	AVR1:0
		2-3	No hazard.	AVR1:0
		3-4	Normal operation.	
		4-5	No hazard.	AVR1:0
		5-6	See 22 Page.	
		6-7	External Fuse opened, No hazard.	AVR1:0
		7-8	No hazard.	AVR1:0



F M E A

Component	Mode		Comment	Output Voltage (V)
IC131	Short	8-9	No hazard.	AVR1:0
		9-10	No hazard.	AVR1:0
IC301	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	Normal operation.	
		7	Normal operation.	
		8	Normal operation.	
		9	No hazard.	AVR1:0
		10	No hazard.	AVR1:0
		11	Normal operation.	
		12	Normal operation.	
		13	Normal operation.	
		14	Normal operation.	
		15	No hazard.	AVR1:0
		16	Normal operation.	
		17	No hazard.	AVR1:0
		18	Normal operation.	
		19	No hazard.	AVR1:0
		20	Normal operation.	
		21	Normal operation.	
		22	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC301	Open	23	Normal operation.	
		24	Normal operation.	
		25	No hazard.	AVR1:0
		26	No hazard.	AVR1:0
		27	No hazard.	AVR1:0
		28	No hazard.	AVR1:0
		29	No hazard.	AVR1:0
		30	Normal operation.	
		31	Output voltage increased. No hazard.	AVR1:Increased
		32	Output voltage increased. No hazard.	AVR1:Increased
		33	Output voltage increased. No hazard.	AVR1:Increased
		34	Output voltage decreased. No hazard.	AVR1:decreased
		35	No hazard.	AVR1:0
		36	No hazard.	AVR1:0
		37	No hazard.	AVR1:0
		38	No hazard.	AVR1:0
		39	Normal operation.	
		40	Output voltage increased. No hazard.	AVR1:Increased
	Short	1-2	No hazard.	AVR1:0
		2-3	No hazard.	AVR1:0
		3-4	No hazard.	AVR1:0
		4-5	No hazard.	AVR1:0
		5-6	No hazard.	AVR1:0
		6-7	Normal operation.	



F M E A

Component	Mode		Comment	Output Voltage (V)
IC301	Short	7-8	Normal operation.	
		8-9	Normal operation.	
		9-10	No hazard.	AVR1:0
		10-11	Normal operation.	
		11-12	Normal operation.	
		12-13	Normal operation.	
		13-14	Normal operation.	
		14-15	Normal operation.	
		15-16	Normal operation.	
		16-17	Normal operation.	
		17-18	Normal operation.	
		18-19	No hazard.	AVR1:0
		19-20	No hazard.	AVR1:0
		20-21	Normal operation.	
		21-22	Normal operation.	
		22-23	Normal operation.	
		23-24	Normal operation.	
		24-25	Normal operation.	
		25-26	No hazard.	AVR1:0
		26-27	No hazard.	AVR1:0
		27-28	No hazard.	AVR1:0
		28-29	No hazard.	AVR1:0
		29-30	Normal operation.	
		30-31	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
IC301	Short	31-32	Output voltage decreased. No hazard.	AVR1:decreased
		32-33	Output voltage decreased. No hazard.	AVR1:decreased
		33-34	Output voltage increased. No hazard.	AVR1:Increased
		34-35	Output voltage decreased or increased.	AVR1:decreased or increased
		35-36	Normal operation.	
		36-37	No hazard.	AVR1:0
		37-38	Output voltage decreased No hazard.	AVR1:decreased
		38-39	Output voltage decreased No hazard.	AVR1:decreased
		39-40	No hazard.	AVR1:0
		40-1	No hazard.	AVR1:0
IC401	Open	1	Normal operation.	
		2	No hazard.	AVR1:0
		3	No hazard.	AVR1:0
		4	Normal operation.	
		5	No hazard.	AVR1:0
		6	No hazard.	AVR1:0
		7	Normal operation.	
		8	Normal operation.	
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		3-4	Normal operation.	
		5-6	Normal operation.	
		6-7	Normal operation.	
		7-8	No hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
IC601	Open	1	Normal operation.	
		2	Normal operation.	
		3	Normal operation.	
		4	Normal operation.	
		5	Normal operation.	
		6	Normal operation.	
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		3-4	Normal operation.	
		4-5	Normal operation.	AVR1:decreased
		5-6	Normal operation.	
L101	Open	1	No hazard.	AVR1:0
L141	Open	1	No hazard.	
		2	No hazard.	
		3	No hazard.	
R101	Open		No hazard.	
R103	Open		Normal operation.	
R121	Open		See 19 Page.	
R122	Open		Normal operation.	
R123	Open		See 22 Page.	
R124	Open		Normal operation.	
R131	Open		No hazard.	AVR1:0
R132	Open		Normal operation.	
R133	Open		See 22 Page.	



F M E A

Component	Mode	Comment	Output Voltage (V)
R134	Open	Normal operation.	
R135	Open	Normal operation.	
R136	Open	Normal operation.	
R141	Open	Normal operation.	
R201	Open	No hazard.	AVR1:0
R202	Open	Normal operation.	
R203	Open	No hazard.	AVR1:0
R204	Open	Normal operation.	
R205	Open	Normal operation.	
R206	Open	No hazard.	AVR1:0
R207	Open	No hazard.	AVR1:0
R208	Open	No hazard.	AVR1:0
R209	Open	Normal operation.	
R210	Open	Normal operation.	
R211	Open	Normal operation.	
R212	Open	Normal operation.	
R213	Open	No hazard.	AVR1:0
R214	Open	No hazard.	AVR1:0
R215	Open	No hazard.	AVR1:0
R216	Open	No hazard.	AVR1:0
R217	Open	No hazard.	AVR1:0
R218	Open	No hazard.	AVR1:0
R219	Open	No hazard.	AVR1:0
R220	Open	No hazard.	

F M E A

Component	Mode	Comment	Output Voltage (V)
R301	Open	No hazard.	AVR1:0
R302	Open	No hazard.	AVR1:0
R303	Open	No hazard.	AVR1:0
R304	Open	Normal operation.	
R305	Open	No hazard.	AVR1:0
R306	Open	Output voltage decreased No hazard.	AVR1:decreased
R307	Open	Output voltage increased. No hazard.	AVR1:Increased
R308	Open	Output voltage decreased No hazard.	AVR1:decreased
R309	Open	Output voltage decreased No hazard.	AVR1:decreased
R310	Open	Output voltage increased. No hazard.	AVR1:Increased
R311	Open	Normal operation.	
R312	Open	Normal operation.	
R313	Open	Output voltage decreased No hazard.	AVR1:decreased
R314	Open	No hazard.	AVR1:0
R315	Open	Normal operation.	
R316	Open	Output voltage decreased No hazard.	AVR1:decreased
R317	Open	Normal operation.	
R401	Open	Normal operation.	
R402	Open	Normal operation.	
R403	Open	Normal operation.	
R404	Open	Normal operation.	
R405	Open	Normal operation.	
R406	Open	No hazard.	AVR1:0
R407	Open	No hazard.	AVR1:0

F M E A

Component	Mode		Comment	Output Voltage (V)
R408	Open		Normal operation.	
R409	Open		Normal operation.	
R410	Open		Normal operation.	
R411	Open		No hazard.	AVR1:0
R412	Open		Normal operation.	
R501	Open		Normal operation.	
R502	Open		Normal operation.	
R503	Open		Normal operation.	
R504	Open		Normal operation.	
R505	Open		Normal operation.	
R506	Open		No hazard.	AVR1:0
R507	Open		No hazard.	AVR1:0
R508	Open		Normal operation.	
R509	Open		Normal operation.	
R510	Open		Normal operation.	
R511	Open		No hazard.	AVR1:0
R512	Open		Normal operation.	
R601	Open		Normal operation.	
R603	Open		Normal operation.	
TH221	Open		Normal operation.	
	Short		No hazard.	AVR1:0
TH231	Open		Normal operation.	
	Short		No hazard.	AVR1:0
TR121	Open	G (Hi)	See 22 Page.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR121	Open	D (Hi)	See 22 Page.	
		S (Hi), D (Lo)	See 22 Page.	
		G (Lo)	See 22 Page.	
		S (Lo)	See 22 Page.	
	Short	D (Hi) - S (Hi)	See 22 Page.	
		D (Hi) - S (Lo)	See 22 Page.	
		S (Hi) - G (Hi)	See 22 Page.	
		G (Hi) - D (Hi)	See 22 Page.	
		D (Lo) - S (Lo)	See 22 Page.	
		S (Lo) - G (Lo)	See 22 Page.	
		G (Lo) - D (Lo)	See 22 Page.	
TR131	Open	G (Hi)	See 22 Page.	
		D (Hi)	See 22 Page.	
		S (Hi), D (Lo)	See 22 Page.	
		G (Lo)	See 22 Page.	
		S (Lo)	See 23 Page.	
	Short	D (Hi) - S (Hi)	See 23 Page.	
		D (Hi) - S (Lo)	See 23 Page.	
		S (Hi) - G (Hi)	See 23 Page.	
		G (Hi) - D (Hi)	See 23 Page.	
		D (Lo) - S (Lo)	See 23 Page.	
		S (Lo) - G (Lo)	See 23 Page.	
		G (Lo) - D (Lo)	See 23 Page.	
TR201	Open	D	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR201	Open	S	Normal operation.	
		G	Normal operation.	AVR1:Increased
	Short	D-S	Normal operation.	
		S-G	Normal operation.	
TR202	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	Normal operation.	
		E-B	Normal operation.	
		B-C	No hazard.	AVR1:0
TR203	Open	C	Normal operation.	
		E	Normal operation.	
		B	Normal operation.	
	Short	C-E	No hazard.	AVR1:0
		E-B	Normal operation.	
		B-C	No hazard.	AVR1:0
TR301	Open	1 (1)	Normal operation.	
		1 (2)	Normal operation.	
		2 (3)	Normal operation.	
		2 (4)	Output voltage increased. No hazard.	AVR1:Increased
		2 (5)	Output voltage increased. No hazard.	AVR1:Increased
		1 (6)	Normal operation.	
	Short	1-1 (1-2)	Normal operation.	
		1-2 (2-3)	Normal operation.	

F M E A

Component	Mode		Comment	Output Voltage (V)
TR301	Short	2-2 (4-5)	Normal operation.	
		2-1 (5-6)	Output voltage increased. No hazard.	AVR1:Increased
TR501	Open	D (6)	Normal operation.	
		S (1)	Normal operation.	
		G (2)	Normal operation.	
		D (3)	Normal operation.	
		S (4)	Normal operation.	
		G (5)	Normal operation.	
	Short	S (1)-G (2)	Normal operation.	
		G (2)-D (3)	Normal operation.	
		S (4)-G (5)	Normal operation.	
		G (5)-D (6)	Normal operation.	
ZD201	Open		Normal operation.	
	Short		No hazard.	AVR1:0
ZD202	Open		Normal operation.	
	Short		Normal operation.	
ZD301	Open		Normal operation.	
	Short		Output voltage increased. No hazard.	AVR1:Increased
ZD601	Open	1	Normal operation.	
		2	Normal operation.	
		3	Normal operation.	
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		1-3	Normal operation.	



F M E A

Component	Mode		Comment	Output Voltage (V)
ZD602	Open		Normal operation.	
	Short		Normal operation.	
ZD603	Open	1	Normal operation.	
		2	Normal operation.	
		3	Normal operation.	
	Short	1-2	Normal operation.	
		2-3	Normal operation.	
		1-3	Normal operation.	

ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
C141	Short		No hazard.	AVR1:0
C151	Short		No hazard.	AVR1:0
IC121	Open	6	No hazard.	AVR1:*
	Short	5-6	No hazard.	AVR1:*
IC131	Open	6	No hazard.	AVR1:*
	Short	5-6	No hazard.	AVR1:*
R123	Open		No hazard.	AVR1:*
R133	Open		No hazard.	AVR1:*
TR121	Open	G(Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D(Hi)	No hazard.	AVR1:*
		S(Hi), D(Lo)	No hazard.	AVR1:*
		G(Lo)	External Fuse opened, No hazard.	AVR1:0
		S(Lo)	No hazard.	AVR1:*
	Short	D(Hi)-S(Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D(Hi)-S(Lo)	External Fuse opened, No hazard.	AVR1:0
		S(Hi)-G(Hi)	No hazard.	AVR1:*
		G(Hi)-D(Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D(Lo)-S(Lo)	External Fuse opened, No hazard.	AVR1:0
		S(Lo)-G(Lo)	No hazard.	AVR1:*
		G(Lo)-D(Lo)	No hazard.	AVR1:*
TR131	Open	G(Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D(Hi)	No hazard.	AVR1:*
		S(Hi), D(Lo)	No hazard.	AVR1:*
		G(Lo)	External Fuse opened, No hazard.	AVR1:0



ABNORMAL TEST RESULT

Component	Mode		Comment	Output Voltage (V)
TR131	Open	S (Lo)	No hazard.	AVR1:*
	Short	D (Hi) - S (Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D (Hi) - S (Lo)	External Fuse opened, No hazard.	AVR1:0
		S (Hi) - G (Hi)	No hazard.	AVR1:*
		G (Hi) - D (Hi)	Output voltage increased. No hazard.	AVR1:Increased
		D (Lo) - S (Lo)	External Fuse opened, No hazard.	AVR1:0
		S (Lo) - G (Lo)	No hazard.	AVR1:*
		G (Lo) - D (Lo)	No hazard.	AVR1:*