

# TEST DATA OF BRFS100

Regulated DC Power Supply  
November 27, 2014

Approved by : Yoshimichi Hirokawa  
Yoshimichi Hirokawa Design Manager

Prepared by : Shohei Mukaide  
Shohei Mukaide Design Engineer

**COSEL CO.,LTD.**

## CONTENTS

1.Input Current (by Input Voltage) . . . . .	1
2.Input Current (by Load Current) . . . . .	2
3.Input Power (by Load Current) . . . . .	3
4.Efficiency (by Input Voltage) . . . . .	4
5.Efficiency (by Load Current) . . . . .	5
6.Line Regulation . . . . .	6
7.Load Regulation . . . . .	7
8.Dynamic Load Response . . . . .	8
9.Ripple Voltage (by Load Current) . . . . .	9
10.Ripple-Noise . . . . .	10
11.Ripple Voltage (by Ambient Temperature) . . . . .	11
12.Ambient Temperature Drift . . . . .	12
13.Output Voltage Accuracy . . . . .	13
14.Time Lapse Drift . . . . .	14
15.Rise and Fall Time . . . . .	15
16.Minimum Input Voltage for Regulated Output Voltage . . . . .	16
17.Overcurrent Protection . . . . .	17
18.Figure of Testing Circuitry . . . . .	18

(Final Page 18)

Model		BRFS100																																																																																				
Item		Input Current (by Input Voltage)																																																																																				
Object		+1.2V																																																																																				
1.Graph		2.Values																																																																																				
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>Load 100%</div><div>Load 50%</div><div>Load 0%</div></div></div><p>Note: Slanted line shows the range of the rated input voltage.</p></div>		<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Load 0%</th><th>Load 50%</th><th>Load 100%</th></tr><tr><td>0.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr><tr><td>2.0</td><td>0.005</td><td>0.005</td><td>0.005</td></tr><tr><td>4.0</td><td>0.033</td><td>0.033</td><td>0.034</td></tr><tr><td>4.5</td><td>0.208</td><td>14.690</td><td>30.716</td></tr><tr><td>5.0</td><td>0.218</td><td>13.148</td><td>27.359</td></tr><tr><td>5.2</td><td>0.224</td><td>12.631</td><td>26.247</td></tr><tr><td>6.0</td><td>0.225</td><td>10.937</td><td>22.651</td></tr><tr><td>8.0</td><td>0.229</td><td>8.208</td><td>17.091</td></tr><tr><td>10.0</td><td>0.235</td><td>6.603</td><td>13.643</td></tr><tr><td>12.0</td><td>0.242</td><td>5.543</td><td>11.368</td></tr><tr><td>14.0</td><td>0.248</td><td>4.792</td><td>9.791</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Input Voltage [V]	Input Current [A]			Load 0%	Load 50%	Load 100%	0.0	0.000	0.000	0.000	2.0	0.005	0.005	0.005	4.0	0.033	0.033	0.034	4.5	0.208	14.690	30.716	5.0	0.218	13.148	27.359	5.2	0.224	12.631	26.247	6.0	0.225	10.937	22.651	8.0	0.229	8.208	17.091	10.0	0.235	6.603	13.643	12.0	0.242	5.543	11.368	14.0	0.248	4.792	9.791	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Input Voltage [V]	Input Current [A]																																																																																					
	Load 0%	Load 50%	Load 100%																																																																																			
0.0	0.000	0.000	0.000																																																																																			
2.0	0.005	0.005	0.005																																																																																			
4.0	0.033	0.033	0.034																																																																																			
4.5	0.208	14.690	30.716																																																																																			
5.0	0.218	13.148	27.359																																																																																			
5.2	0.224	12.631	26.247																																																																																			
6.0	0.225	10.937	22.651																																																																																			
8.0	0.229	8.208	17.091																																																																																			
10.0	0.235	6.603	13.643																																																																																			
12.0	0.242	5.543	11.368																																																																																			
14.0	0.248	4.792	9.791																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			
--	-	-	-																																																																																			

Model	BRFS100																																																									
Item	Input Current (by Load Current)	Temperature	25°C																																																							
		Testing Circuitry	Figure A																																																							
Object	+1.2V																																																									
1.Graph		2.Values																																																								
<div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>---□---</div><div>Input Volt.</div><div>12V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>14V</div></div></div> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 14[V]</th></tr><tr><td>0</td><td>0.208</td><td>0.242</td><td>0.249</td></tr><tr><td>20</td><td>5.771</td><td>2.318</td><td>2.028</td></tr><tr><td>40</td><td>11.561</td><td>4.454</td><td>3.861</td></tr><tr><td>60</td><td>17.634</td><td>6.669</td><td>5.758</td></tr><tr><td>80</td><td>24.010</td><td>8.976</td><td>7.734</td></tr><tr><td>100</td><td>30.716</td><td>11.368</td><td>9.791</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Input Current [A]			Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]	0	0.208	0.242	0.249	20	5.771	2.318	2.028	40	11.561	4.454	3.861	60	17.634	6.669	5.758	80	24.010	8.976	7.734	100	30.716	11.368	9.791	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Current [A]																																																									
	Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]																																																							
0	0.208	0.242	0.249																																																							
20	5.771	2.318	2.028																																																							
40	11.561	4.454	3.861																																																							
60	17.634	6.669	5.758																																																							
80	24.010	8.976	7.734																																																							
100	30.716	11.368	9.791																																																							
--	-	-	-																																																							
--	-	-	-																																																							
--	-	-	-																																																							
--	-	-	-																																																							
--	-	-	-																																																							
--	-	-	-																																																							

-

2

-

BC - 10871

Model	BRFS100																																																					
Item	Input Power (by Load Current)	Temperature	25°C																																																			
		Testing Circuitry	Figure A																																																			
Object	+1.2V																																																					
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>---□---</div><div>Input Volt.</div><div>12V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>14V</div></div></div> <p>Input Power [W]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Power [W]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 14[V]</th></tr><tr><td>0</td><td>0.9</td><td>2.9</td><td>3.5</td></tr><tr><td>20</td><td>25.68</td><td>27.69</td><td>28.30</td></tr><tr><td>40</td><td>51.44</td><td>53.20</td><td>53.87</td></tr><tr><td>60</td><td>78.46</td><td>79.65</td><td>80.34</td></tr><tr><td>80</td><td>106.84</td><td>107.21</td><td>107.91</td></tr><tr><td>100</td><td>136.67</td><td>135.77</td><td>136.61</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Input Power [W]			Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]	0	0.9	2.9	3.5	20	25.68	27.69	28.30	40	51.44	53.20	53.87	60	78.46	79.65	80.34	80	106.84	107.21	107.91	100	136.67	135.77	136.61	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Power [W]																																																					
	Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]																																																			
0	0.9	2.9	3.5																																																			
20	25.68	27.69	28.30																																																			
40	51.44	53.20	53.87																																																			
60	78.46	79.65	80.34																																																			
80	106.84	107.21	107.91																																																			
100	136.67	135.77	136.61																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

- 3 -

BC - 10871

Model	BRFS100	Temperature 25°C Testing Circuitry Figure A																															
Item	Efficiency (by Input Voltage)																																
Object	+1.2V																																
1.Graph		2.Values																															
<div><div><div>---□---</div><div>Load 50%</div></div><div><div>—△—</div><div>Load 100%</div></div></div> <table><thead><tr><th>Input Voltage [V]</th><th>Load 50% Efficiency [%]</th><th>Load 100% Efficiency [%]</th></tr></thead><tbody><tr><td>4.5</td><td>92.6</td><td>88.0</td></tr><tr><td>5.0</td><td>92.7</td><td>88.6</td></tr><tr><td>8.0</td><td>92.1</td><td>89.0</td></tr><tr><td>10.0</td><td>91.4</td><td>88.9</td></tr><tr><td>12.0</td><td>90.7</td><td>88.7</td></tr><tr><td>14.0</td><td>89.9</td><td>88.1</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table> <p>Note: Slanted line shows the range of the rated input voltage.</p>		Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]	4.5	92.6	88.0	5.0	92.7	88.6	8.0	92.1	89.0	10.0	91.4	88.9	12.0	90.7	88.7	14.0	89.9	88.1	--	-	-	--	-	-	--	-	-		
Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]																															
4.5	92.6	88.0																															
5.0	92.7	88.6																															
8.0	92.1	89.0																															
10.0	91.4	88.9																															
12.0	90.7	88.7																															
14.0	89.9	88.1																															
--	-	-																															
--	-	-																															
--	-	-																															

# COSEL

Model	BRFS100																																																					
Item	Efficiency (by Load Current)	Temperature	25°C																																																			
		Testing Circuitry	Figure A																																																			
Object	+1.2V																																																					
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>---□---</div><div>Input Volt.</div><div>12V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>14V</div></div></div> <p>Efficiency [%]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 14[V]</th></tr><tr><td>0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>20</td><td>93.6</td><td>86.9</td><td>84.9</td></tr><tr><td>40</td><td>93.4</td><td>90.4</td><td>89.2</td></tr><tr><td>60</td><td>91.9</td><td>90.6</td><td>89.8</td></tr><tr><td>80</td><td>90.0</td><td>89.8</td><td>89.2</td></tr><tr><td>100</td><td>88.0</td><td>88.7</td><td>88.1</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Efficiency [%]			Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]	0	-	-	-	20	93.6	86.9	84.9	40	93.4	90.4	89.2	60	91.9	90.6	89.8	80	90.0	89.8	89.2	100	88.0	88.7	88.1	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Efficiency [%]																																																					
	Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]																																																			
0	-	-	-																																																			
20	93.6	86.9	84.9																																																			
40	93.4	90.4	89.2																																																			
60	91.9	90.6	89.8																																																			
80	90.0	89.8	89.2																																																			
100	88.0	88.7	88.1																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

-

5

-

BC - 10871

Model		BRFS100	
Item		Line Regulation	
Object		+1.2V100A	
1.Graph		2.Values	

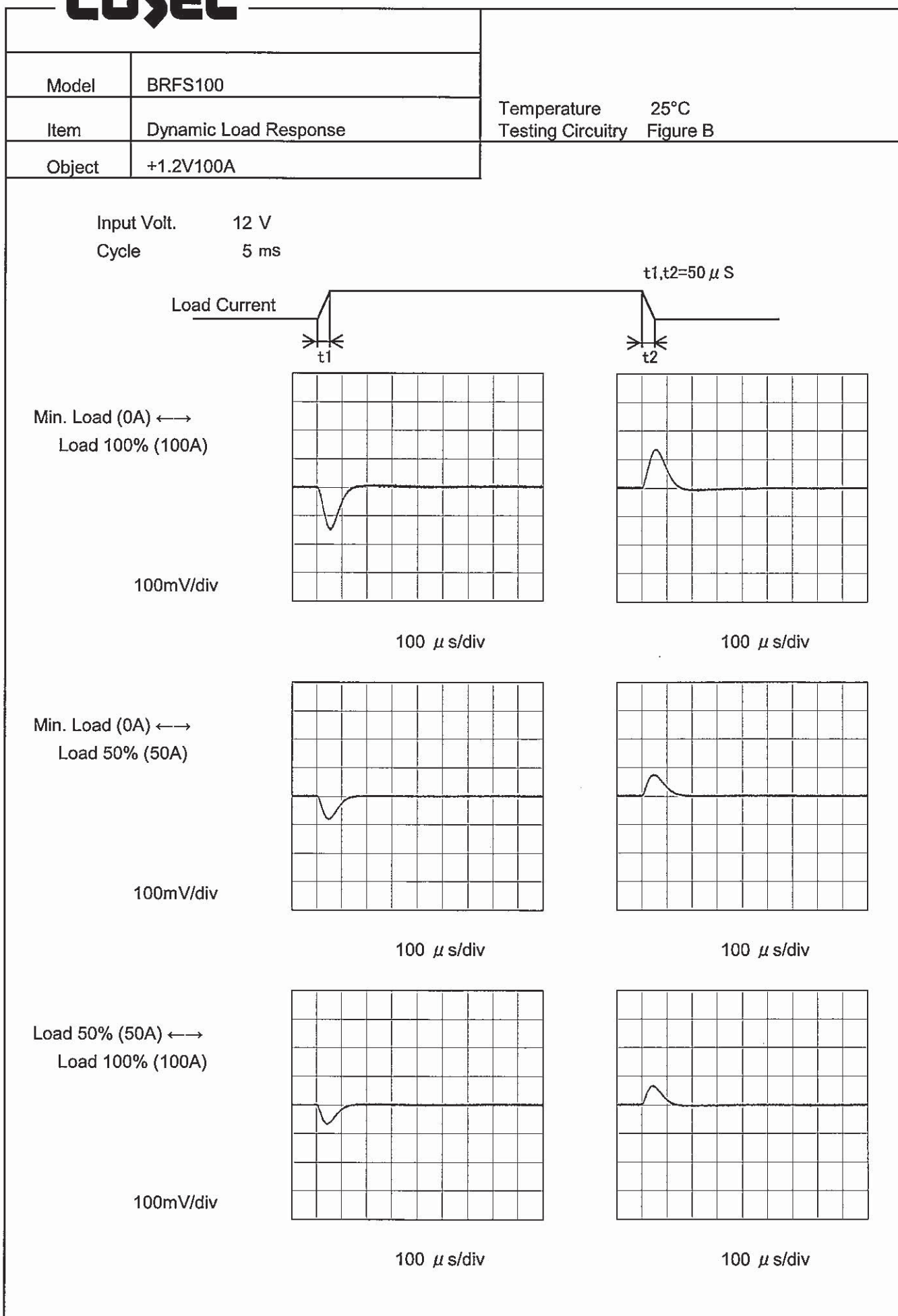
<



Model		BRFS100		Temperature Testing Circuitry	25°C Figure A																																																			
Item		Load Regulation																																																						
Object		+1.2V100A																																																						
1.Graph		<div><div><div>—△—</div>Input Volt. 4.5V</div><div><div>---□---</div>Input Volt. 12V</div><div><div>---○---</div>Input Volt. 14V</div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p>		2.Values																																																				
				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 14[V]</th></tr><tr><td>0</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>20</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>40</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>60</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>80</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>100</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Output Voltage [V]			Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]	0	1.201	1.202	1.201	20	1.201	1.202	1.201	40	1.201	1.202	1.201	60	1.201	1.202	1.201	80	1.201	1.202	1.201	100	1.201	1.202	1.201	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Output Voltage [V]																																																							
	Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]																																																					
0	1.201	1.202	1.201																																																					
20	1.201	1.202	1.201																																																					
40	1.201	1.202	1.201																																																					
60	1.201	1.202	1.201																																																					
80	1.201	1.202	1.201																																																					
100	1.201	1.202	1.201																																																					
--	-	-	-																																																					
--	-	-	-																																																					
--	-	-	-																																																					
--	-	-	-																																																					
--	-	-	-																																																					

Note: Slanted line shows the range of the rated load current.

Note: Slanted line shows the range of the rated load current.



Model		BRFS100		Temperature 25°C Testing Circuitry Figure C																																									
Item		Ripple Voltage (by Load Current)																																											
Object		+1.2V100A																																											
1.Graph																																													
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>Input Volt.</div><div>5V</div></div><div><div>Input Volt.</div><div>12V</div></div></div><div><table><thead><tr><th>Load Current [A]</th><th>Input Volt. 5 [V]</th><th>Input Volt. 12 [V]</th></tr></thead><tbody><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>20</td><td>2</td><td>2</td></tr><tr><td>40</td><td>2</td><td>2</td></tr><tr><td>60</td><td>3</td><td>2</td></tr><tr><td>80</td><td>3</td><td>2</td></tr><tr><td>100</td><td>4</td><td>2</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table></div></div> <div><div>Measured by 20 MHz Oscilloscope.</div><div>Ripple Voltage is shown as p-p in the figure below.</div><div>Note: Slanted line shows the range of the rated load current.</div></div> <div><div><div>Ripple [mVp-p]</div><div></div></div><div>Fig.Complex Ripple Wave Form</div></div>					Load Current [A]	Input Volt. 5 [V]	Input Volt. 12 [V]	0	1	1	20	2	2	40	2	2	60	3	2	80	3	2	100	4	2	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	2.Values				
Load Current [A]	Input Volt. 5 [V]	Input Volt. 12 [V]																																											
0	1	1																																											
20	2	2																																											
40	2	2																																											
60	3	2																																											
80	3	2																																											
100	4	2																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											
<table><thead><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 5 [V]</th><th>Input Volt. 12 [V]</th></tr></thead><tbody><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>20</td><td>2</td><td>2</td></tr><tr><td>40</td><td>2</td><td>2</td></tr><tr><td>60</td><td>3</td><td>2</td></tr><tr><td>80</td><td>3</td><td>2</td></tr><tr><td>100</td><td>4</td><td>2</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table>					Load Current [A]	Ripple Voltage [mV]		Input Volt. 5 [V]	Input Volt. 12 [V]	0	1	1	20	2	2	40	2	2	60	3	2	80	3	2	100	4	2	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-			
Load Current [A]	Ripple Voltage [mV]																																												
	Input Volt. 5 [V]	Input Volt. 12 [V]																																											
0	1	1																																											
20	2	2																																											
40	2	2																																											
60	3	2																																											
80	3	2																																											
100	4	2																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											
--	-	-																																											

-

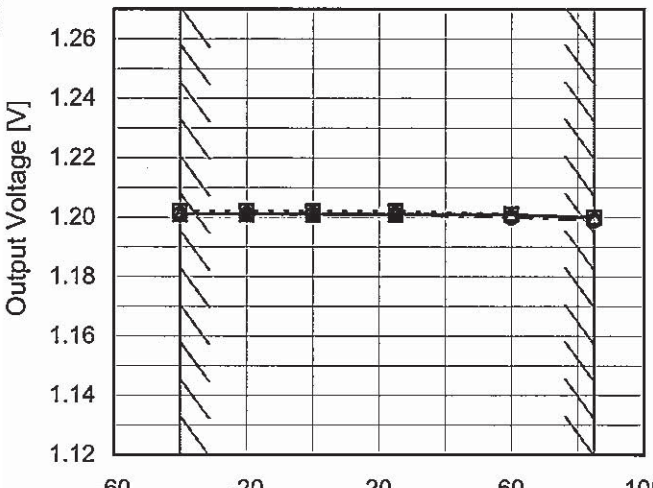
9

-

BC - 10871

Model		BRFS100	Temperature 25°C Testing Circuitry Figure C																																					
Item		Ripple-Noise																																						
Object		+1.2V100A																																						
1.Graph		<div><div><div><div><div></div><div>—△—</div><div>Input Volt. 5V</div></div><div><div>---○---</div><div>Input Volt. 12V</div></div></div><table><thead><tr><th>Load Current [A]</th><th>Input Volt. 5 [V]</th><th>Input Volt. 12 [V]</th></tr></thead><tbody><tr><td>0.000</td><td>6</td><td>9</td></tr><tr><td>20.000</td><td>7</td><td>10</td></tr><tr><td>40.000</td><td>8</td><td>10</td></tr><tr><td>60.000</td><td>10</td><td>10</td></tr><tr><td>80.000</td><td>12</td><td>11</td></tr><tr><td>100.000</td><td>13</td><td>11</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table></div></div>	Load Current [A]	Input Volt. 5 [V]	Input Volt. 12 [V]	0.000	6	9	20.000	7	10	40.000	8	10	60.000	10	10	80.000	12	11	100.000	13	11	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	2.Values	
Load Current [A]	Input Volt. 5 [V]	Input Volt. 12 [V]																																						
0.000	6	9																																						
20.000	7	10																																						
40.000	8	10																																						
60.000	10	10																																						
80.000	12	11																																						
100.000	13	11																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
		<table><thead><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 5 [V]</th><th>Input Volt. 12 [V]</th></tr></thead><tbody><tr><td>0.000</td><td>6</td><td>9</td></tr><tr><td>20.000</td><td>7</td><td>10</td></tr><tr><td>40.000</td><td>8</td><td>10</td></tr><tr><td>60.000</td><td>10</td><td>10</td></tr><tr><td>80.000</td><td>12</td><td>11</td></tr><tr><td>100.000</td><td>13</td><td>11</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table>	Load Current [A]	Ripple-Noise [mV]		Input Volt. 5 [V]	Input Volt. 12 [V]	0.000	6	9	20.000	7	10	40.000	8	10	60.000	10	10	80.000	12	11	100.000	13	11	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple-Noise [mV]																																							
	Input Volt. 5 [V]	Input Volt. 12 [V]																																						
0.000	6	9																																						
20.000	7	10																																						
40.000	8	10																																						
60.000	10	10																																						
80.000	12	11																																						
100.000	13	11																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						
Measured by 20 MHz Oscilloscope. Ripple-Noise is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.																																								
Fig.Complex Ripple Noise Wave Form																																								

Model		BRFS100	Testing Circuitry    Figure C
Item		Ripple Voltage (by Ambient Temp.)	
Object		+1.2V100A	
1.Graph			
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div>&lt;</div></div></div>			

Model		BRFS100																																																				
Item		Ambient Temperature Drift																																																				
Object		+1.2V100A																																																				
1.Graph		<div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>---□---</div><div>Input Volt.</div><div>12V</div></div><div><div>---○---</div><div>Input Volt.</div><div>14V</div></div></div> <div><p>Output Voltage [V]</p><p>Ambient Temperature [°C]</p><p>Load 100%</p><p>Note: Slanted line shows the range of the rated ambient temperature.</p></div>		2.Values																																																		
		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 14[V]</th></tr><tr><td>-40</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>-20</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>0</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>25</td><td>1.201</td><td>1.202</td><td>1.201</td></tr><tr><td>60</td><td>1.201</td><td>1.201</td><td>1.200</td></tr><tr><td>85</td><td>1.200</td><td>1.200</td><td>1.199</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]	-40	1.201	1.202	1.201	-20	1.201	1.202	1.201	0	1.201	1.202	1.201	25	1.201	1.202	1.201	60	1.201	1.201	1.200	85	1.200	1.200	1.199	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
	Input Volt. 4.5[V]	Input Volt. 12[V]	Input Volt. 14[V]																																																			
-40	1.201	1.202	1.201																																																			
-20	1.201	1.202	1.201																																																			
0	1.201	1.202	1.201																																																			
25	1.201	1.202	1.201																																																			
60	1.201	1.201	1.200																																																			
85	1.200	1.200	1.199																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

Model		BRFS100	Testing Circuitry Figure A
Item		Output Voltage Accuracy	
Object		+1.2V100A	

### 1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -40 - 85°C

Input Voltage : 4.5 - 14V

Load Current : 0 - 100A

\* Output Voltage Accuracy =  $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

\* Output Voltage Accuracy (Ration) =  $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

### 2. Values

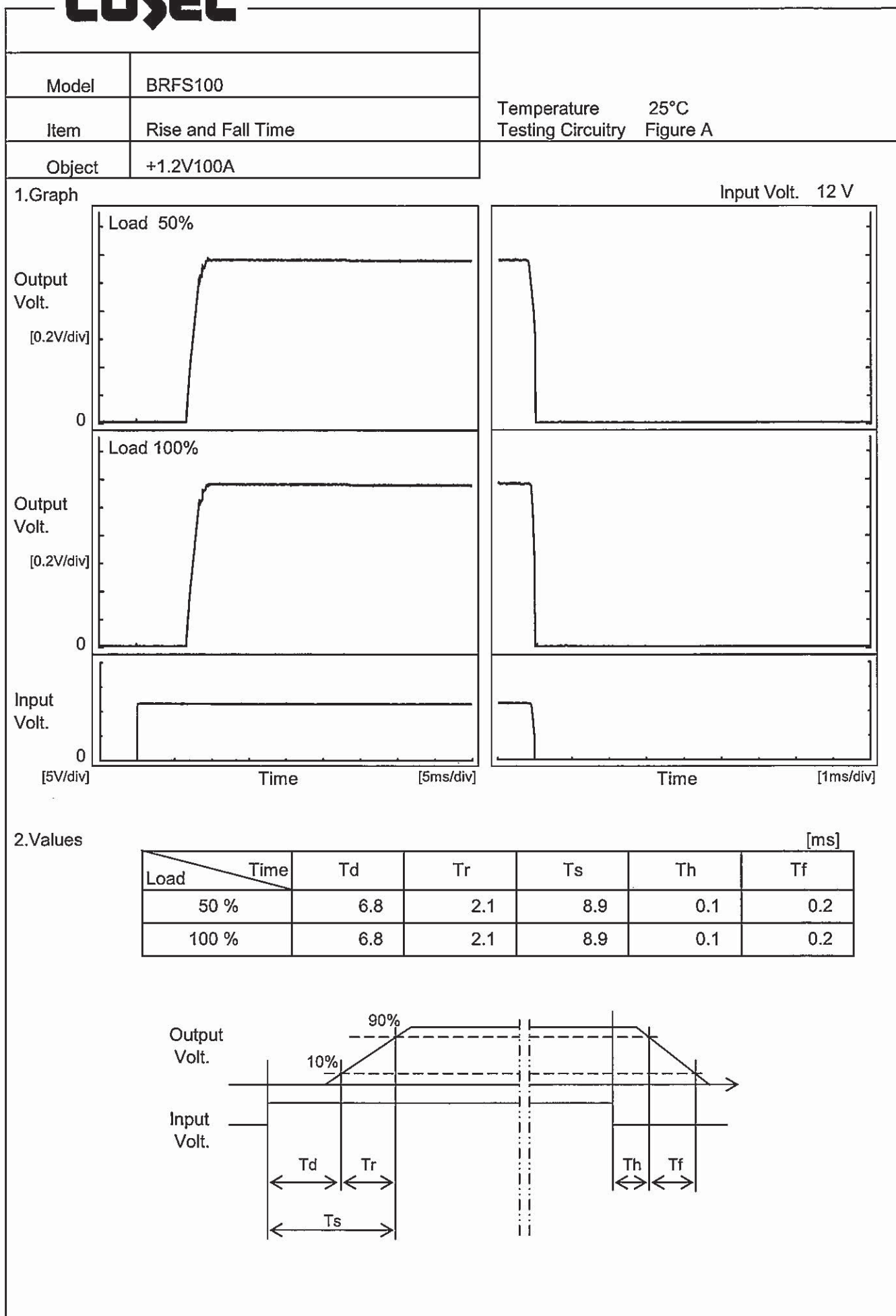
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-40	12	0	1.202	±2	±0.2
Minimum Voltage	85	14	0	1.199		







# COSEL



Model		BRFS100
Item		Minimum Input Voltage for Regulated Output Voltage
Object		+1.2V100A

1.Graph

---

□

---

Load 50%

—

△

—

Load 100%

Input Voltage [V]

</

Temperature 25°C  
Testing Circuitry Figure A

[illegible]

Intermittent operation occurs when overcurrent protection is activated.

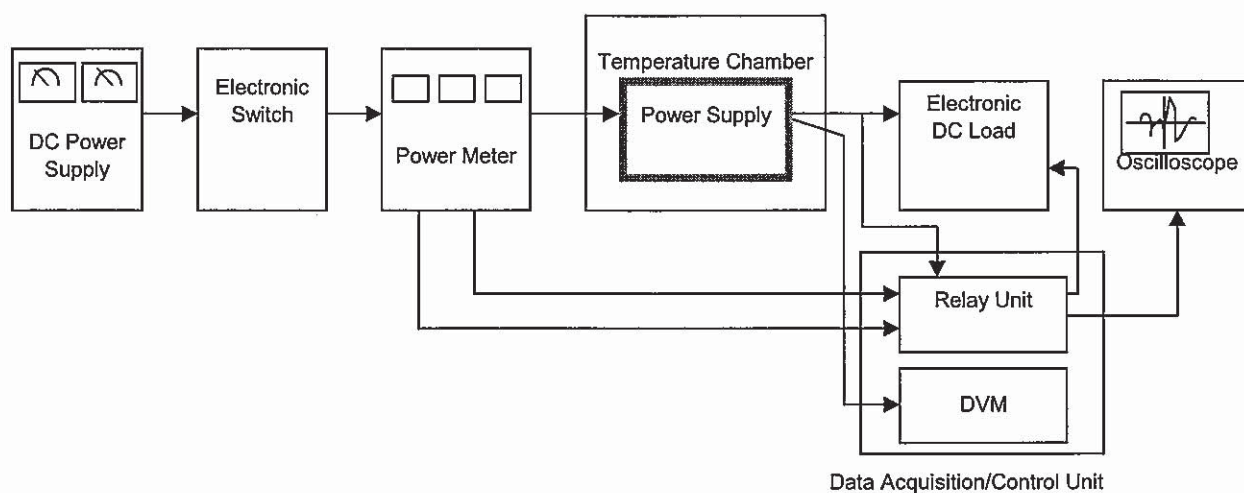


Figure A

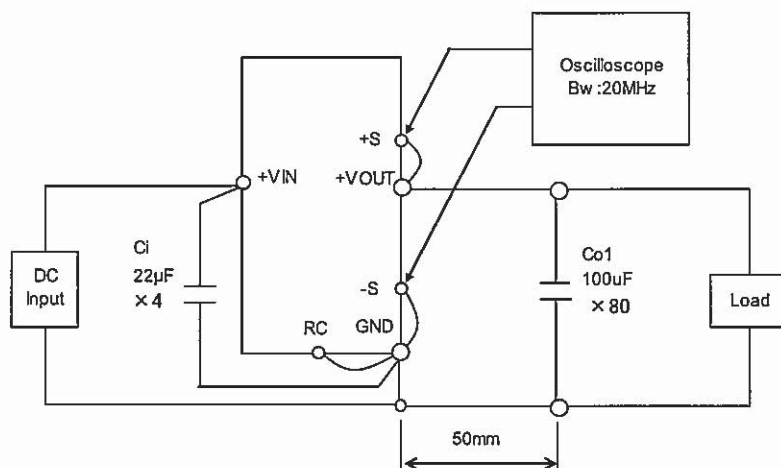


Figure B

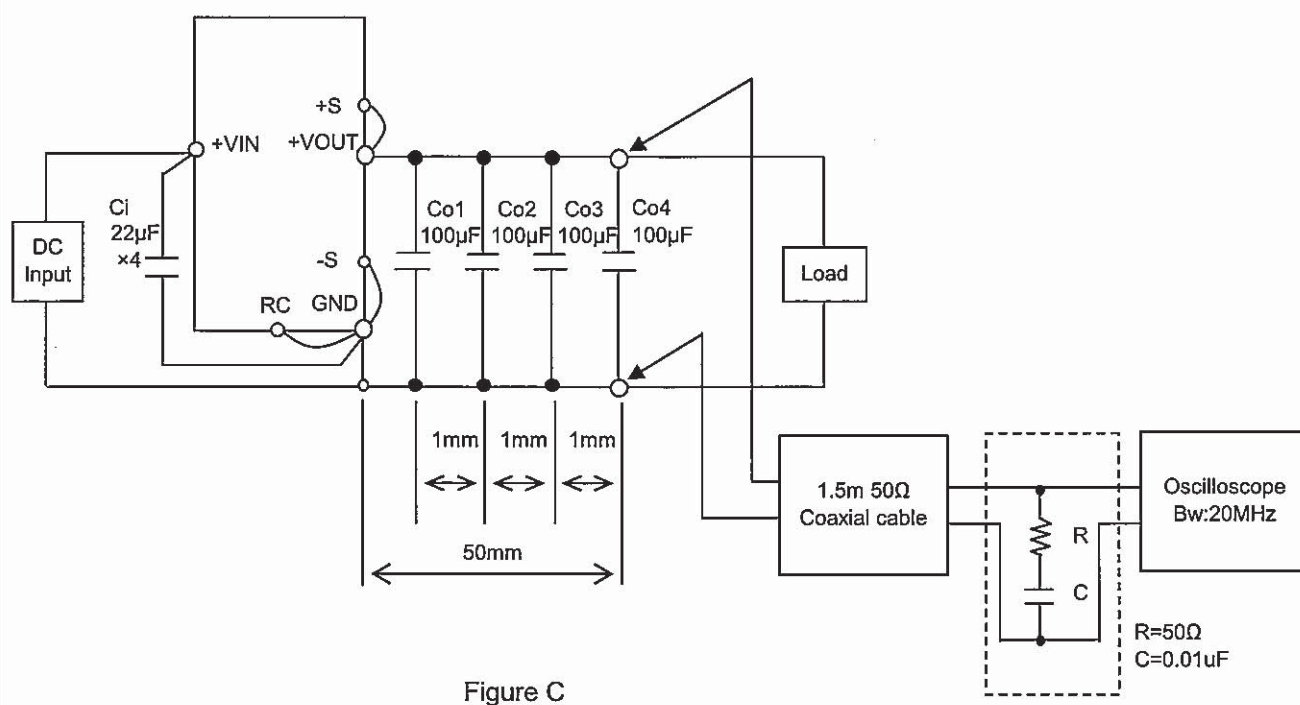


Figure C