

# TEST DATA OF SUTS64815

Regulated DC Power Supply  
March 18, 2009

Approved by : Kazunari Asano  
Kazunari Asano Design Manager

Prepared by : Sho Saito  
Sho Saito Design Engineer

**COSEL CO.,LTD.**

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Model	SUTS64815																																																																																	
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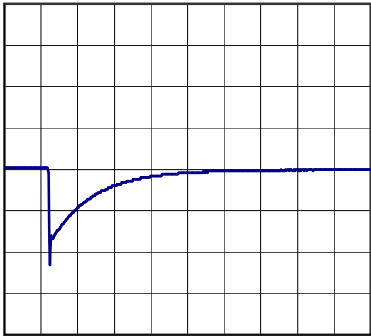
Model		SUTS64815	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+15V0.4A	

Input Volt. 48 V  
Cycle 100 mS

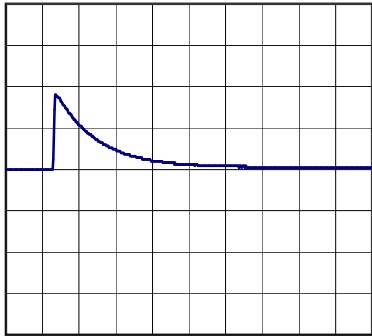


Min. Load (0A)  $\longleftrightarrow$   
Load 100% (0.4A)

200mV/div



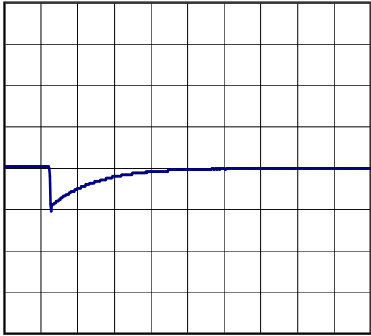
1ms/div



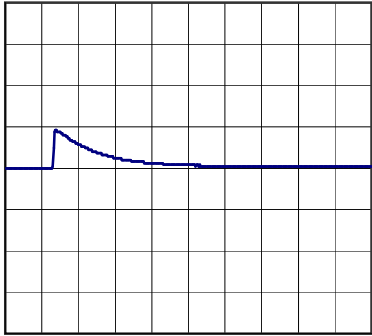
1ms/div

Min. Load (0A)  $\longleftrightarrow$   
Load 50% (0.2A)

200mV/div



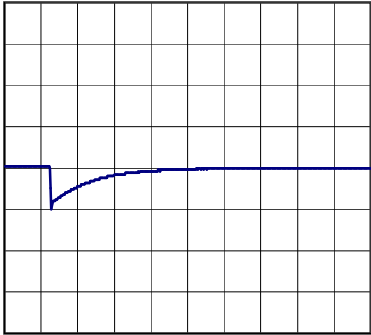
1ms/div



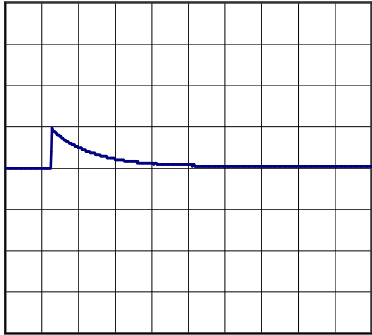
1ms/div

Load 50% (0.2A)  $\longleftrightarrow$   
Load 100% (0.4A)

200mV/div

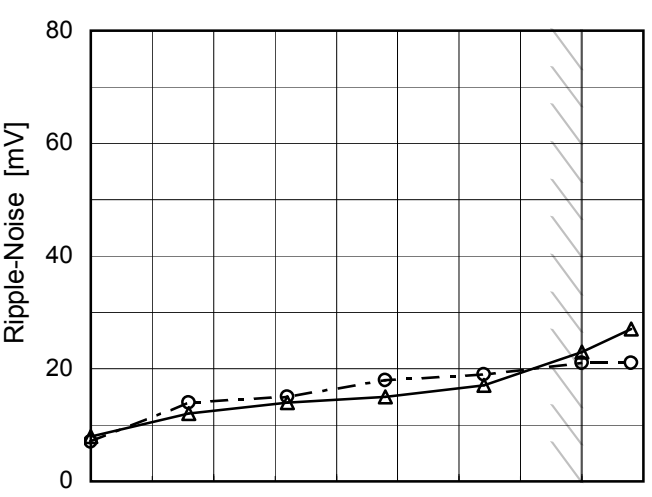
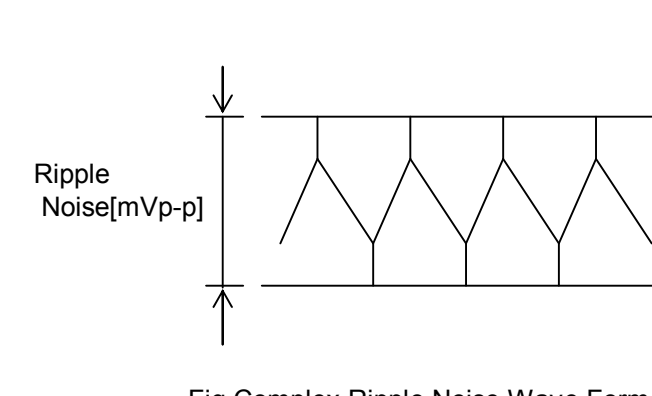


1ms/div



1ms/div

Model	SUTS64815																																								
Item	Ripple Voltage (by Load Current)	Temperature	25°C																																						
		Testing Circuitry	Figure B																																						
Object	+15V0.4A																																								
1.Graph		2.Values																																							
<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>76V</div></div></div> <p>Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 36 [V]</th><th>Input Volt. 76 [V]</th></tr><tr><td>0.00</td><td>4</td><td>3</td></tr><tr><td>0.08</td><td>4</td><td>3</td></tr><tr><td>0.16</td><td>4</td><td>3</td></tr><tr><td>0.24</td><td>4</td><td>3</td></tr><tr><td>0.32</td><td>5</td><td>4</td></tr><tr><td>0.40</td><td>10</td><td>6</td></tr><tr><td>0.44</td><td>15</td><td>8</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></table>		Load Current [A]	Ripple Voltage [mV]		Input Volt. 36 [V]	Input Volt. 76 [V]	0.00	4	3	0.08	4	3	0.16	4	3	0.24	4	3	0.32	5	4	0.40	10	6	0.44	15	8	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																								
	Input Volt. 36 [V]	Input Volt. 76 [V]																																							
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<p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																									

Model	SUTS64815																																								
Item	Ripple-Noise	Temperature	25°C																																						
		Testing Circuitry	Figure B																																						
Object	+15V0.4A																																								
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Load Current [A]	Ripple-Noise [mV]																																								
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Model	SUTS64815																																																						
Item	Ambient Temperature Drift	Testing Circuitry    Figure A																																																					
Object	+15V0.4A																																																						
1.Graph		2.Values																																																					
<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</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>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>-60</td><td>14.868</td><td>14.871</td><td>14.872</td></tr><tr><td>-40</td><td>14.889</td><td>14.891</td><td>14.891</td></tr><tr><td>-20</td><td>14.905</td><td>14.906</td><td>14.906</td></tr><tr><td>0</td><td>14.916</td><td>14.916</td><td>14.916</td></tr><tr><td>25</td><td>14.921</td><td>14.920</td><td>14.920</td></tr><tr><td>55</td><td>14.918</td><td>14.917</td><td>14.915</td></tr><tr><td>60</td><td>14.916</td><td>14.915</td><td>14.914</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	-60	14.868	14.871	14.872	-40	14.889	14.891	14.891	-20	14.905	14.906	14.906	0	14.916	14.916	14.916	25	14.921	14.920	14.920	55	14.918	14.917	14.915	60	14.916	14.915	14.914	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																						
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Model		SUTS64815	Testing Circuitry Figure A
Item		Output Voltage Accuracy	
Object		+15V0.4A	

### 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 - 55°C

Input Voltage : 36 - 76V

Load Current : 0 - 0.4A

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

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

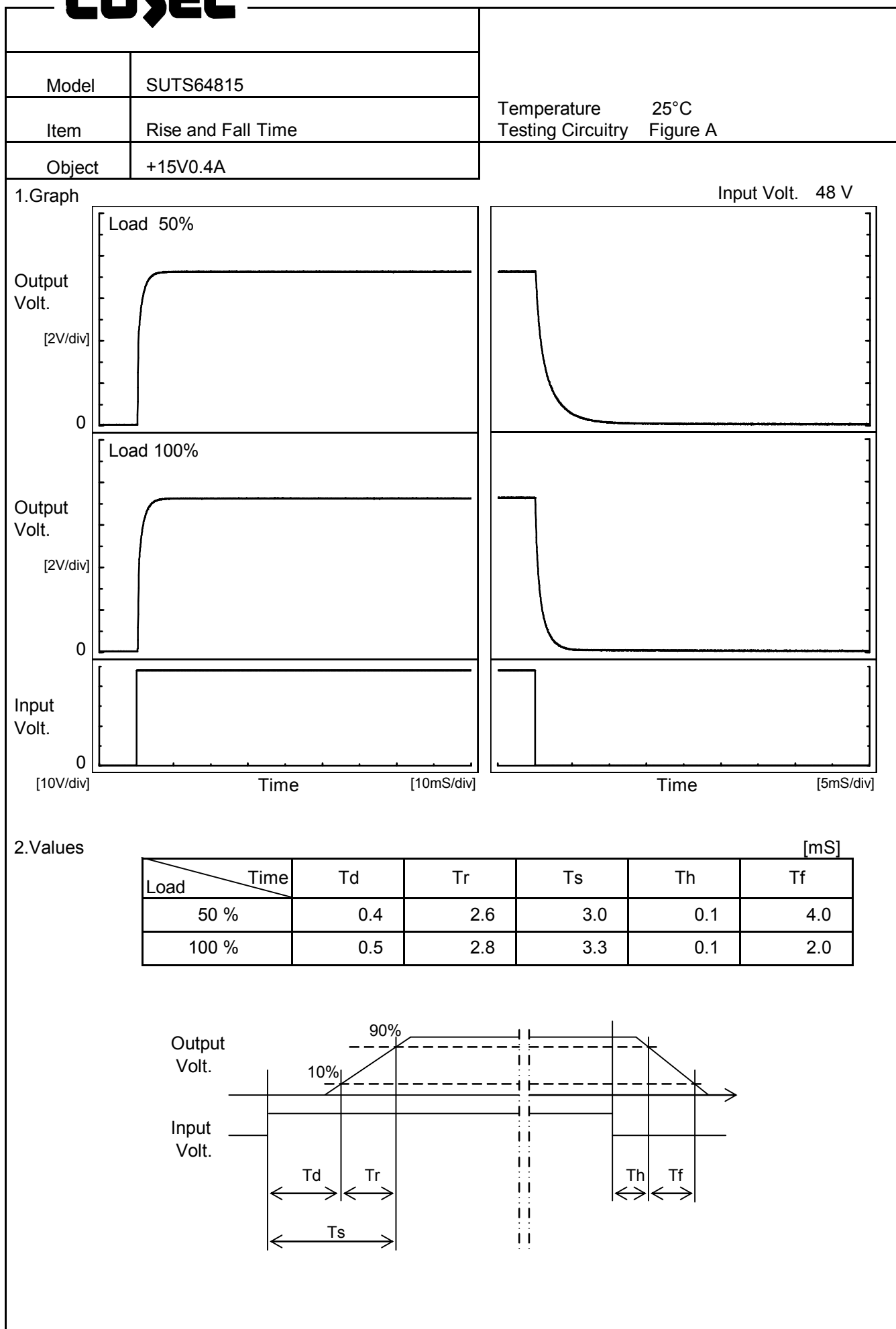
### 2. Values

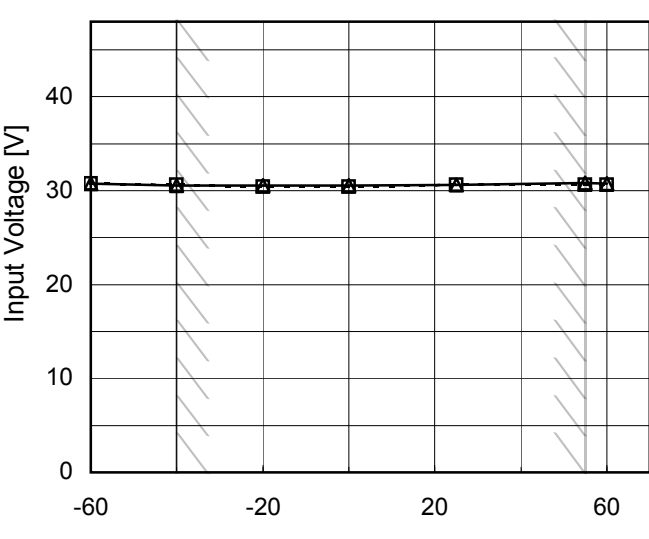
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	25	76	0	14.927	±19	±0.1
Minimum Voltage	-40	36	0.4	14.889		



Model	SUTS64815		
Item	Time Lapse Drift	Temperature	25°C
		Testing Circuitry	Figure A
Object	+15V0.4A		
1.Graph		2.Values	
<div><div><div>Output Voltage [V]</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></di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<div><div><div></div><div></div><div></div></div><div><div>Input Volt. 36V</div><div>Input Volt. 48V</div><div>Input Volt. 76V</div></div><p>Note: Slanted line shows the range of the rated load current.</p></div>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>15.0</td><td>0.40</td><td>0.40</td><td>0.40</td></tr><tr><td>14.3</td><td>0.57</td><td>0.60</td><td>0.60</td></tr><tr><td>13.5</td><td>0.58</td><td>0.61</td><td>0.61</td></tr><tr><td>12.0</td><td>0.61</td><td>0.63</td><td>0.62</td></tr><tr><td>10.5</td><td>0.69</td><td>0.72</td><td>0.70</td></tr><tr><td>9.0</td><td>0.73</td><td>0.76</td><td>0.73</td></tr><tr><td>7.5</td><td>0.77</td><td>0.79</td><td>0.76</td></tr><tr><td>6.0</td><td>0.80</td><td>0.81</td><td>0.78</td></tr><tr><td>4.5</td><td>0.82</td><td>0.82</td><td>0.79</td></tr><tr><td>3.0</td><td>0.82</td><td>0.81</td><td>0.79</td></tr><tr><td>1.5</td><td>0.78</td><td>0.76</td><td>0.75</td></tr><tr><td>0.0</td><td>1.35</td><td>1.34</td><td>1.35</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	15.0	0.40	0.40	0.40	14.3	0.57	0.60	0.60	13.5	0.58	0.61	0.61	12.0	0.61	0.63	0.62	10.5	0.69	0.72	0.70	9.0	0.73	0.76	0.73	7.5	0.77	0.79	0.76	6.0	0.80	0.81	0.78	4.5	0.82	0.82	0.79	3.0	0.82	0.81	0.79	1.5	0.78	0.76	0.75	0.0	1.35	1.34	1.35
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Figure A

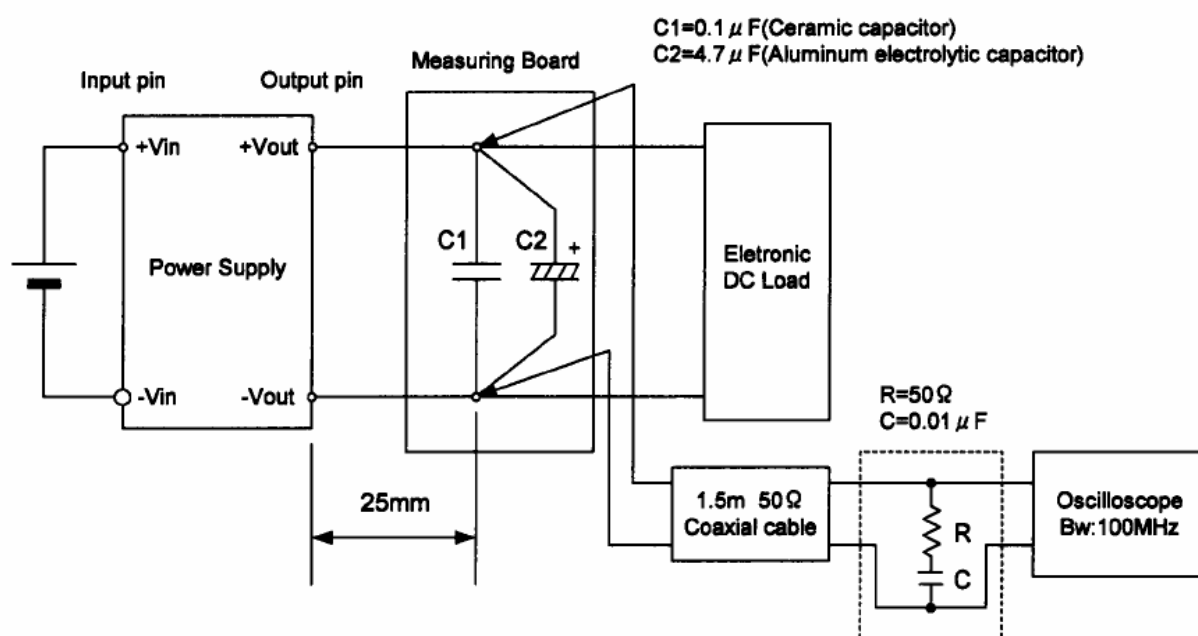


Figure B (Ripple and Ripple noise Characteristic)