

TEST DATA OF SUTS3123R3

Regulated DC Power Supply
February 16, 2009

Approved by : Kazunari Asano
Kazunari Asano Design Manager

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Sho Saito Design Engineer

COSEL CO.,LTD.

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Model	SUTS3123R3																																																																																	
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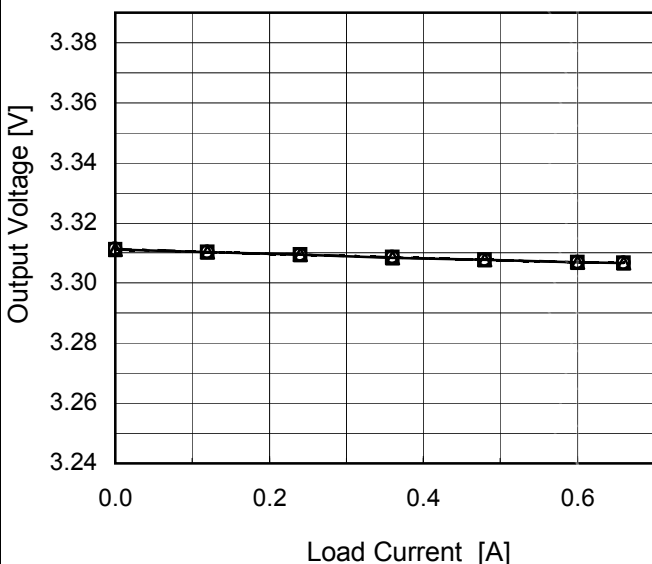
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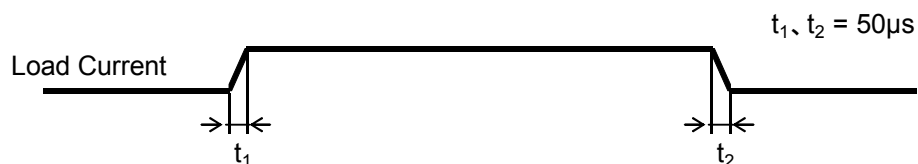
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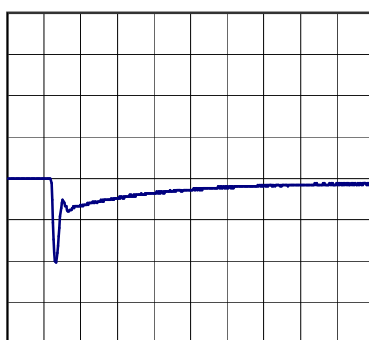
Model	SUTS3123R3	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	+3.3V0.6A	

Input Volt. 12 V
Cycle 100 mS



Min. Load (0A) \longleftrightarrow
Load 100% (0.6A)

100mV/div



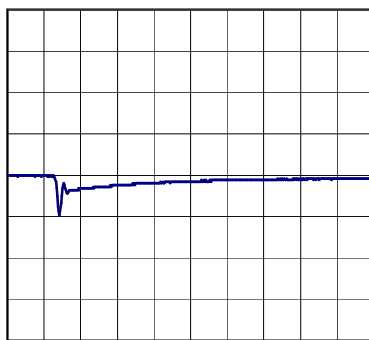
200µs/div



200µs/div

Min. Load (0A) \longleftrightarrow
Load 50% (0.3A)

100mV/div



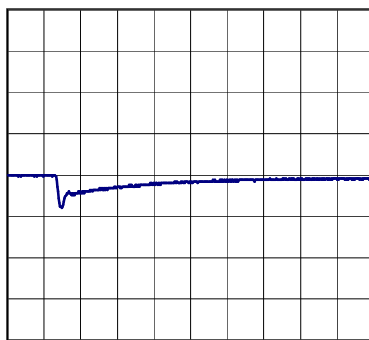
200µs/div



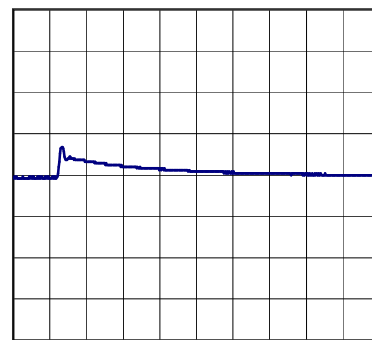
200µs/div

Load 50% (0.3A) \longleftrightarrow
Load 100% (0.6A)

100mV/div

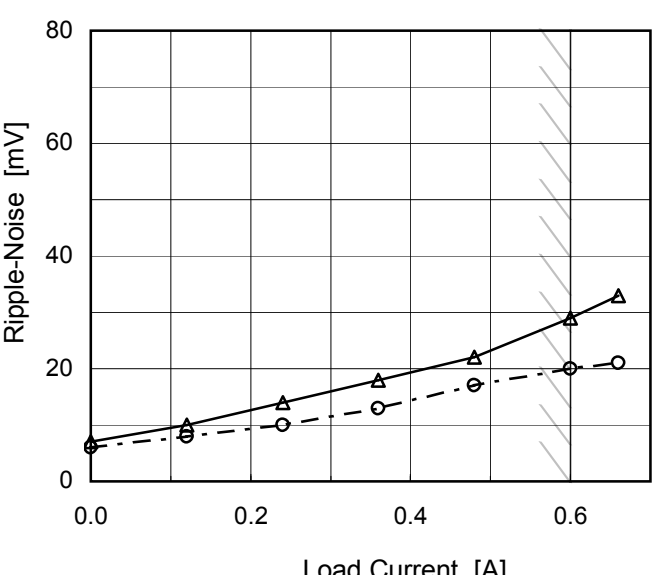
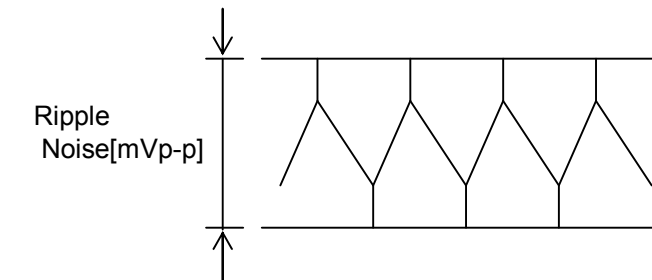


200µs/div



200µs/div

Model	SUTS3123R3																																								
Item	Ripple Voltage (by Load Current)	Temperature	25°C																																						
		Testing Circuitry	Figure B																																						
Object	+3.3V0.6A																																								
1.Graph		2.Values																																							
<div><div><div>—△— Input Volt. 9V</div><div>-·-○-·- Input Volt. 18V</div></div><p>Ripple Voltage [mV]</p><p>Load Current [A]</p></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 9 [V]</th><th>Input Volt. 18 [V]</th></tr><tr><td>0.00</td><td>3</td><td>3</td></tr><tr><td>0.12</td><td>3</td><td>3</td></tr><tr><td>0.24</td><td>6</td><td>6</td></tr><tr><td>0.36</td><td>8</td><td>6</td></tr><tr><td>0.48</td><td>11</td><td>7</td></tr><tr><td>0.60</td><td>16</td><td>8</td></tr><tr><td>0.66</td><td>19</td><td>9</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. 9 [V]	Input Volt. 18 [V]	0.00	3	3	0.12	3	3	0.24	6	6	0.36	8	6	0.48	11	7	0.60	16	8	0.66	19	9	--	-	-	--	-	-	--	-	-	--	-	-
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<p>Ripple Voltage is shown as p-p in the figure below.</p> <p>Note: Slanted line shows the range of the rated load current.</p>																																									
<div><div>Ripple [mVp-p]</div><p>Fig.Complex Ripple Wave Form</p></div>																																									

Model	SUTS3123R3																																								
Item	Ripple-Noise	Temperature	25°C																																						
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Model	SUTS3123R3																																								
Item	Ripple Voltage (by Ambient Temp.)	Testing Circuitry Figure B																																							
Object	+3.3V0.6A																																								
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Model	SUTS3123R3																																																						
Item	Ambient Temperature Drift	Testing Circuitry Figure A																																																					
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1.Graph		2.Values																																																					
<div><div>—△— Input Volt. 9V</div><div>---□--- Input Volt. 12V</div><div>-·-○-·- Input Volt. 18V</div></div> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>-60</td><td>3.265</td><td>3.266</td><td>3.267</td></tr><tr><td>-40</td><td>3.278</td><td>3.279</td><td>3.279</td></tr><tr><td>-20</td><td>3.288</td><td>3.289</td><td>3.289</td></tr><tr><td>0</td><td>3.298</td><td>3.298</td><td>3.298</td></tr><tr><td>25</td><td>3.307</td><td>3.307</td><td>3.307</td></tr><tr><td>55</td><td>3.312</td><td>3.312</td><td>3.312</td></tr><tr><td>60</td><td>3.313</td><td>3.313</td><td>3.313</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. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	-60	3.265	3.266	3.267	-40	3.278	3.279	3.279	-20	3.288	3.289	3.289	0	3.298	3.298	3.298	25	3.307	3.307	3.307	55	3.312	3.312	3.312	60	3.313	3.313	3.313	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Model		Testing Circuitry Figure A
SUTS3123R3		
Item	Output Voltage Accuracy	
Object	+3.3V0.6A	

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 : 9 - 18V

Load Current : 0 - 0.6A

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

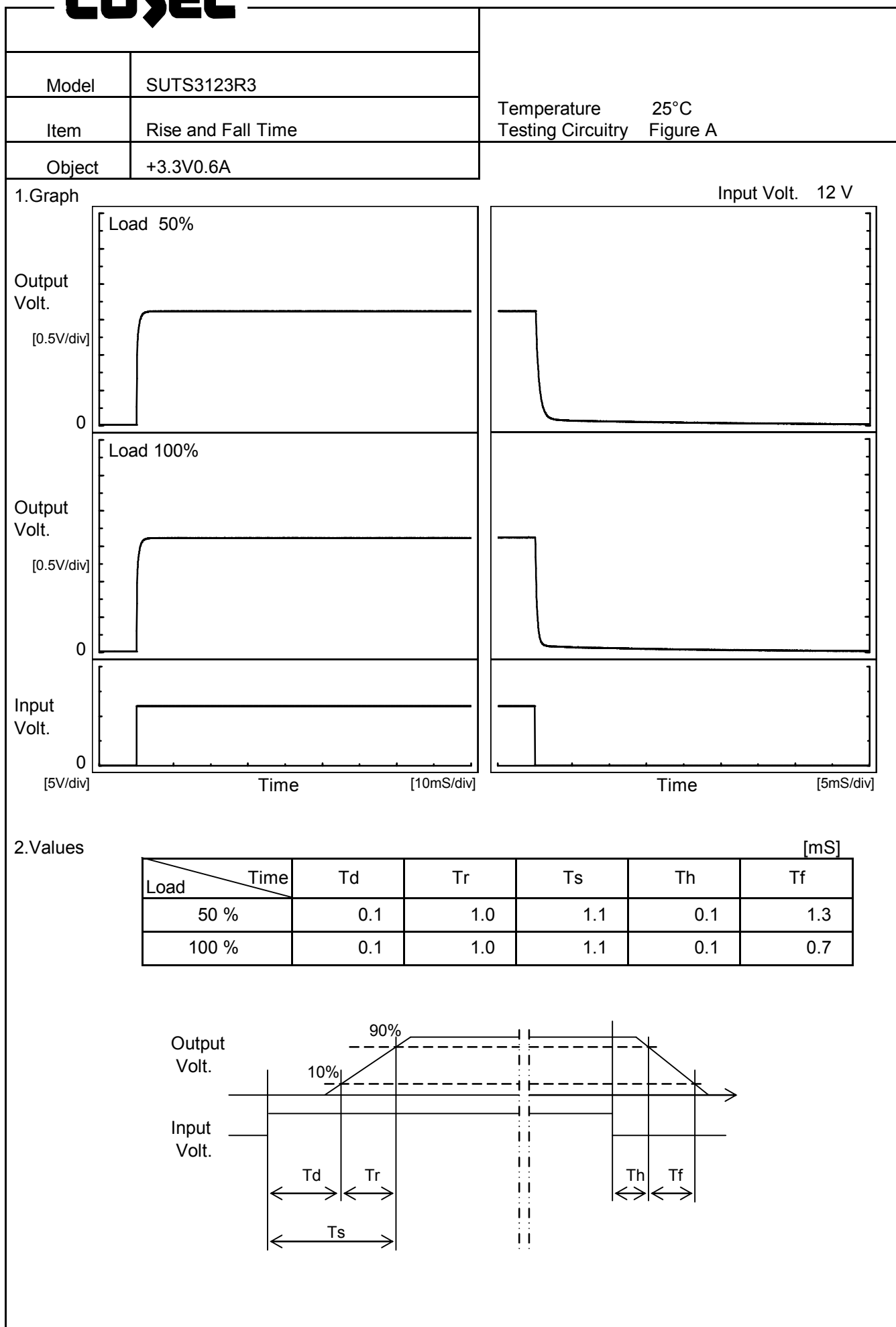
* Output Voltage Accuracy (Ratio) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	55	9	0	3.317	±20	±0.6
Minimum Voltage	-40	9	0.6	3.278		



Model	SUTS3123R3		
Item	Time Lapse Drift	Temperature	25°C
		Testing Circuitry	Figure A
Object	+3.3V0.6A		
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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Model

SUTS3123R3

Item

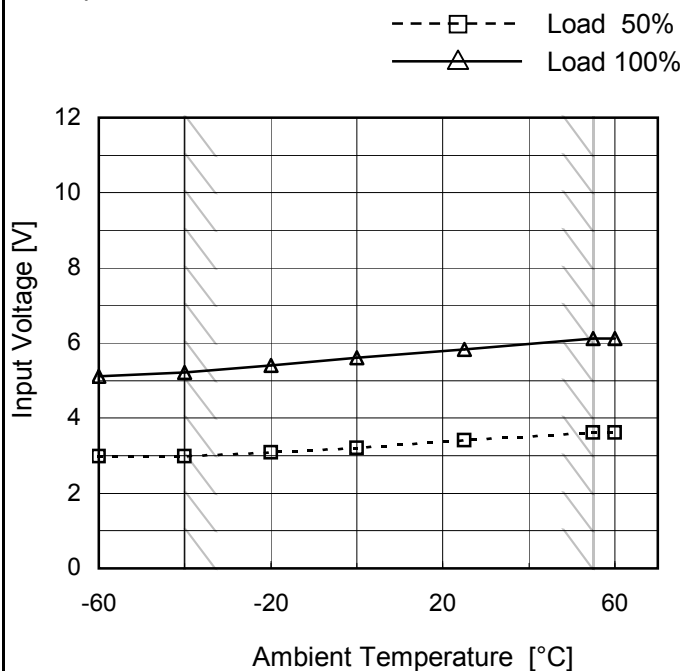
Minimum Input Voltage
for Regulated Output Voltage

Object

+3.3V0.6A

Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated ambient temperature.

2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	3.0	5.2
-40	3.0	5.3
-20	3.1	5.4
0	3.2	5.7
25	3.4	5.9
55	3.7	6.2
60	3.7	6.2
--	-	-
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Model	SUTS3123R3																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
		Testing Circuitry	Figure A																																																							
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1.Graph		2.Values																																																								
<div><div><div></div><div></div><div></div></div><div><div>Input Volt. 9V</div><div>Input Volt. 12V</div><div>Input Volt. 18V</div></div></div> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>3.30</td><td>0.60</td><td>0.60</td><td>0.60</td></tr><tr><td>3.14</td><td>0.90</td><td>0.98</td><td>0.91</td></tr><tr><td>2.97</td><td>0.91</td><td>0.99</td><td>0.92</td></tr><tr><td>2.64</td><td>0.95</td><td>1.02</td><td>0.94</td></tr><tr><td>2.31</td><td>0.98</td><td>1.05</td><td>0.96</td></tr><tr><td>1.98</td><td>1.02</td><td>1.07</td><td>0.97</td></tr><tr><td>1.65</td><td>1.05</td><td>1.09</td><td>0.98</td></tr><tr><td>1.32</td><td>1.08</td><td>1.10</td><td>0.98</td></tr><tr><td>0.99</td><td>1.08</td><td>1.09</td><td>0.96</td></tr><tr><td>0.66</td><td>1.06</td><td>1.05</td><td>0.92</td></tr><tr><td>0.33</td><td>1.00</td><td>0.99</td><td>0.87</td></tr><tr><td>0.00</td><td>1.11</td><td>1.05</td><td>0.89</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	3.30	0.60	0.60	0.60	3.14	0.90	0.98	0.91	2.97	0.91	0.99	0.92	2.64	0.95	1.02	0.94	2.31	0.98	1.05	0.96	1.98	1.02	1.07	0.97	1.65	1.05	1.09	0.98	1.32	1.08	1.10	0.98	0.99	1.08	1.09	0.96	0.66	1.06	1.05	0.92	0.33	1.00	0.99	0.87	0.00	1.11	1.05	0.89
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Figure A

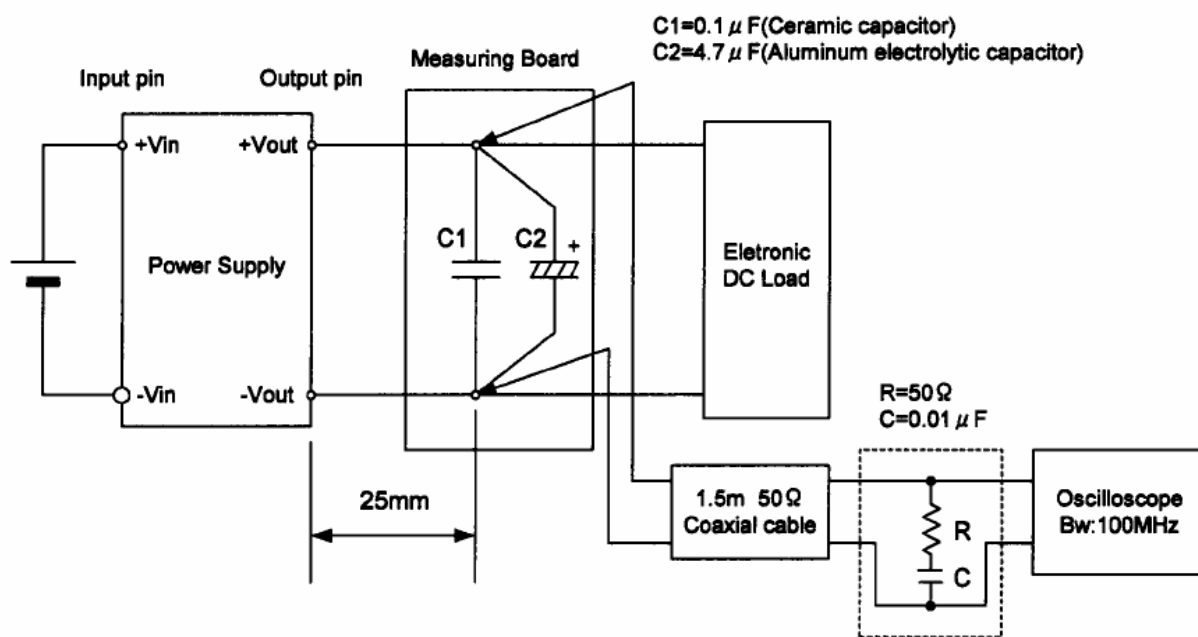


Figure B (Ripple and Ripple noise Characteristic)