



TEST DATA OF MGS61205

Regulated DC Power Supply
July 28, 2016

Approved by : Takayuki Fukuda
Takayuki Fukuda Design Manager

Prepared by : Ryosuke Nakao
Ryosuke Nakao Design Engineer

COSEL CO.,LTD.

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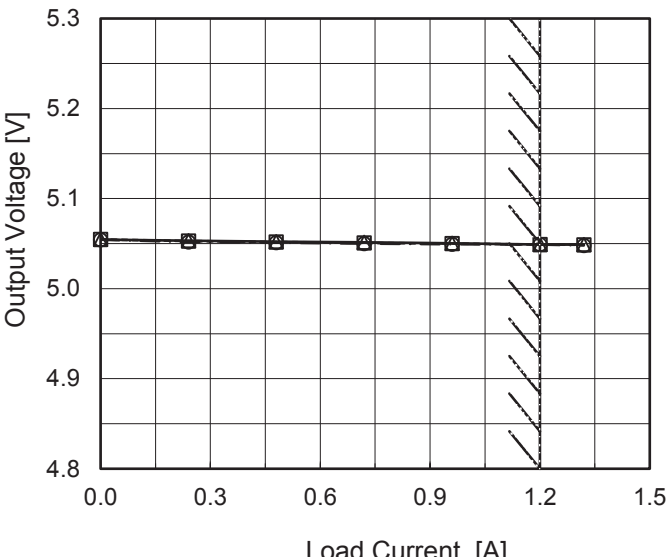
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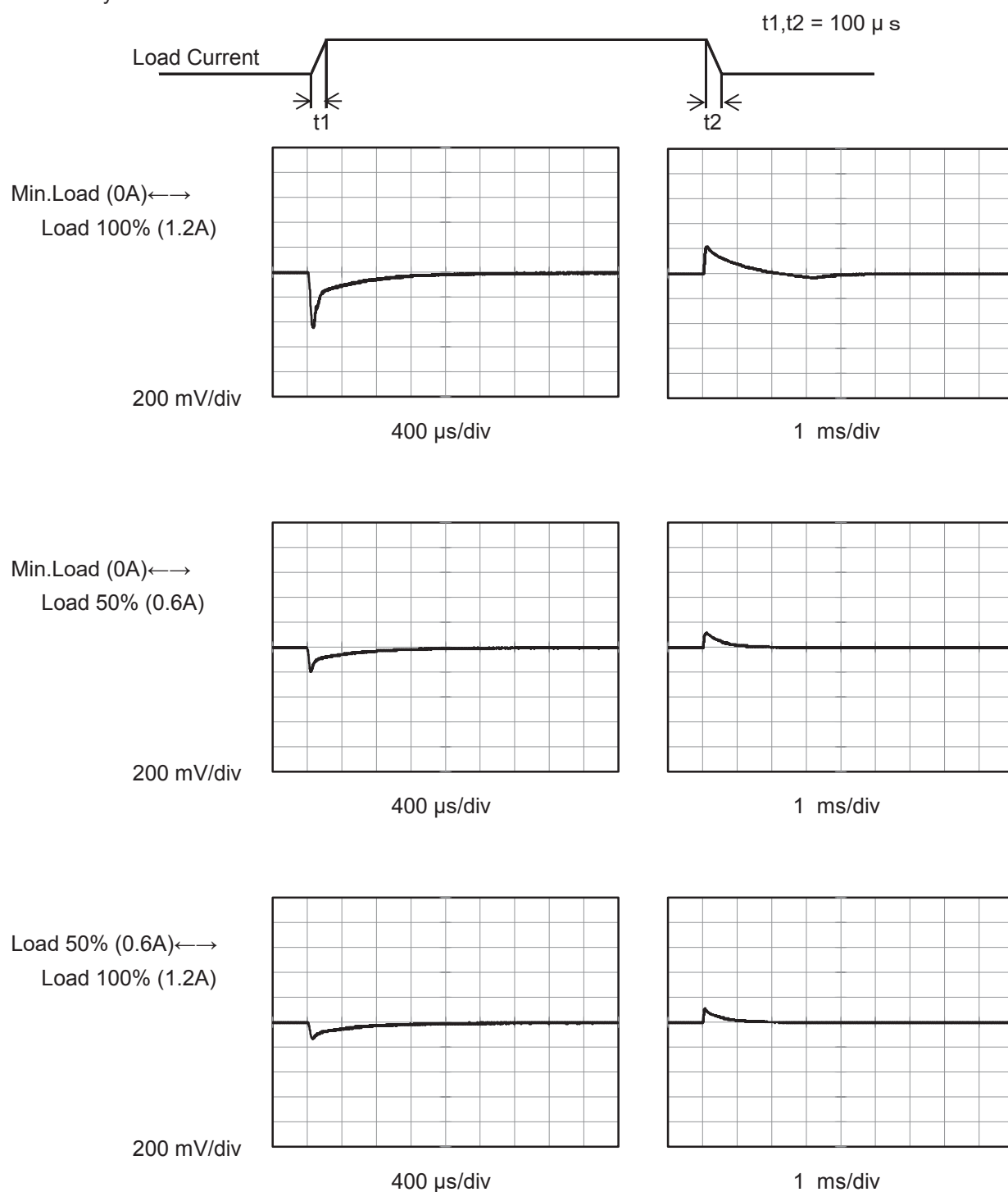
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BC-11015



Model	MGS61205	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	+5V1.2A	

Input Volt. 12 V
Cycle 100 ms



Model		MGS61205	Temperature 25°C Testing Circuitry Figure B																																					
Item		Ripple Voltage (by Load Current)																																						
Object		+5V1.2A																																						
1.Graph			2.Values																																					
<div><div><div><div><div></div><div></div></div><div>Input Volt.</div><div>9V</div></div><div><div><div></div><div></div></div><div>Input Volt.</div><div>18V</div></div></div><div><p>Measured by 100 MHz Oscilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p><div><div><div></div><div></div></div><div>Ripple [mVp-p]</div><p>Fig.Complex Ripple Wave Form</p></div></div></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>5</td><td>20</td></tr><tr><td>0.24</td><td>5</td><td>5</td></tr><tr><td>0.48</td><td>5</td><td>5</td></tr><tr><td>0.72</td><td>5</td><td>5</td></tr><tr><td>0.96</td><td>10</td><td>5</td></tr><tr><td>1.20</td><td>10</td><td>5</td></tr><tr><td>1.32</td><td>10</td><td>5</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	5	20	0.24	5	5	0.48	5	5	0.72	5	5	0.96	10	5	1.20	10	5	1.32	10	5	--	-	-	--	-	-	--	-	-	--	-	-
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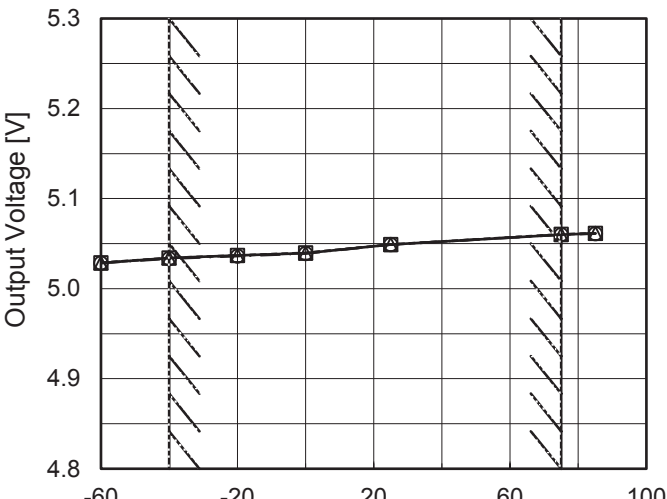
<div>COSEL</div>																																									
Model	MGS61205																																								
Item	Ripple-Noise	Temperature	25°C																																						
Object	+5V1.2A	Testing Circuitry	Figure B																																						
1.Graph		2.Values																																							
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Model		MGS61205
Item		Ripple Voltage (by Ambient Temp.)
Object		+5V1.2A
1.Graph		2.Values

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Model		MGS61205	Testing Circuitry Figure A																																																			
Item		Ambient Temperature Drift																																																				
Object		+5V1.2A																																																				
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		<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>5.029</td><td>5.029</td><td>5.029</td></tr><tr><td>-40</td><td>5.034</td><td>5.034</td><td>5.034</td></tr><tr><td>-20</td><td>5.037</td><td>5.037</td><td>5.036</td></tr><tr><td>0</td><td>5.039</td><td>5.040</td><td>5.039</td></tr><tr><td>25</td><td>5.049</td><td>5.049</td><td>5.049</td></tr><tr><td>75</td><td>5.060</td><td>5.060</td><td>5.060</td></tr><tr><td>85</td><td>5.061</td><td>5.062</td><td>5.061</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	5.029	5.029	5.029	-40	5.034	5.034	5.034	-20	5.037	5.037	5.036	0	5.039	5.040	5.039	25	5.049	5.049	5.049	75	5.060	5.060	5.060	85	5.061	5.062	5.061	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	
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Model		MGS61205	Testing Circuitry Figure A
Item		Output Voltage Accuracy	
Object		+5V1.2A	

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 - 75°C

Input Voltage : 9 - 18V

Load Current : 0 - 1.2A

* 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	0	0	0	5.066	±16	±0.3
Minimum Voltage	0	0	0	5.034		

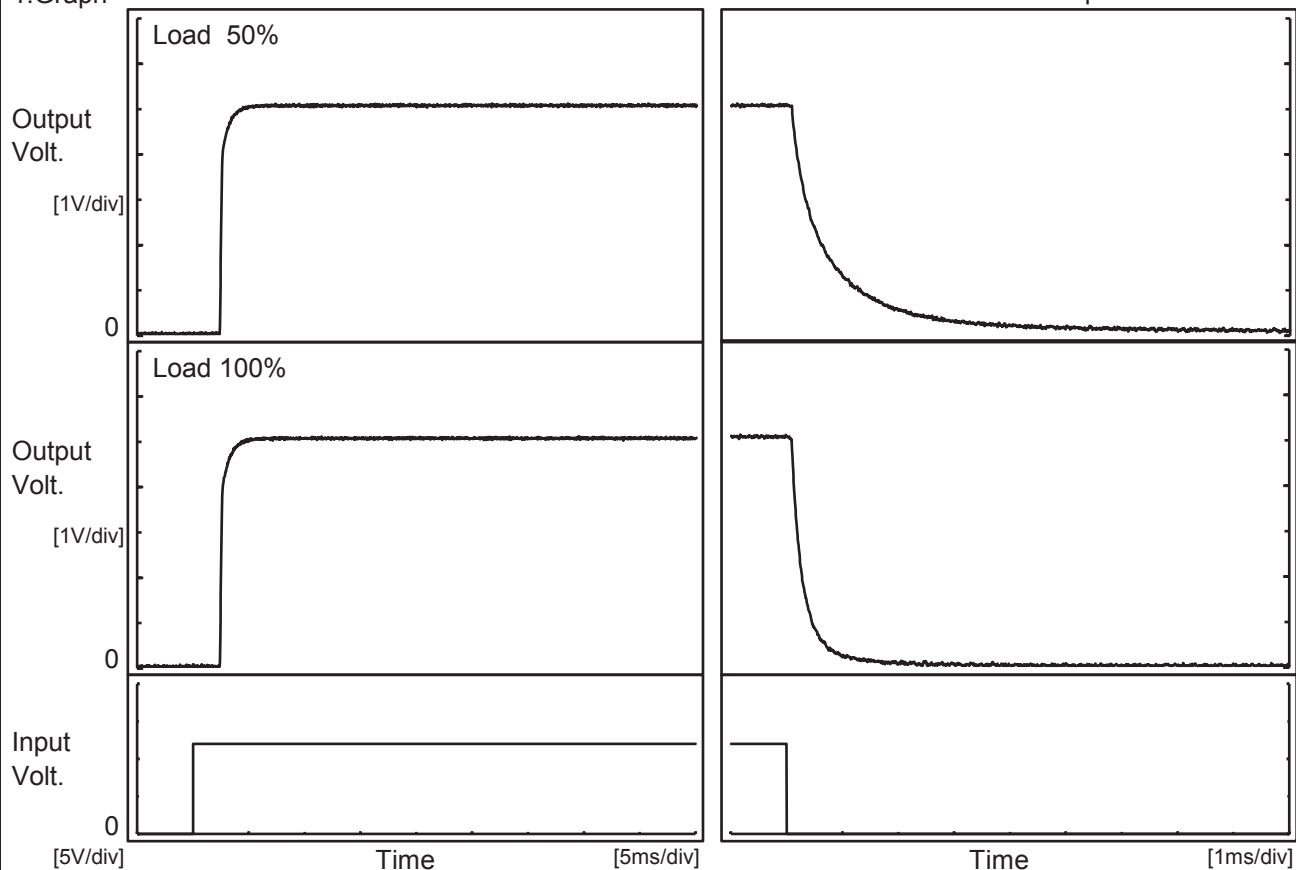
Model		MGS61205	Temperature25°C Testing CircuitryFigure A																						
Item		Time Lapse Drift																							
Object		+5V1.2A																							
1.Graph			2.Values																						
<div><div><div>5.3</div><div>5.2</div><div>5.1</div><div>5.0</div><div>4.9</div><div>4.8</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div><div>Output Voltage [V]</div><div>Time [H]</div></div><div><div>Input Volt.12V</div><div>Load100%</div></div></div>			<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.046</td></tr><tr><td>0.5</td><td>5.050</td></tr><tr><td>1.0</td><td>5.050</td></tr><tr><td>2.0</td><td>5.050</td></tr><tr><td>3.0</td><td>5.050</td></tr><tr><td>4.0</td><td>5.050</td></tr><tr><td>5.0</td><td>5.050</td></tr><tr><td>6.0</td><td>5.050</td></tr><tr><td>7.0</td><td>5.050</td></tr><tr><td>8.0</td><td>5.050</td></tr></table>	Time since start [H]	Output Voltage [V]	0.0	5.046	0.5	5.050	1.0	5.050	2.0	5.050	3.0	5.050	4.0	5.050	5.0	5.050	6.0	5.050	7.0	5.050	8.0	5.050
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6.0	5.050																								
7.0	5.050																								
8.0	5.050																								

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Model	MGS61205	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+5V1.2A		

1.Graph

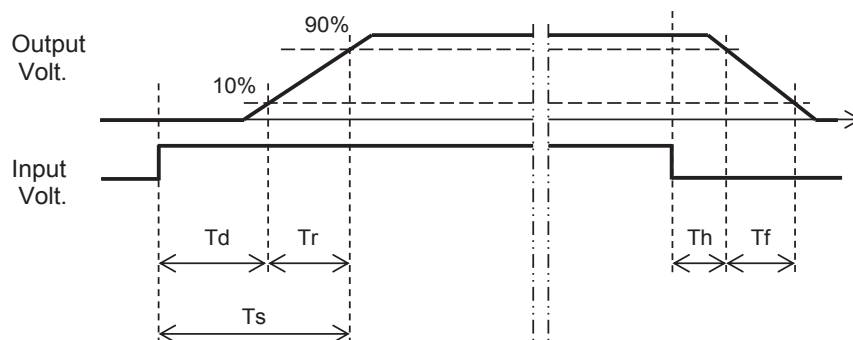
Input Volt. 12 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	2.4	0.7	3.1	0.1	2.0
100 %	2.4	0.7	3.1	0.1	0.6



Model

MGS61205

Item

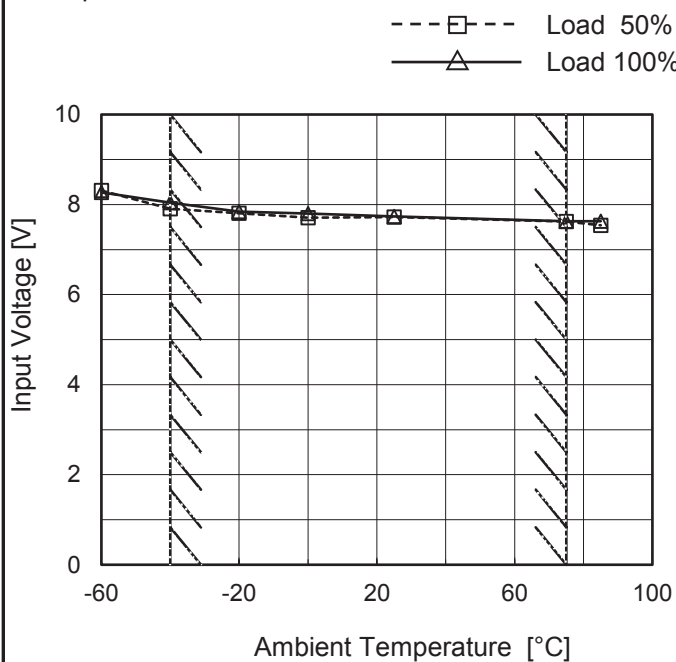
Minimum Input Voltage
for Regulated Output Voltage

Object

+5V1.2A

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	8.4	8.3
-40	8.0	8.1
-20	7.9	7.9
0	7.8	7.8
25	7.8	7.8
75	7.7	7.7
85	7.6	7.7
--	-	-
--	-	-
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Model		MGS61205	Temperature 25°C Testing Circuitry Figure A																																																								
Item		Overcurrent Protection																																																									
Object		+5V1.2A																																																									
1.Graph		<div><div><div></div>Input Volt. 9V</div><div><div></div>Input Volt. 12V</div><div><div></div>Input Volt. 18V</div></div> <p>Note: Slanted line shows the range of the rated load current.</p>	2.Values																																																								
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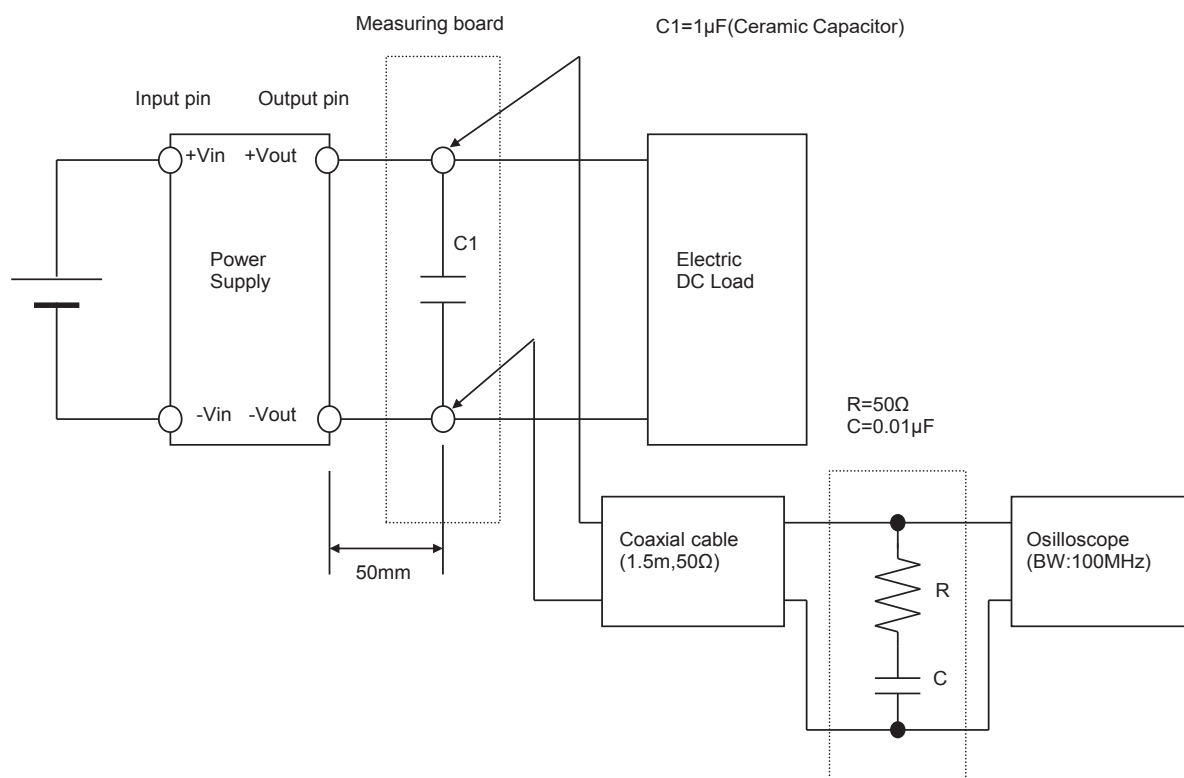
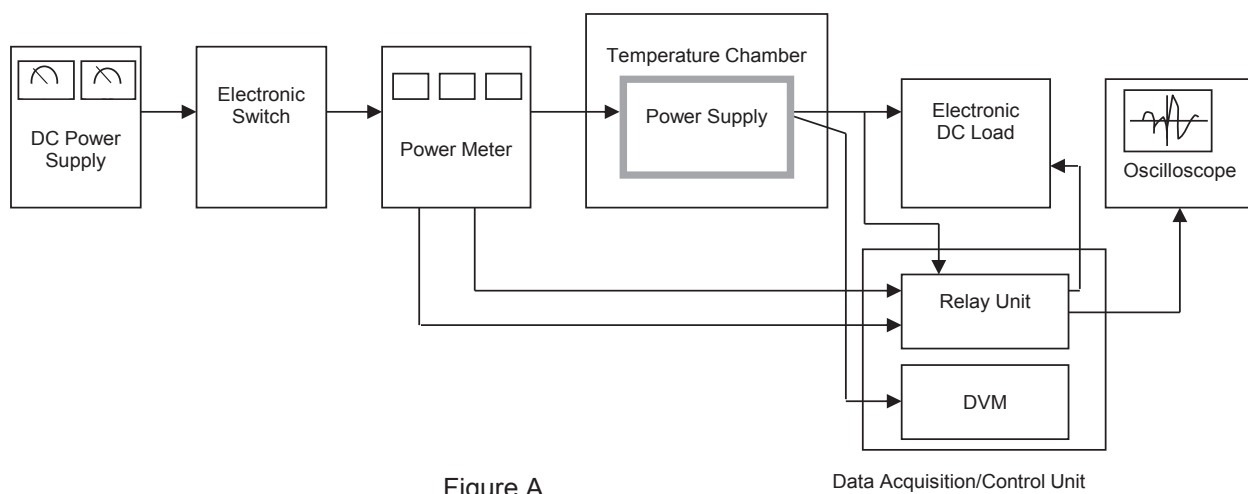


Figure B (Ripple and Ripple noise Characteristic)