

TEST DATA OF MMC75B-2

Regulated DC Power Supply
December 24, 2010

Approved by : Naoki Tonami
Naoki Tonami Design Manager

Prepared by : Hironobu Shimizu
Hironobu Shimizu Design Engineer

COSEL CO.,LTD.

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Model		MMC75B-2		Temperature 25°C																																																				
Item		Input Current (by Load Current)		Testing Circuitry Figure A																																																				
Object		_____																																																						
1.Graph		<div><div>—△—</div>Input Volt. 85V</div> <div><div>---□---</div>Input Volt. 100V</div> <div><div>-·-○-·-</div>Input Volt. 132V</div> <div>Input Current [A]</div> <div>Load Ration [%]</div>		2.Values																																																				
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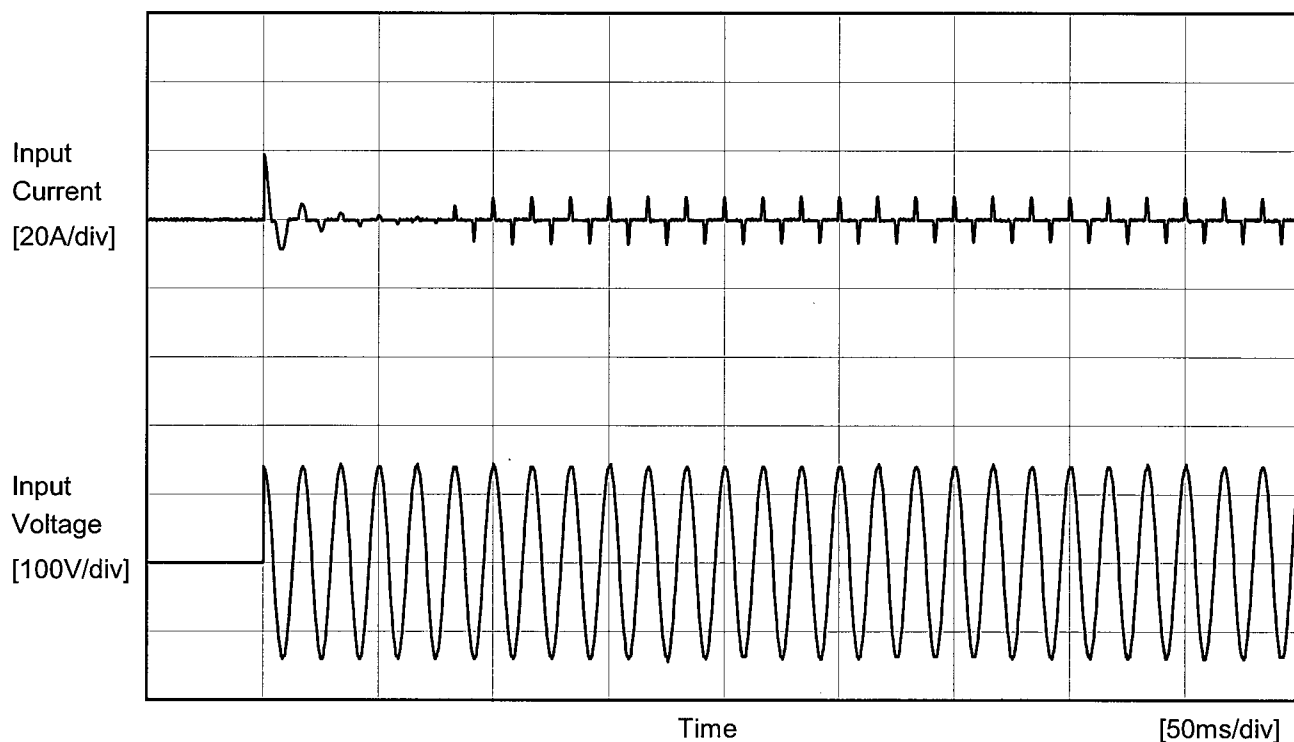
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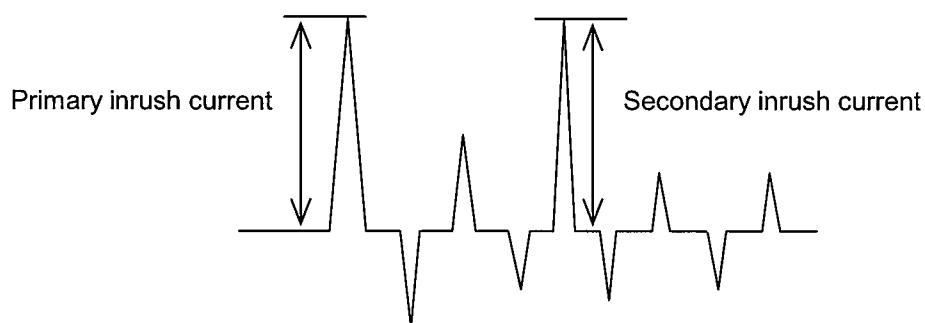
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Model	MMC75B-2	Temperature 25°C Testing Circuitry Figure A
Item	Inrush Current	
Object	_____	



Input Voltage	100 V
Frequency	60 Hz
Load	100 %

Primary inrush current	18.8 A
Secondary inrush current	7.2 A





Model		Temperature 25°C Testing Circuitry Figure B
MMC75B-2		
Item	Leakage Current	
Object		

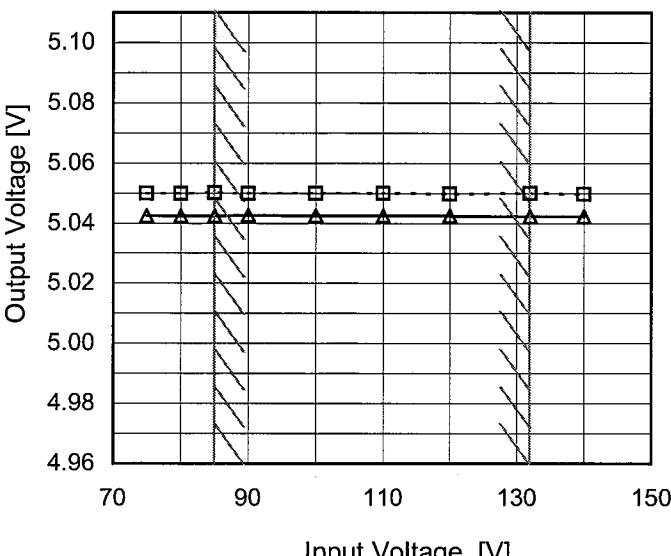
1.Results

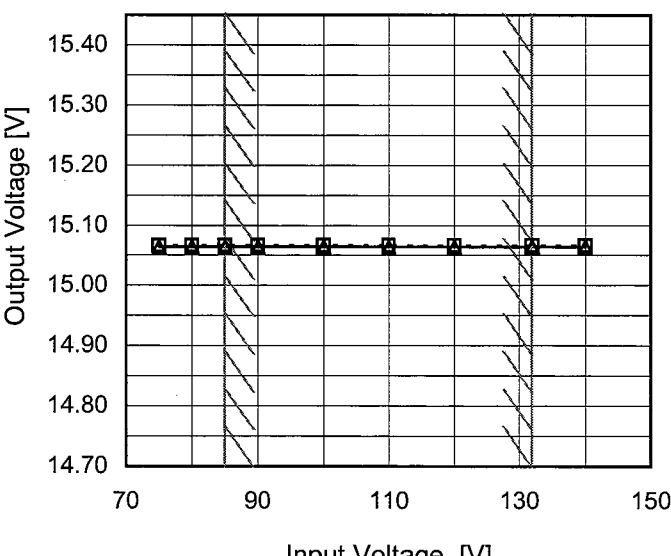
Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A)DEN-AN	0.11	0.13	0.18
(B)IEC60950-1	0.22	0.26	0.36

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 240 [V]	Input Volt. 264 [V]
(B)IEC60950-1	-	-	-

2.Condition

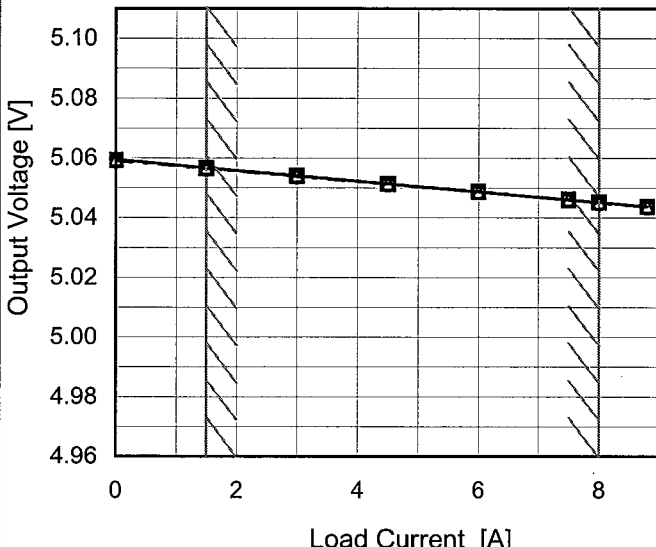
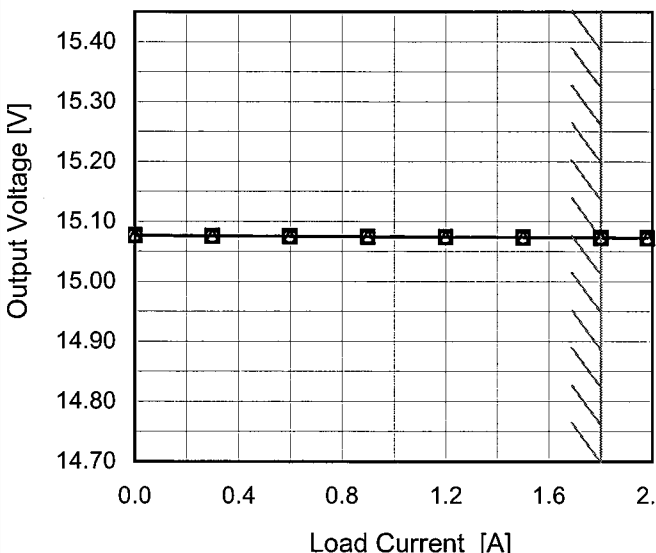
Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.

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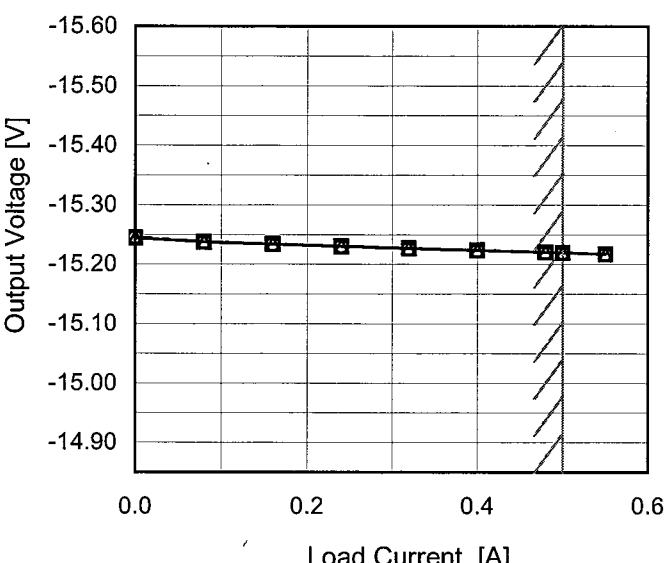
Note: Slanted line shows the range of the rated input voltage.

Model	MMC75B-2		
Item	Line Regulation	Temperature	25°C
Object	-15V0.5A	Testing Circuitry	Figure A
1.Graph		2.Values	
<div><div><div>---</div><div>□</div><div>---</div></div><div>Load 50%</div></div> <div><div>—</div><div>△</div><div>—</div></div> <div>Load 100%</div> <div><div><div>Output Voltage 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		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>0.0</td><td>5.060</td><td>5.059</td><td>5.059</td></tr><tr><td>1.5</td><td>5.057</td><td>5.057</td><td>5.057</td></tr><tr><td>3.0</td><td>5.054</td><td>5.054</td><td>5.054</td></tr><tr><td>4.5</td><td>5.051</td><td>5.051</td><td>5.051</td></tr><tr><td>6.0</td><td>5.049</td><td>5.049</td><td>5.049</td></tr><tr><td>7.5</td><td>5.046</td><td>5.046</td><td>5.046</td></tr><tr><td>8.0</td><td>5.045</td><td>5.045</td><td>5.045</td></tr><tr><td>8.8</td><td>5.044</td><td>5.044</td><td>5.044</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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	5.060	5.059	5.059	1.5	5.057	5.057	5.057	3.0	5.054	5.054	5.054	4.5	5.051	5.051	5.051	6.0	5.049	5.049	5.049	7.5	5.046	5.046	5.046	8.0	5.045	5.045	5.045	8.8	5.044	5.044	5.044	--	-	-	-	--	-	-	-	--	-	-	-
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Load Current [A]	Output Voltage [V]																																																							
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Note: Slanted line shows the range of the rated load current.																																																								

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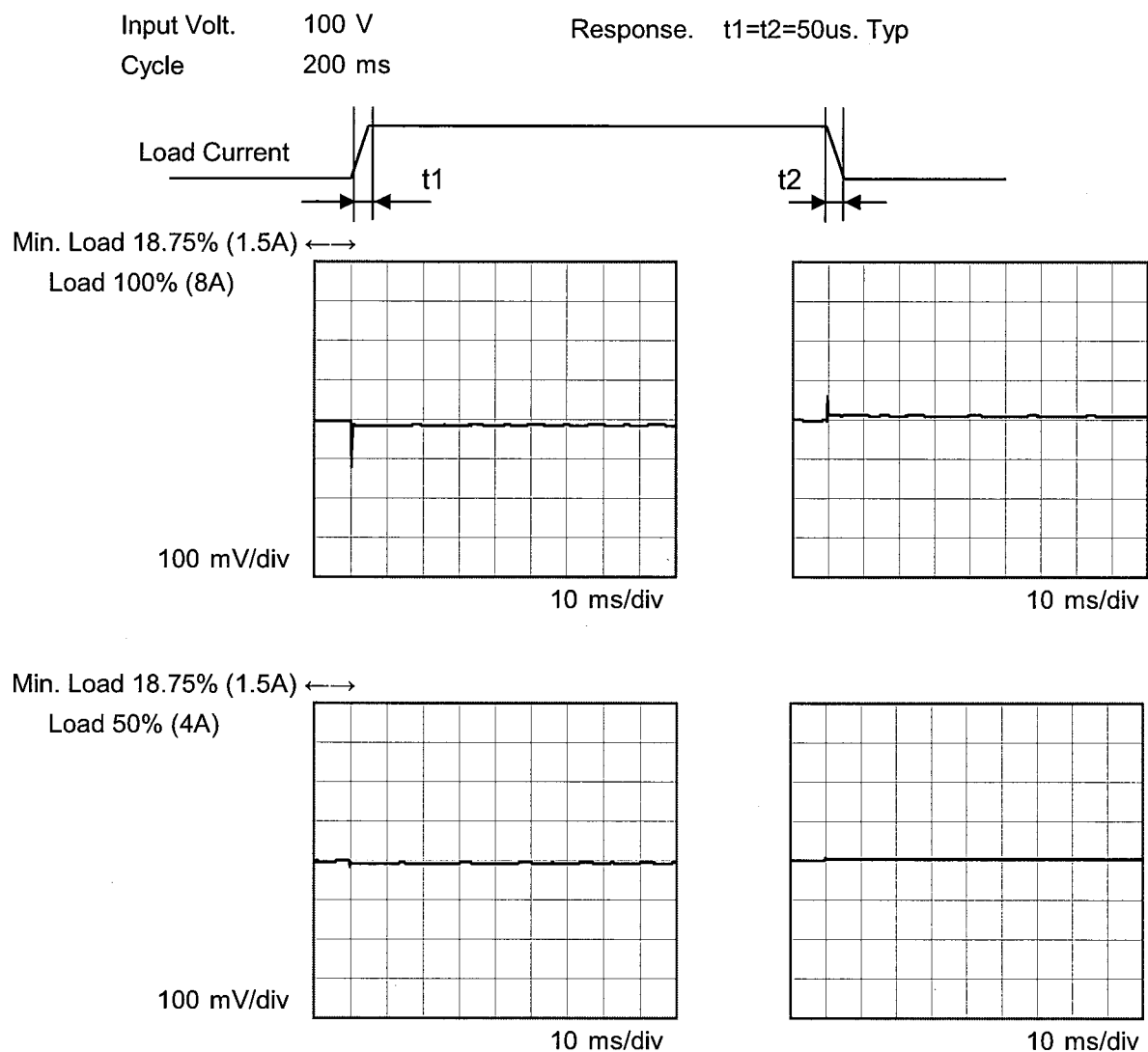
Model		MMC75B-2		Temperature		25°C																																																				
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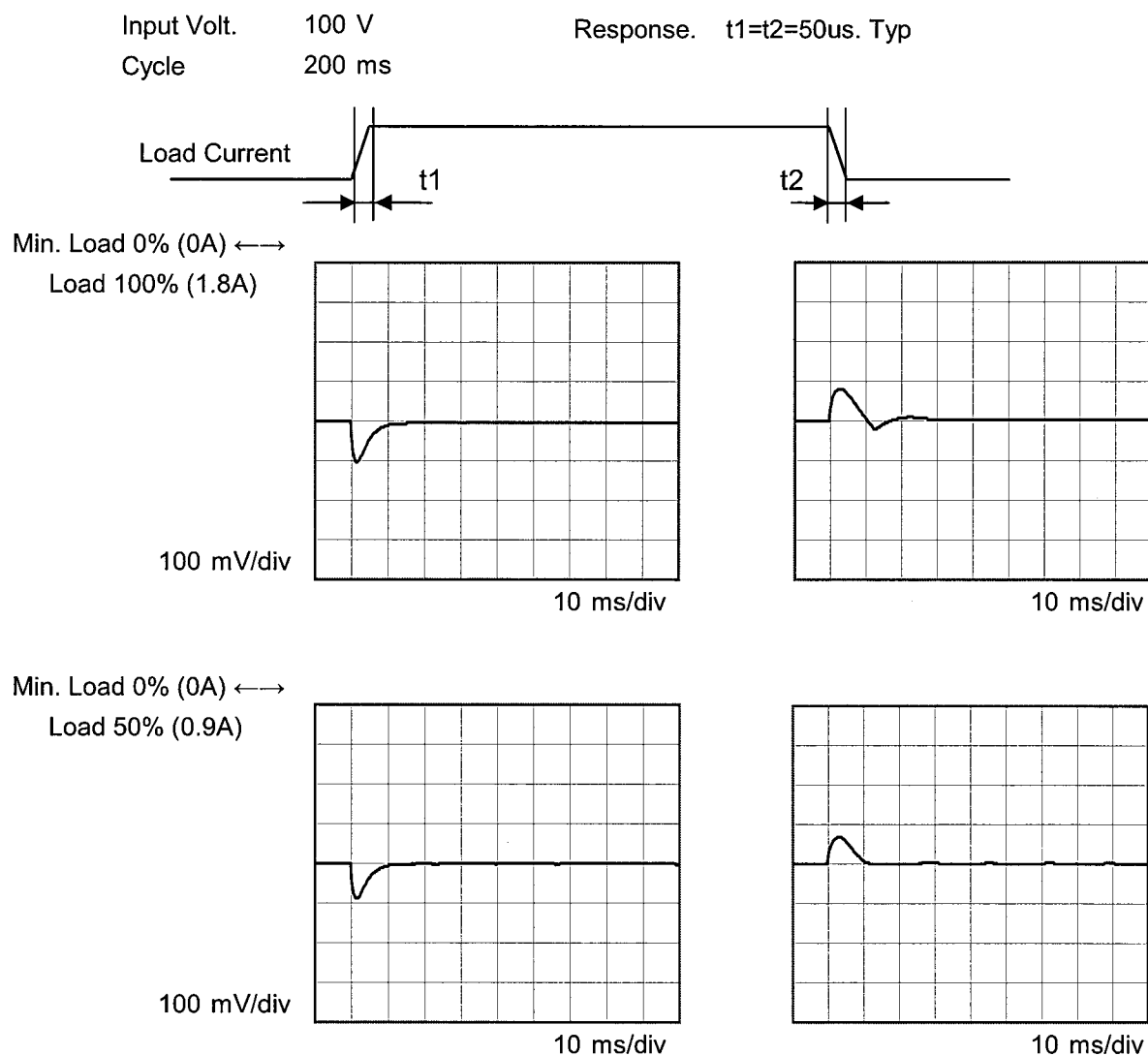
COSEL

Model	MMC75B-2	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+5V8A		



COSEL

Model	MMC75B-2	Temperature Testing Circuitry	25°C Figure A
Item	Dynamic Load Response		
Object	+15V1.8A		

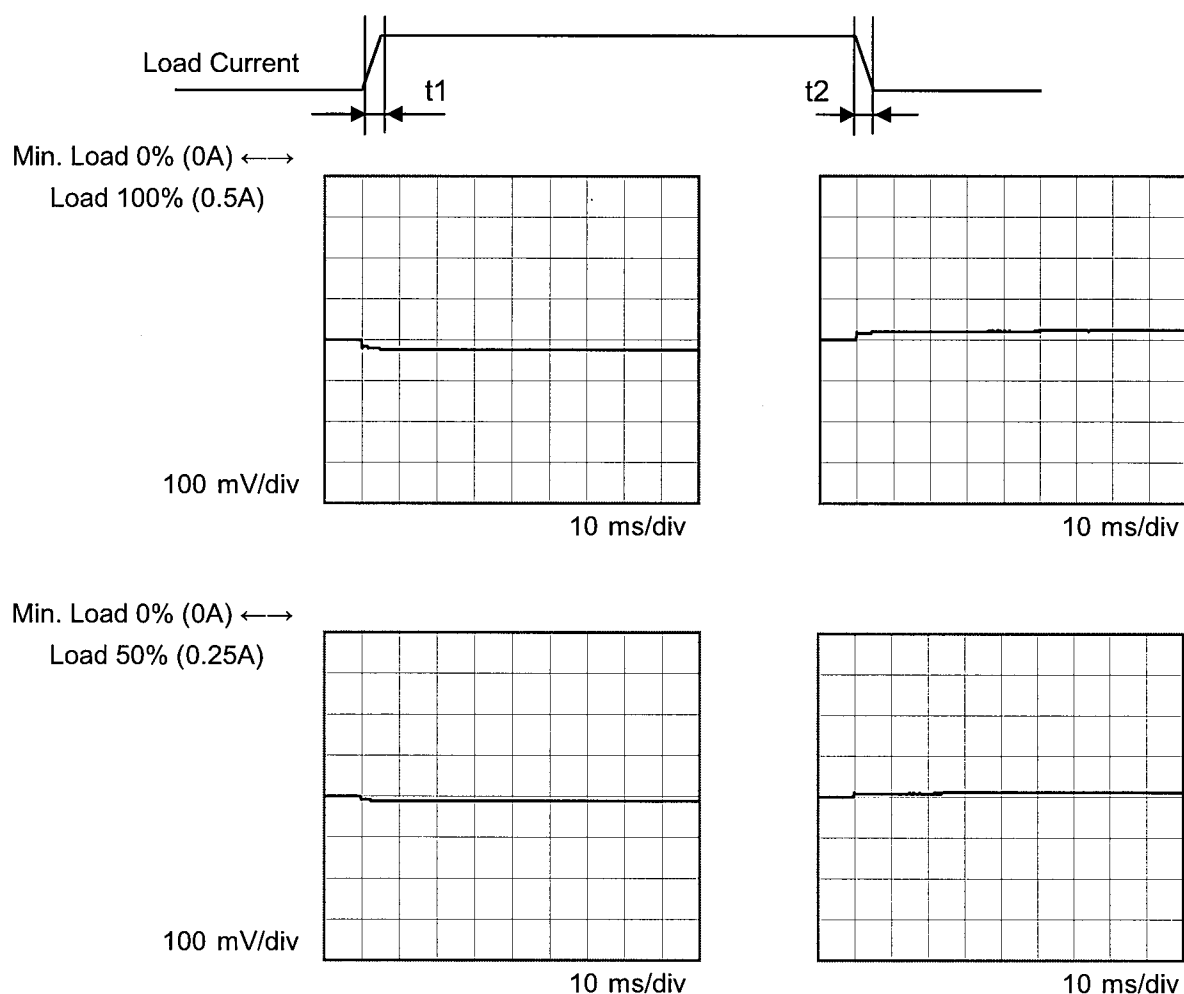




Model	MMC75B-2	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	-15V0.5A		

Input Volt. 100 V
Cycle 200 ms

Response. $t_1=t_2=50\mu\text{s}$. Typ



COSEL

Model		MMC75B-2	Temperature Testing Circuitry	25°C Figure B																																						
Item		Ripple Voltage (by Load Current)																																								
Object		+5V8A																																								
1.Graph			2.Values																																							
<div><div><div>—△— Input Volt. 85V</div><div>-·-○-·- Input Volt. 132V</div></div><div>Ripple Voltage [mV]</div><div>Load Current [A]</div></div>			<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 85 [V]</th><th>Input Volt. 132 [V]</th></tr><tr><td>0.0</td><td>20</td><td>20</td></tr><tr><td>1.6</td><td>20</td><td>20</td></tr><tr><td>3.2</td><td>20</td><td>20</td></tr><tr><td>4.8</td><td>20</td><td>20</td></tr><tr><td>6.4</td><td>25</td><td>25</td></tr><tr><td>8.0</td><td>30</td><td>25</td></tr><tr><td>8.8</td><td>30</td><td>25</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. 85 [V]	Input Volt. 132 [V]	0.0	20	20	1.6	20	20	3.2	20	20	4.8	20	20	6.4	25	25	8.0	30	25	8.8	30	25	--	-	-	--	-	-	--	-	-	--	-	-
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<div><div><div>T1: Due to AC Input Line</div><div>T2: Due to Switching</div></div><div>Ripple [mVp-p]</div><div>T1</div><div>T2</div></div>																																										
Fig. Complex Ripple Wave Form																																										

COSEL

Model		MMC75B-2	
Item		Ripple Voltage (by Load Current)	
Object		+15V1.8A	
1.Graph		2.Values	

—△—

Input Volt.

85V

-·-○-·-

Input Volt.

132V

Load Current [A]	85V [mV]	132V [mV]
0.00	15	15
0.36	20	25
0.72	25	25
1.08	25	25
1.44	30	25
1.80	30	25
1.98	30	30
--	-	-
--	-	-
--	-	-
--	-	-

Measured by 20 MHz Oscilloscope.

Ripple Voltage is shown as p-p in the figure below.

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

T1: Due to AC Input Line

T2: Due to Switching

Ripple [mVp-p]

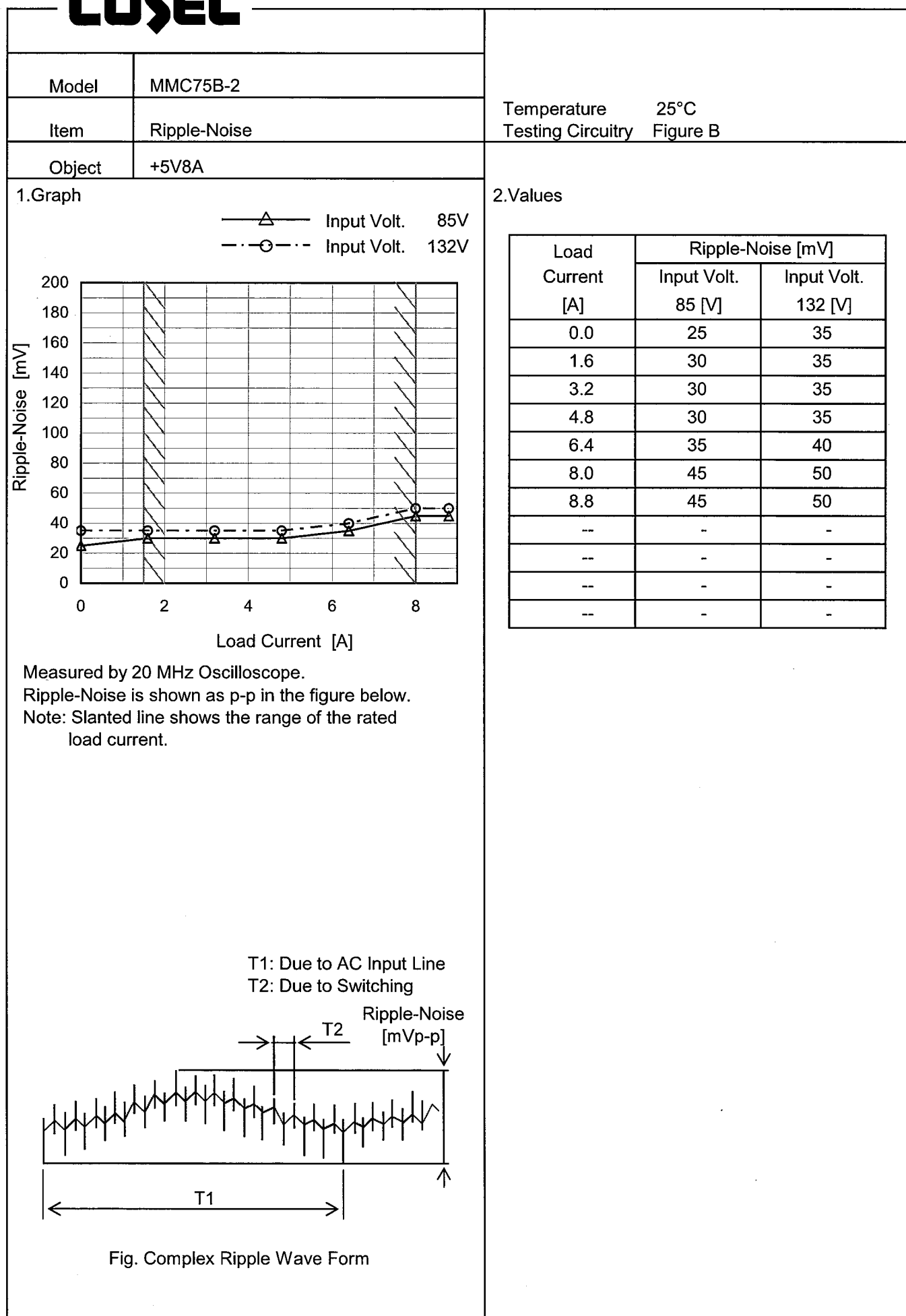
T1

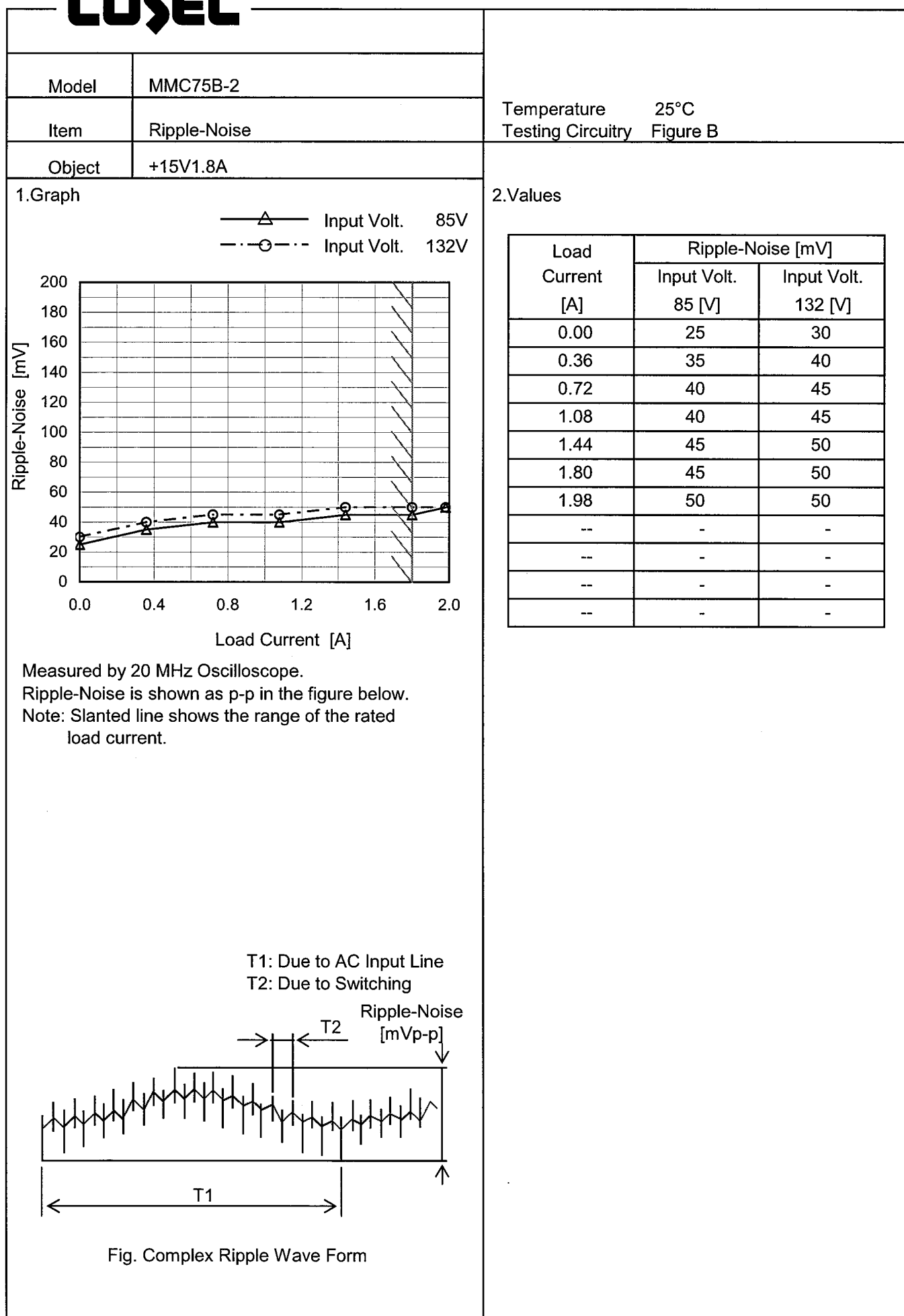
T2

Fig. Complex Ripple Wave Form

COSEL

Model	MMC75B-2																																								
Item	Ripple Voltage (by Load Current)	Temperature	25°C																																						
		Testing Circuitry	Figure B																																						
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COSEL

COSEL

COSEL

Model		MMC75B-2	
Item		Ripple-Noise	
Object		-15V0.5A	
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></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> 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		Note: Slanted line shows the range of the rated ambient temperature.																																																				

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Testing Circuitry Figure A

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	-15.193	-15.195	-15.196
-10	-15.205	-15.206	-15.206
0	-15.216	-15.217	-15.217
10	-15.224	-15.225	-15.225
20	-15.228	-15.229	-15.229
25	-15.229	-15.230	-15.229
30	-15.230	-15.230	-15.230
40	-15.230	-15.230	-15.229
50	-15.228	-15.228	-15.227
60	-15.224	-15.224	-15.223
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		Testing Circuitry Figure A
Model	MMC75B-2	
Item	Output Voltage Accuracy	

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 : 0 - 50°C

Input Voltage : 85 - 132V

Load Current (AVR 1) : 1.5 - 8A (AVR 2) : 0 - 1.8A (AVR 3) : 0 - 0.5A

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

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

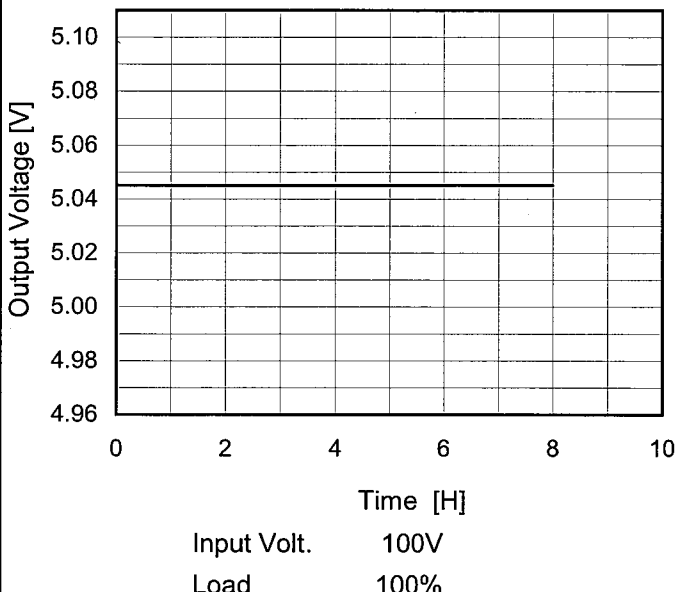
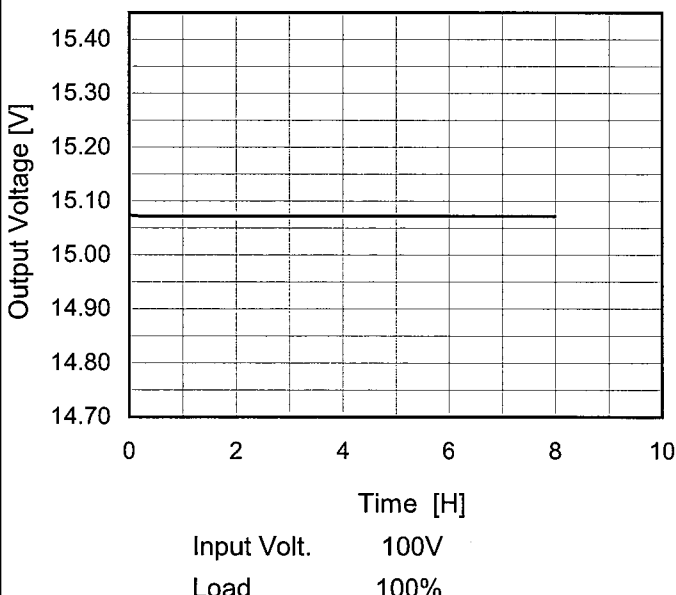
2. Values

Object	+5V8A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	40	100	1.5	5.056	±8	±0.2
Minimum Voltage	0	132	8	5.041		

Object	+15V1.8A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	20	132	0	15.074	±6	±0.1
Minimum Voltage	50	132	1.8	15.063		

Object	-15V0.5A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	50	132	0	-15.258	±28	±0.2
Minimum Voltage	0	85	0.5	-15.203		

COSEL

Model	MMC75B-2	Temperature 25°C Testing Circuitry Figure A																								
Item	Time Lapse Drift																									
Object	+5V8A																									
1.Graph		2.Values																								
<div><p>Input Volt. 100V Load 100%</p></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.045</td></tr><tr><td>0.5</td><td>5.045</td></tr><tr><td>1.0</td><td>5.045</td></tr><tr><td>2.0</td><td>5.045</td></tr><tr><td>3.0</td><td>5.045</td></tr><tr><td>4.0</td><td>5.045</td></tr><tr><td>5.0</td><td>5.045</td></tr><tr><td>6.0</td><td>5.045</td></tr><tr><td>7.0</td><td>5.045</td></tr><tr><td>8.0</td><td>5.045</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	5.045	0.5	5.045	1.0	5.045	2.0	5.045	3.0	5.045	4.0	5.045	5.0	5.045	6.0	5.045	7.0	5.045	8.0	5.045	
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<div><p>Input Volt. 100V Load 100%</p></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>15.075</td></tr><tr><td>0.5</td><td>15.072</td></tr><tr><td>1.0</td><td>15.072</td></tr><tr><td>2.0</td><td>15.072</td></tr><tr><td>3.0</td><td>15.072</td></tr><tr><td>4.0</td><td>15.072</td></tr><tr><td>5.0</td><td>15.072</td></tr><tr><td>6.0</td><td>15.072</td></tr><tr><td>7.0</td><td>15.072</td></tr><tr><td>8.0</td><td>15.072</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	15.075	0.5	15.072	1.0	15.072	2.0	15.072	3.0	15.072	4.0	15.072	5.0	15.072	6.0	15.072	7.0	15.072	8.0	15.072	
Time since start [H]	Output Voltage [V]																									
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COSEL

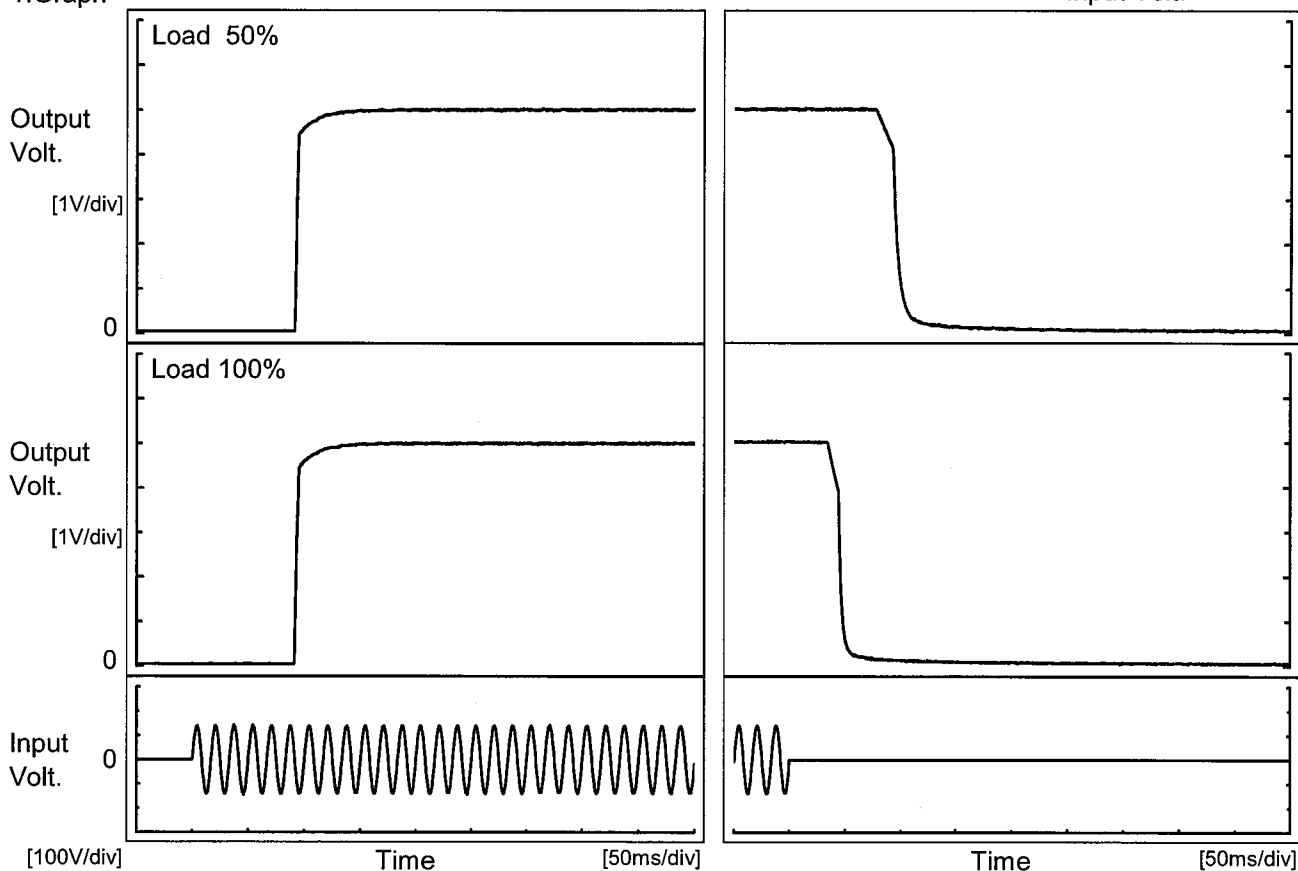
Model		MMC75B-2		Temperature25°C Testing CircuitryFigure A
Item		Time Lapse Drift		
Object		-15V0.5A		
1.Graph				2.Values
<div><div><div>Output Voltage [V]</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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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COSEL

Model	MMC75B-2	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+5V8A		

1. Graph

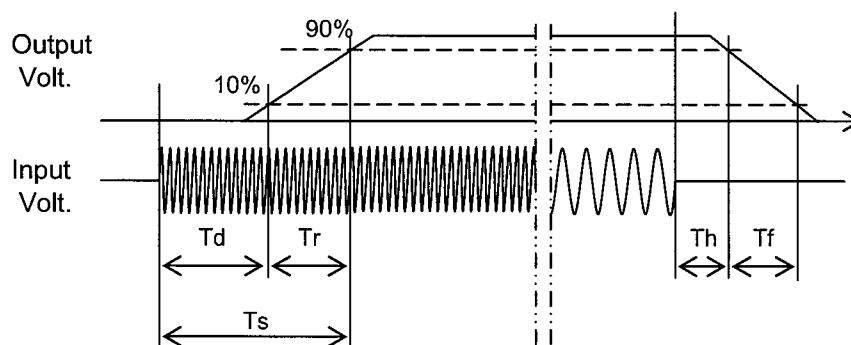
Input Volt. 100 V



2. Values

[ms]

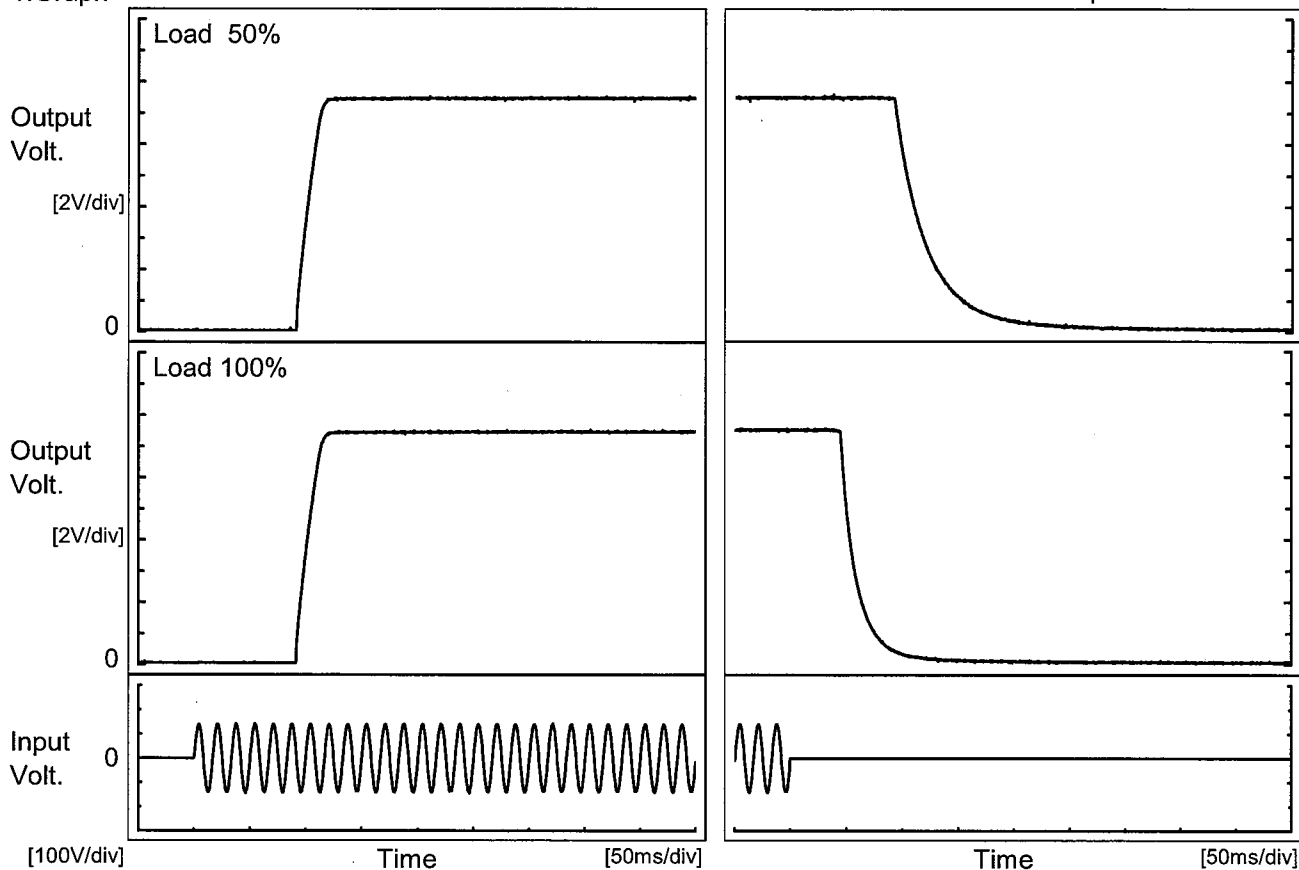
Load \ Time	Td	Tr	Ts	Th	Tf
50 %	92.3	6.3	98.6	86.0	19.0
100 %	92.3	5.8	98.1	38.5	12.3



COSEL

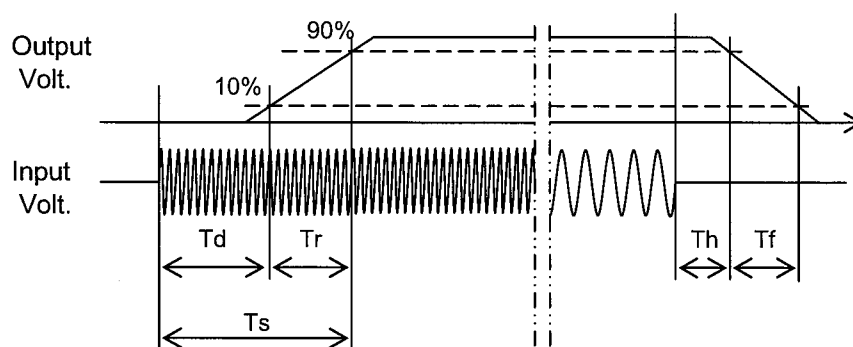
Model	MMC75B-2	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+15V1.8A		

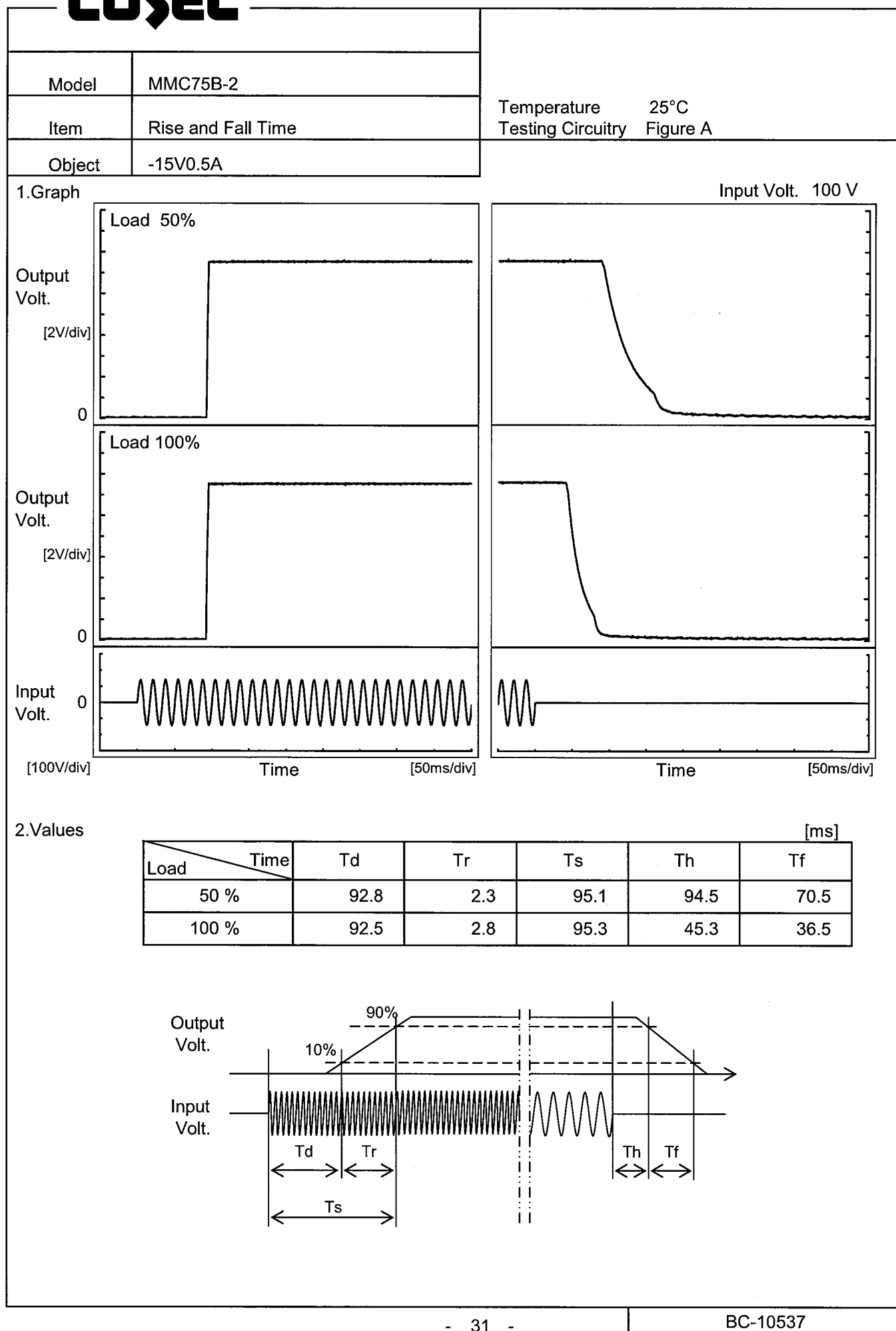
1. Graph



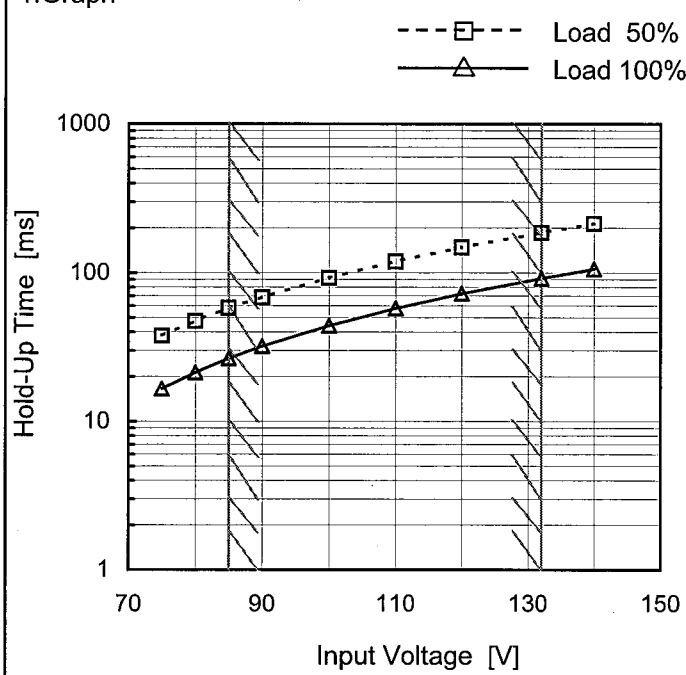
2. Values

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	92.5	20.0	112.5	94.8	67.0
100 %	92.3	20.3	112.6	45.8	34.5



COSEL

Model		MMC75B-2	Temperature 25°C Testing Circuitry Figure A																																
Item		Hold-Up Time																																	
Object		+5V8A																																	
1.Graph			2.Values																																
<div><div><div>Hold-Up Time [ms]</div><div><div><div>1000</div><div>100</div><div>10</div><div>1</div></div><div><div>70</div><div>90</div><div>110</div><div>130</div><div>150</div></div></div><div><div><div>---□---</div><div>Load 50%</div></div><div><div>—△—</div><div>Load 100%</div></div></div></div></div>																																			
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			<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Hold-Up Time [ms]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>75</td><td>24</td><td>7</td></tr><tr><td>80</td><td>34</td><td>12</td></tr><tr><td>85</td><td>44</td><td>17</td></tr><tr><td>90</td><td>55</td><td>23</td></tr><tr><td>100</td><td>79</td><td>35</td></tr><tr><td>110</td><td>105</td><td>48</td></tr><tr><td>120</td><td>134</td><td>62</td></tr><tr><td>132</td><td>172</td><td>82</td></tr><tr><td>140</td><td>200</td><td>96</td></tr></table>	Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	75	24	7	80	34	12	85	44	17	90	55	23	100	79	35	110	105	48	120	134	62	132	172	82	140	200	96
Input Voltage [V]	Hold-Up Time [ms]																																		
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Model	MMC75B-2																																																																
Item	Hold-Up Time	Temperature	25°C																																																														
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1.Graph		2.Values																																																															
<div><div>---□--- Load 50%</div><div>—△— Load 100%</div><p>The graph shows Hold-Up Time [ms] on a logarithmic y-axis (1 to 1000) versus Input Voltage [V] on a linear x-axis (70 to 150). Two data series are plotted: Load 50% (dashed line with square markers) and Load 100% (solid line with triangle markers). Both series show an increasing trend. A slanted shaded region indicates the rated input voltage range from approximately 85V to 135V.</p><table><caption>Data points estimated from the graph</caption><tr><th>Input Voltage [V]</th><th>Load 50% Hold-Up Time [ms]</th><th>Load 100% Hold-Up Time [ms]</th></tr><tr><td>75</td><td>38</td><td>17</td></tr><tr><td>80</td><td>47</td><td>21</td></tr><tr><td>85</td><td>58</td><td>27</td></tr><tr><td>90</td><td>68</td><td>32</td></tr><tr><td>100</td><td>92</td><td>44</td></tr><tr><td>110</td><td>119</td><td>58</td></tr><tr><td>120</td><td>148</td><td>72</td></tr><tr><td>132</td><td>186</td><td>92</td></tr><tr><td>140</td><td>214</td><td>106</td></tr></table></div>		Input Voltage [V]	Load 50% Hold-Up Time [ms]	Load 100% Hold-Up Time [ms]	75	38	17	80	47	21	85	58	27	90	68	32	100	92	44	110	119	58	120	148	72	132	186	92	140	214	106	<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Hold-Up Time [ms]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>75</td><td>38</td><td>17</td></tr><tr><td>80</td><td>47</td><td>21</td></tr><tr><td>85</td><td>58</td><td>27</td></tr><tr><td>90</td><td>68</td><td>32</td></tr><tr><td>100</td><td>92</td><td>44</td></tr><tr><td>110</td><td>119</td><td>58</td></tr><tr><td>120</td><td>148</td><td>72</td></tr><tr><td>132</td><td>186</td><td>92</td></tr><tr><td>140</td><td>214</td><td>106</td></tr></table>		Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	75	38	17	80	47	21	85	58	27	90	68	32	100	92	44	110	119	58	120	148	72	132	186	92	140	214	106
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BC-10537

Model	MMC75B-2																																																					
Item	Instantaneous Interruption Compensation	Temperature	25°C																																																			
Object	+5V8A	Testing Circuitry	Figure A																																																			
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Note: Slanted line shows the range of the rated ambient temperature.

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Model	MMC75B-2	Testing Circuitry Figure A																																							
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<div><div><div></div>Input Volt. 85V</div><div><div></div>Input Volt. 100V</div><div><div></div>Input Volt. 132V</div></div>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>14.25</td><td>3.79</td><td>3.85</td><td>3.90</td></tr><tr><td>13.50</td><td>3.91</td><td>3.96</td><td>4.02</td></tr><tr><td>12.00</td><td>4.13</td><td>4.18</td><td>4.26</td></tr><tr><td>10.50</td><td>4.36</td><td>4.41</td><td>4.50</td></tr><tr><td>9.00</td><td>4.59</td><td>4.65</td><td>4.75</td></tr><tr><td>7.50</td><td>4.82</td><td>4.88</td><td>4.99</td></tr><tr><td>6.00</td><td>5.05</td><td>5.10</td><td>5.24</td></tr><tr><td>4.50</td><td>5.28</td><td>5.33</td><td>5.44</td></tr><tr><td>3.00</td><td>5.47</td><td>5.51</td><td>5.61</td></tr><tr><td>1.50</td><td>5.63</td><td>5.65</td><td>5.73</td></tr><tr><td>0.00</td><td>5.88</td><td>6.00</td><td>6.29</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>			Output Voltage [V]	Load Current [A]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	14.25	3.79	3.85	3.90	13.50	3.91	3.96	4.02	12.00	4.13	4.18	4.26	10.50	4.36	4.41	4.50	9.00	4.59	4.65	4.75	7.50	4.82	4.88	4.99	6.00	5.05	5.10	5.24	4.50	5.28	5.33	5.44	3.00	5.47	5.51	5.61	1.50	5.63	5.65	5.73	0.00	5.88	6.00	6.29	--	-	-	-
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Note: Slanted line shows the range of the rated load current.																																																											

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Model	MMC75B-2																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
Object	-15V0.5A	Testing Circuitry	Figure A																																																							
1.Graph		2.Values																																																								
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Output Voltage [V]	Load Current [A]																																																									
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Note: Slanted line shows the range of the rated load current.

Model		MMC75B-2																																							
Item		Overvoltage Protection																																							
Object		+5V8A																																							
1.Graph		2.Values																																							
<div><div><div><div><div>—△—</div><div>Input Volt. 85V</div></div><div><div>---□---</div><div>Input Volt. 132V</div></div></div><div><p>Operating Point [V]</p><p>Ambient Temperature [°C]</p><p>Load 0%</p></div><p>Note: Slanted line shows the range of the rated ambient temperature.</p></div></div>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Operating Point [V]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>-20</td><td>6.30</td><td>6.30</td></tr><tr><td>-10</td><td>6.30</td><td>6.30</td></tr><tr><td>0</td><td>6.30</td><td>6.30</td></tr><tr><td>10</td><td>6.30</td><td>6.30</td></tr><tr><td>20</td><td>6.30</td><td>6.30</td></tr><tr><td>25</td><td>6.30</td><td>6.30</td></tr><tr><td>30</td><td>6.30</td><td>6.30</td></tr><tr><td>40</td><td>6.30</td><td>6.30</td></tr><tr><td>50</td><td>6.30</td><td>6.30</td></tr><tr><td>60</td><td>6.30</td><td>6.30</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Ambient Temperature [°C]	Operating Point [V]		Input Volt. 85[V]	Input Volt. 132[V]	-20	6.30	6.30	-10	6.30	6.30	0	6.30	6.30	10	6.30	6.30	20	6.30	6.30	25	6.30	6.30	30	6.30	6.30	40	6.30	6.30	50	6.30	6.30	60	6.30	6.30	--	-	-
Ambient Temperature [°C]	Operating Point [V]																																								
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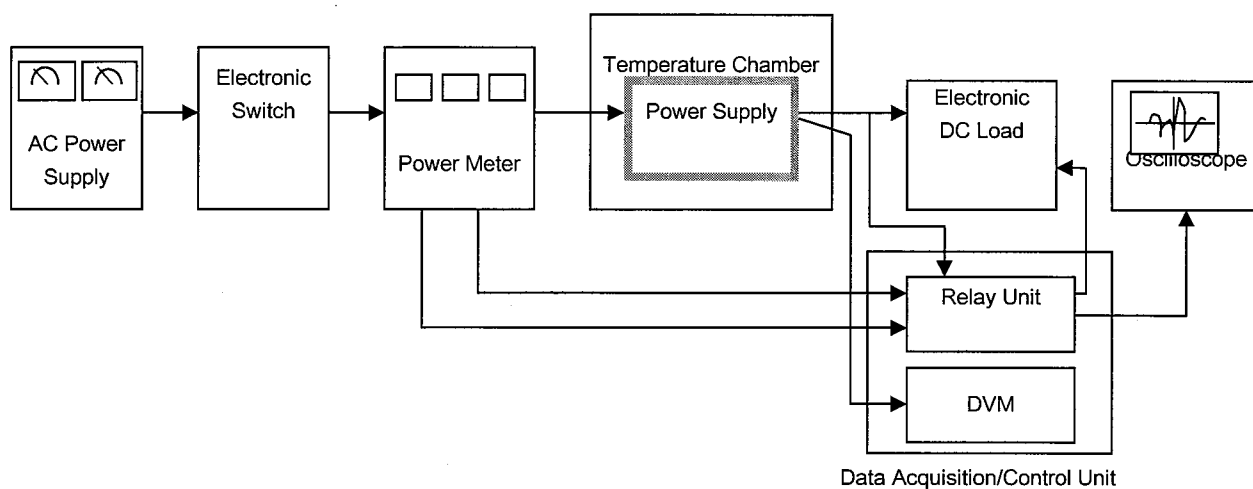


Figure A

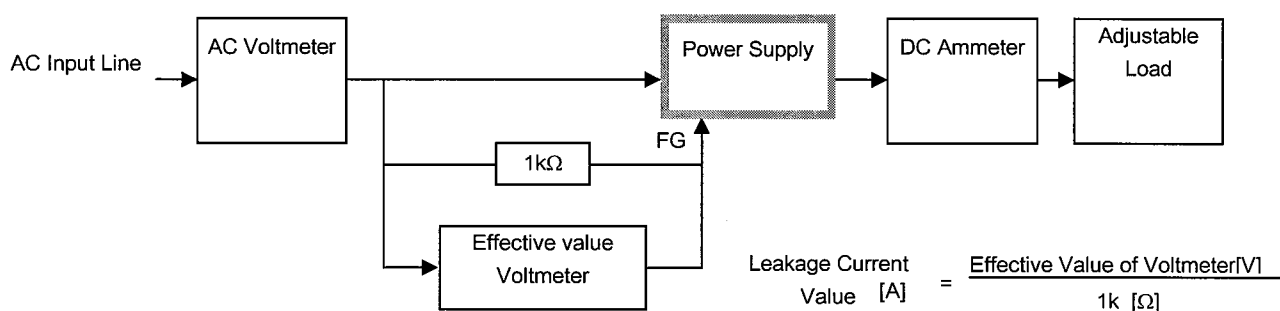


Figure B (DEN-AN)

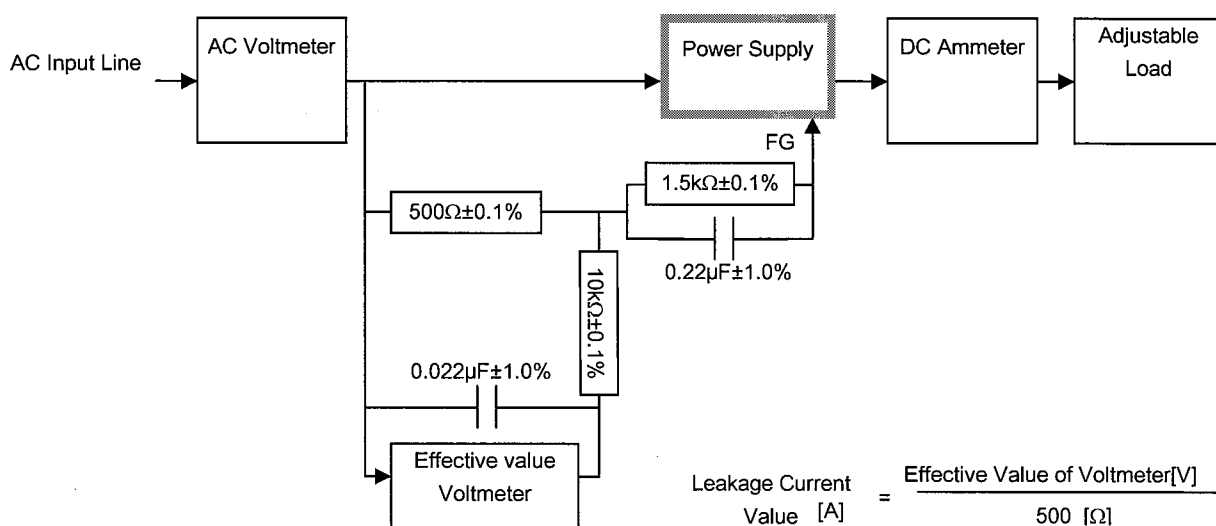


Figure B (IEC60950-1)