



TEST DATA OF MODULE F

(RB series)

Regulated DC Power Supply
November 25, 2019

Approved by : Yoshimichi Hirokawa
Yoshimichi Hirokawa Design Manager

Prepared by : Yutaka Murai
Yutaka Murai Design Engineer



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COSEL																																			
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Item	Line Regulation	Testing Circuitry	Figure A																																
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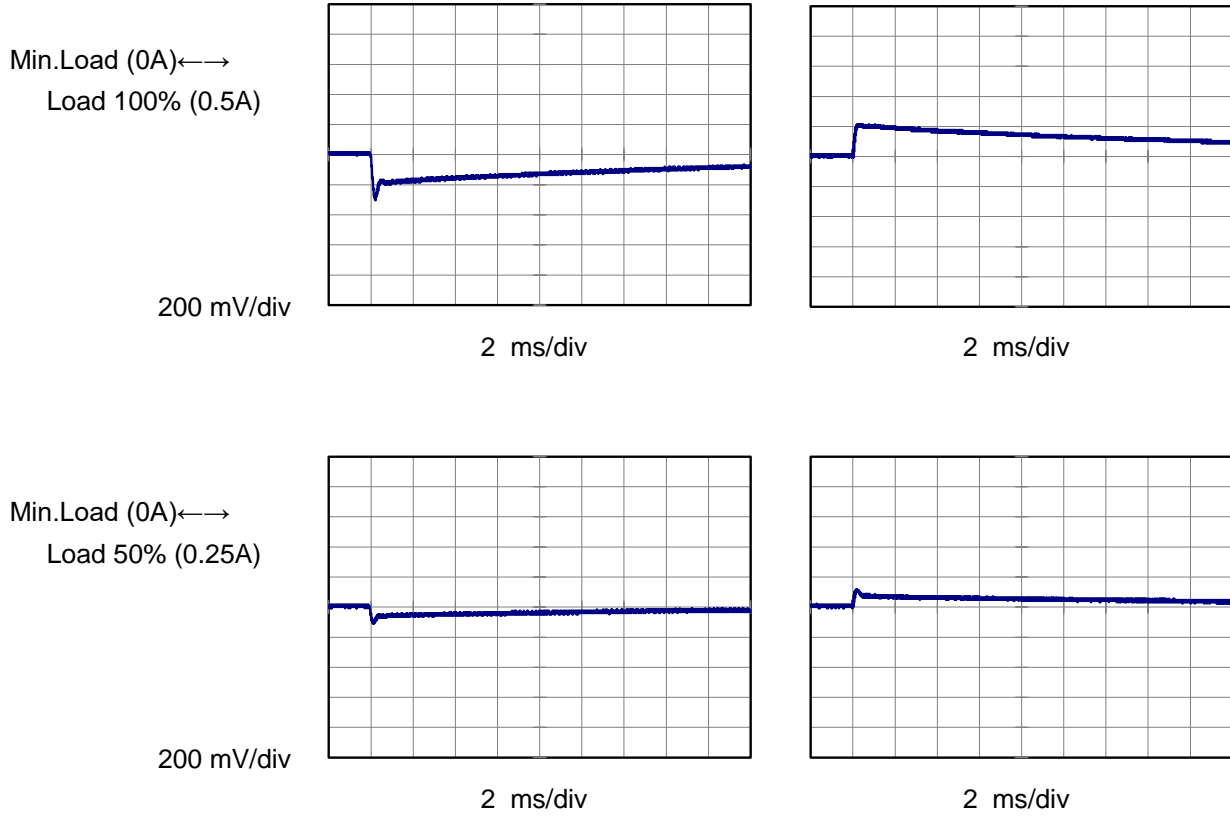
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Model		MODULE F	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+15V0.5A	

Input Volt. 100 V
Other output current rated
Cycle 1000 ms

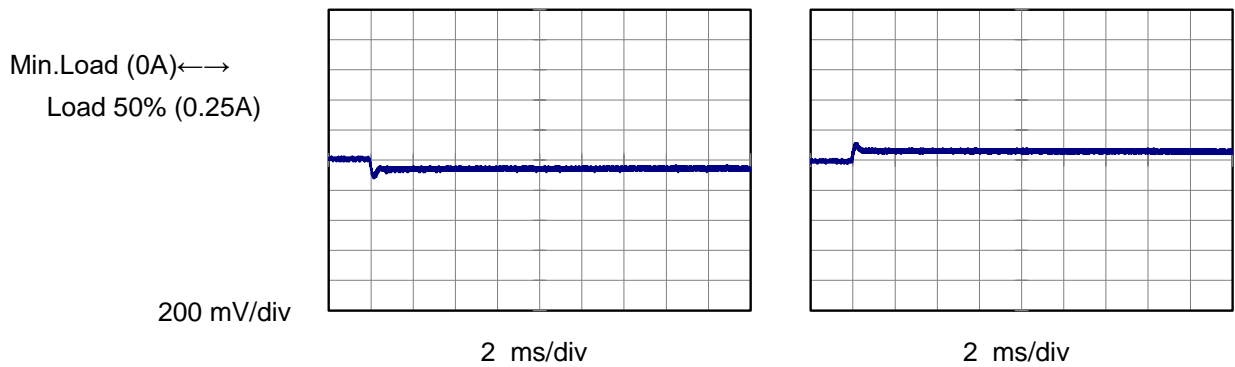
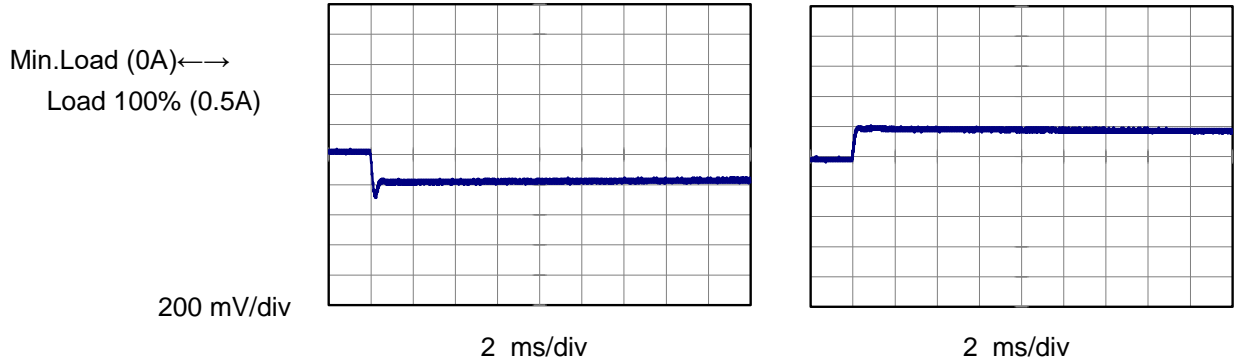
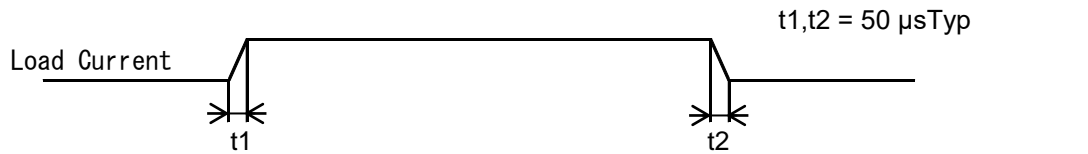
t1,t2 = 50 μsTyp





Model		MODULE F	Temperature 25°C Testing Circuitry Figure A
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<p>1.Graph</p> <div style="text-align: right;"> <p>—△— Input Volt. 100V</p> <p>-·-○-·- Input Volt. 230V</p> </div> <p>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.</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple-Noise [mV]</th> </tr> <tr> <th>Input Volt. 100 [V]</th> <th>Input Volt. 230 [V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>25</td><td>25</td></tr> <tr><td>0.08</td><td>25</td><td>25</td></tr> <tr><td>0.16</td><td>30</td><td>30</td></tr> <tr><td>0.24</td><td>30</td><td>30</td></tr> <tr><td>0.32</td><td>25</td><td>30</td></tr> <tr><td>0.40</td><td>25</td><td>30</td></tr> <tr><td>0.48</td><td>25</td><td>30</td></tr> <tr><td>0.50</td><td>30</td><td>30</td></tr> <tr><td>0.55</td><td>30</td><td>35</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> <p style="text-align: center;">+15V: Rated Load Current</p>	Load Current [A]	Ripple-Noise [mV]		Input Volt. 100 [V]	Input Volt. 230 [V]	0.00	25	25	0.08	25	25	0.16	30	30	0.24	30	30	0.32	25	30	0.40	25	30	0.48	25	30	0.50	30	30	0.55	30	35	--	-	-	--	-	-
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COSEL		
Model	MODULE F	
Item	Output Voltage Accuracy	Testing Circuitry Figure A

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 : -20 - 50°C

Input Voltage : 85 - 264V

Load Current (AVR 1) : 0 - 0.5A (AVR 2) : 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		+15V0.5A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	50	100	0.00	15.828	±229	±1.5
Minimum Voltage	50	85	0.50	15.371		

Object		-15V0.5A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	50	230	0.50	-15.363	±228	±1.5
Minimum Voltage	50	85	0.00	-15.818		



COSEL																									
Model	MODULE F	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+15V0.5A																								
<p>1.Graph</p> <p style="text-align: center;">Time [H]</p> <p>Input Volt. 100V Load 100%</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>15.569</td></tr> <tr><td>0.5</td><td>15.567</td></tr> <tr><td>1.0</td><td>15.566</td></tr> <tr><td>2.0</td><td>15.568</td></tr> <tr><td>3.0</td><td>15.569</td></tr> <tr><td>4.0</td><td>15.569</td></tr> <tr><td>5.0</td><td>15.569</td></tr> <tr><td>6.0</td><td>15.569</td></tr> <tr><td>7.0</td><td>15.569</td></tr> <tr><td>8.0</td><td>15.569</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	15.569	0.5	15.567	1.0	15.566	2.0	15.568	3.0	15.569	4.0	15.569	5.0	15.569	6.0	15.569	7.0	15.569	8.0	15.569
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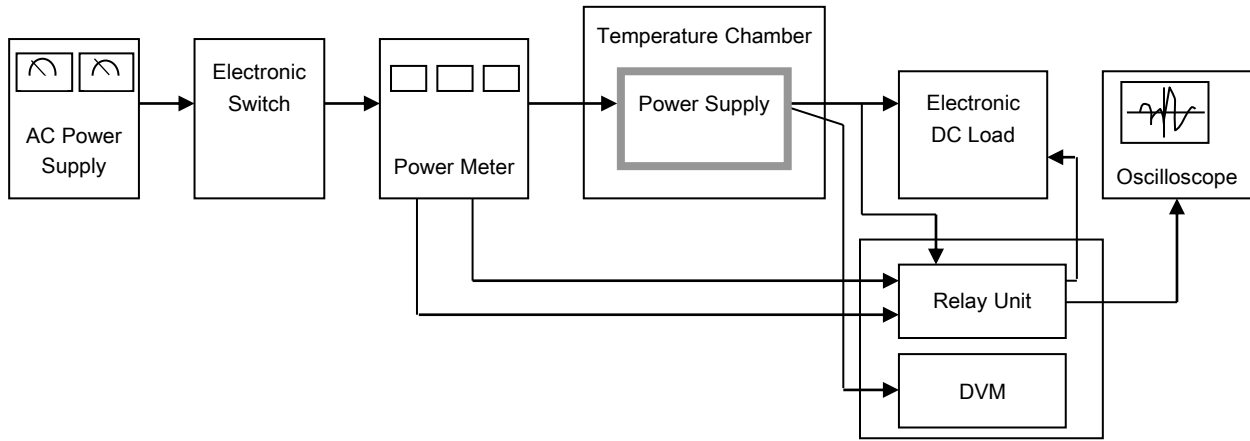
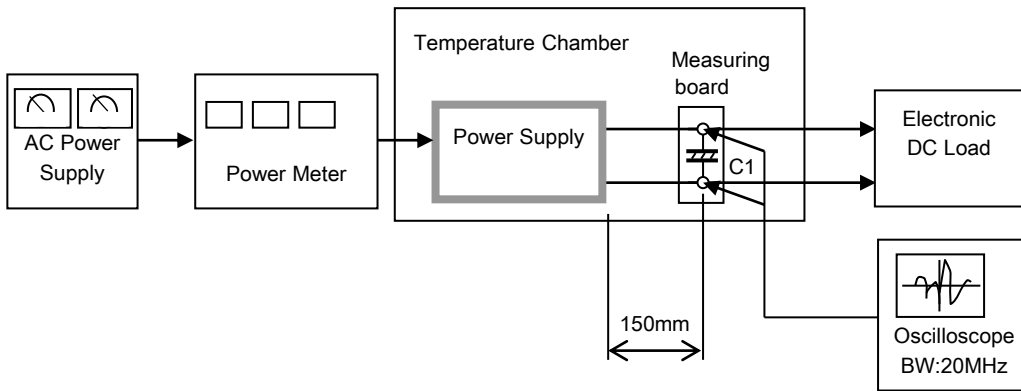


Figure A

Data Acquisition/Control Unit



C1= 22 μ F
(Electrolytic capacitor)

Figure B