

TEST DATA OF MUS10123R3

Regulated DC Power Supply
July 2, 2025

Approved by : Kenichi Tsukada
Design Manager

Prepared by : Soichiro Kawaguchi
Design Engineer

COSEL CO.,LTD.

CONTENTS

1.Input Current (by Load Current)	1
2.Efficiency (by Load Current)	2
3.Line Regulation	3
4.Load Regulation	4
5.Ripple-Noise	4
6.Dynamic Load Response	5
7.Rise and Fall Time	6
8.Overcurrent Protection	7
9.Ambient Temperature Drift	8
10.Minimum Input Voltage for Regulated Output Voltage	8
11.Figure of Testing Circuitry	9

(Final Page 9)

COSEL																																																						
Model	MUS10123R3	Temperature	25°C																																																			
Item	Input Current (by Load Current)	Testing Circuitry	Figure A																																																			
Object																																																						
1.Graph		2.Values																																																				
<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> <p>Input Current [A]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input 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>0.00</td><td>0.028</td><td>0.026</td><td>0.018</td></tr><tr><td>0.52</td><td>0.237</td><td>0.183</td><td>0.127</td></tr><tr><td>1.04</td><td>0.450</td><td>0.338</td><td>0.230</td></tr><tr><td>1.56</td><td>0.667</td><td>0.500</td><td>0.338</td></tr><tr><td>2.08</td><td>0.883</td><td>0.663</td><td>0.446</td></tr><tr><td>2.60</td><td>1.116</td><td>0.832</td><td>0.555</td></tr><tr><td>2.86</td><td>1.238</td><td>0.911</td><td>0.610</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>		Load Current [A]	Input Current [A]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	0.00	0.028	0.026	0.018	0.52	0.237	0.183	0.127	1.04	0.450	0.338	0.230	1.56	0.667	0.500	0.338	2.08	0.883	0.663	0.446	2.60	1.116	0.832	0.555	2.86	1.238	0.911	0.610	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Current [A]																																																					
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]																																																			
0.00	0.028	0.026	0.018																																																			
0.52	0.237	0.183	0.127																																																			
1.04	0.450	0.338	0.230																																																			
1.56	0.667	0.500	0.338																																																			
2.08	0.883	0.663	0.446																																																			
2.60	1.116	0.832	0.555																																																			
2.86	1.238	0.911	0.610																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

Model		MUS10123R3	Temperature 25°C																																																				
Item		Efficiency (by Load Current)	Testing Circuitry Figure A																																																				
Object																																																							
1.Graph		<div><div>—△—</div>Input Volt. 9V</div> <div><div>---□---</div>Input Volt. 12V</div> <div><div>---○---</div>Input Volt. 18V</div> <p>Efficiency [%]</p> <p>Load Current [A]</p>	2.Values																																																				
			<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.52</td><td>81.7</td><td>79.3</td><td>76.0</td></tr><tr><td>1.04</td><td>86.2</td><td>85.8</td><td>83.9</td></tr><tr><td>1.56</td><td>87.3</td><td>87.1</td><td>85.7</td></tr><tr><td>2.08</td><td>87.4</td><td>87.8</td><td>86.6</td></tr><tr><td>2.60</td><td>86.7</td><td>87.6</td><td>87.0</td></tr><tr><td>2.86</td><td>86.1</td><td>87.2</td><td>87.2</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>		Load Current [A]	Efficiency [%]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	0.00	-	-	-	0.52	81.7	79.3	76.0	1.04	86.2	85.8	83.9	1.56	87.3	87.1	85.7	2.08	87.4	87.8	86.6	2.60	86.7	87.6	87.0	2.86	86.1	87.2	87.2	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Efficiency [%]																																																						
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]																																																				
0.00	-	-	-																																																				
0.52	81.7	79.3	76.0																																																				
1.04	86.2	85.8	83.9																																																				
1.56	87.3	87.1	85.7																																																				
2.08	87.4	87.8	86.6																																																				
2.60	86.7	87.6	87.0																																																				
2.86	86.1	87.2	87.2																																																				
--	-	-	-																																																				
--	-	-	-																																																				
--	-	-	-																																																				
--	-	-	-																																																				
		Note: Slanted line shows the range of the rated load current.																																																					

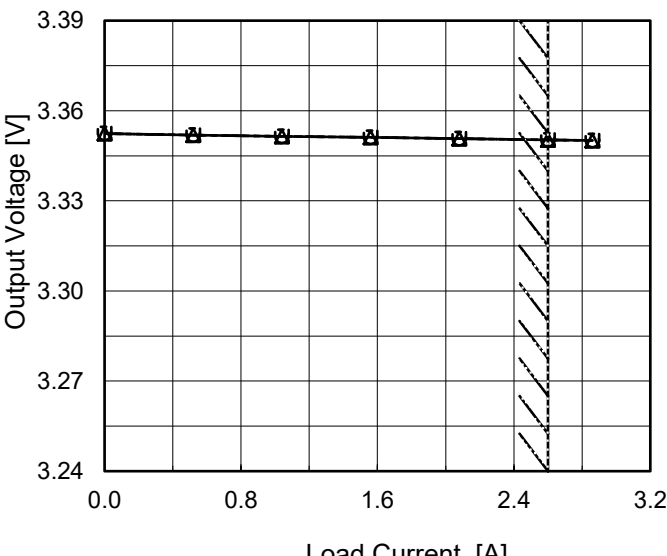
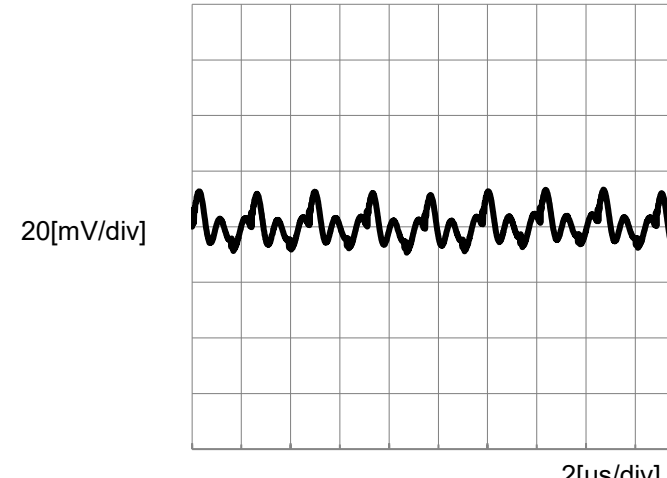
- 2 -

BC-12126



Model		MUS10123R3	Temperature25°C Testing CircuitryFigure A																																
Item		Line Regulation																																	
Object		+3.3V2.6A																																	
1.Graph			2.Values																																
<div><div><div><div></div><div>---</div><div>□</div><div>---</div><div>Load 50%</div></div><div><div></div><div>---</div><div>△</div><div>---</div><div>Load 100%</div></div></div><div><div>Output Voltage [V]</div><div><div></div><div>3.39</div><div>3.36</div><div>3.33</div><div>3.30</div><div>3.27</div><div>3.24</div></div><div><div></div><div>5</div><div>10</div><div>15</div><div>20</div><div>25</div></div><div>Input Voltage [V]</div></div></div>																																			
<div>Note: Slanted line shows the range of the rated input voltage.</div>			<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Output Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>8</td><td>3.351</td><td>3.350</td></tr><tr><td>9</td><td>3.351</td><td>3.350</td></tr><tr><td>10</td><td>3.351</td><td>3.350</td></tr><tr><td>12</td><td>3.351</td><td>3.350</td></tr><tr><td>15</td><td>3.351</td><td>3.350</td></tr><tr><td>18</td><td>3.351</td><td>3.350</td></tr><tr><td>20</td><td>3.351</td><td>3.350</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>	Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	8	3.351	3.350	9	3.351	3.350	10	3.351	3.350	12	3.351	3.350	15	3.351	3.350	18	3.351	3.350	20	3.351	3.350	--	-	-	--	-	-
Input Voltage [V]	Output Voltage [V]																																		
	Load 50%	Load 100%																																	
8	3.351	3.350																																	
9	3.351	3.350																																	
10	3.351	3.350																																	
12	3.351	3.350																																	
15	3.351	3.350																																	
18	3.351	3.350																																	
20	3.351	3.350																																	
--	-	-																																	
--	-	-																																	

COSEL

Model	MUS10123R3																																																					
Item	Load Regulation	Temperature	25°C																																																			
		Testing Circuitry	Figure A																																																			
Object	+3.3V2.6A																																																					
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>9V</div></div><div><div>---□---</div><div>Input Volt.</div><div>12V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>18V</div></div></div>  <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</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>0.00</td><td>3.352</td><td>3.352</td><td>3.352</td></tr><tr><td>0.52</td><td>3.352</td><td>3.352</td><td>3.352</td></tr><tr><td>1.04</td><td>3.352</td><td>3.352</td><td>3.352</td></tr><tr><td>1.56</td><td>3.351</td><td>3.351</td><td>3.351</td></tr><tr><td>2.08</td><td>3.351</td><td>3.351</td><td>3.351</td></tr><tr><td>2.60</td><td>3.350</td><td>3.350</td><td>3.350</td></tr><tr><td>2.86</td><td>3.350</td><td>3.350</td><td>3.350</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>		Load Current [A]	Output Voltage [V]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	0.00	3.352	3.352	3.352	0.52	3.352	3.352	3.352	1.04	3.352	3.352	3.352	1.56	3.351	3.351	3.351	2.08	3.351	3.351	3.351	2.60	3.350	3.350	3.350	2.86	3.350	3.350	3.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																					
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]																																																			
0.00	3.352	3.352	3.352																																																			
0.52	3.352	3.352	3.352																																																			
1.04	3.352	3.352	3.352																																																			
1.56	3.351	3.351	3.351																																																			
2.08	3.351	3.351	3.351																																																			
2.60	3.350	3.350	3.350																																																			
2.86	3.350	3.350	3.350																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
Item	Ripple-Noise	Temperature	25°C																																																			
		Testing Circuitry	Figure B																																																			
Object	+3.3V2.6A																																																					
1.Graph																																																						
<div><div>Input Voltage</div><div>12V</div></div> <div><div>Load</div><div>100%</div></div> 																																																						

-

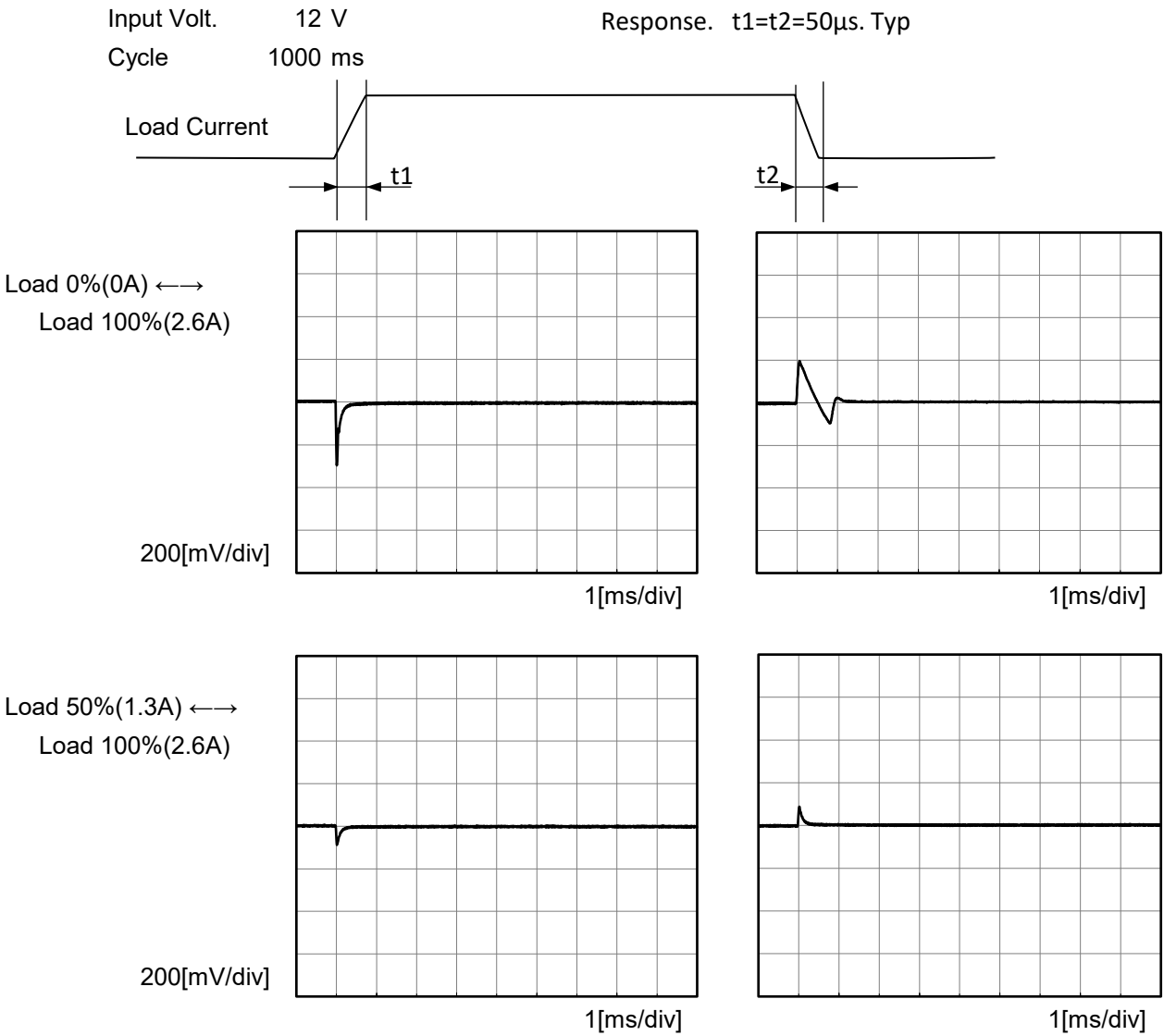
4

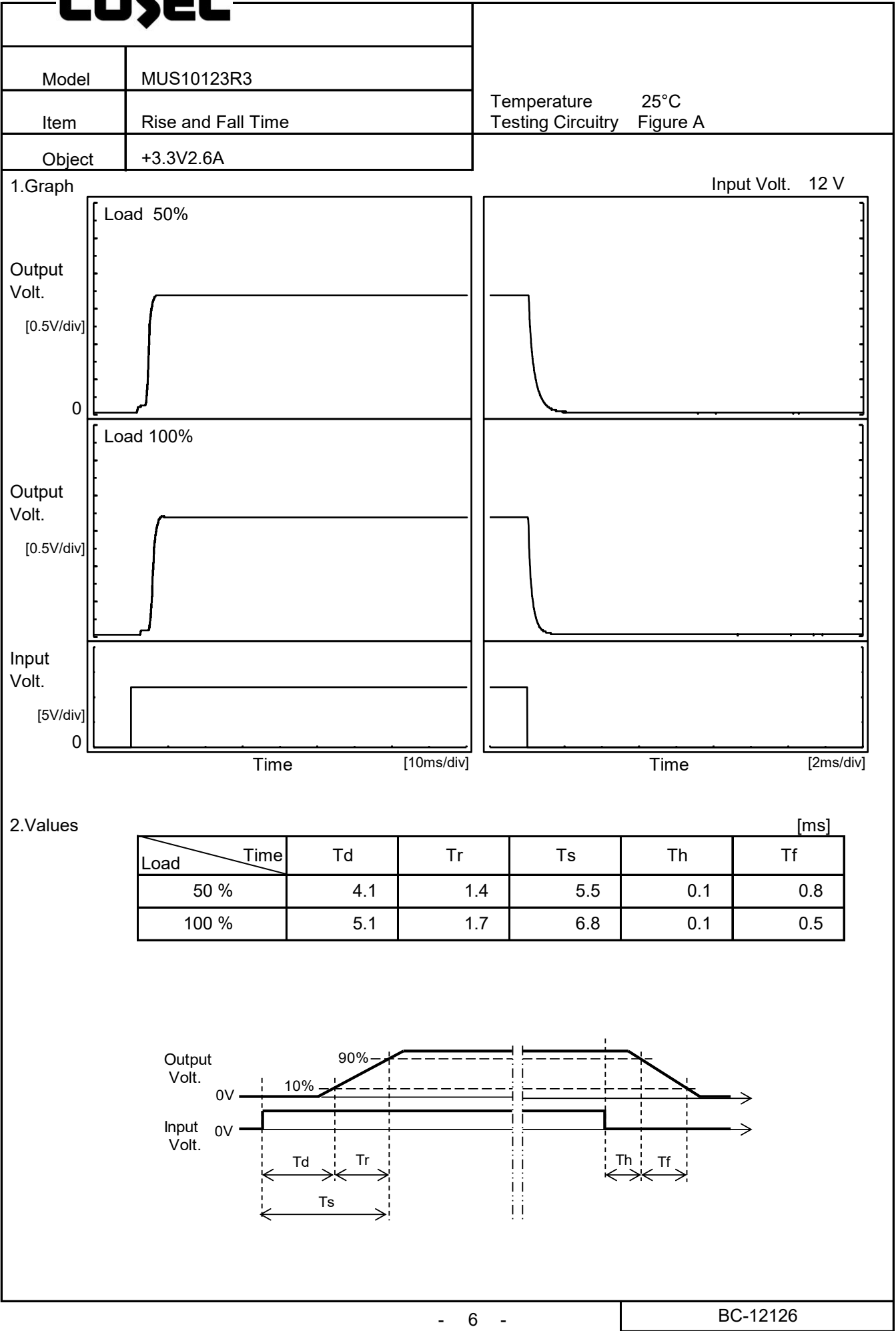
-

BC-12126



Model		MUS10123R3	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+3.3V2.6A	





COSEL																																																										
Model	MUS10123R3																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
		Testing Circuitry	Figure A																																																							
Object	+3.3V2.6A																																																									
1.Graph		2.Values																																																								
<div><div><div></div><div>Input Volt. 9V</div></div><div><div></div><div>Input Volt. 12V</div></div><div><div></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>3.14</td><td>3.36</td><td>3.62</td><td>3.86</td></tr><tr><td>2.97</td><td>3.46</td><td>3.74</td><td>3.99</td></tr><tr><td>2.64</td><td>3.69</td><td>3.98</td><td>4.26</td></tr><tr><td>2.31</td><td>3.96</td><td>4.26</td><td>4.56</td></tr><tr><td>1.98</td><td>4.26</td><td>4.53</td><td>4.71</td></tr><tr><td>1.65</td><td>4.32</td><td>4.51</td><td>4.59</td></tr><tr><td>1.32</td><td>4.39</td><td>4.55</td><td>4.57</td></tr><tr><td>0.99</td><td>4.62</td><td>4.77</td><td>4.75</td></tr><tr><td>0.66</td><td>4.57</td><td>4.67</td><td>4.64</td></tr><tr><td>0.33</td><td>4.61</td><td>4.68</td><td>4.58</td></tr><tr><td>0.00</td><td>4.90</td><td>4.89</td><td>4.71</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	3.14	3.36	3.62	3.86	2.97	3.46	3.74	3.99	2.64	3.69	3.98	4.26	2.31	3.96	4.26	4.56	1.98	4.26	4.53	4.71	1.65	4.32	4.51	4.59	1.32	4.39	4.55	4.57	0.99	4.62	4.77	4.75	0.66	4.57	4.67	4.64	0.33	4.61	4.68	4.58	0.00	4.90	4.89	4.71	--	-	-	-
Output Voltage [V]	Load Current [A]																																																									
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]																																																							
3.14	3.36	3.62	3.86																																																							
2.97	3.46	3.74	3.99																																																							
2.64	3.69	3.98	4.26																																																							
2.31	3.96	4.26	4.56																																																							
1.98	4.26	4.53	4.71																																																							
1.65	4.32	4.51	4.59																																																							
1.32	4.39	4.55	4.57																																																							
0.99	4.62	4.77	4.75																																																							
0.66	4.57	4.67	4.64																																																							
0.33	4.61	4.68	4.58																																																							
0.00	4.90	4.89	4.71																																																							
--	-	-	-																																																							

COSEL

		Testing Circuitry Figure A
Model	MUS10123R3	
Item	Ambient Temperature Drift	
Object	+3.3V2.6A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V
-40	3.336	3.336	3.336
25	3.350	3.350	3.350
85	3.342	3.341	3.341

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+3.3V2.6A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	7.1	7.1
25	7.1	7.1
85	7.1	7.1

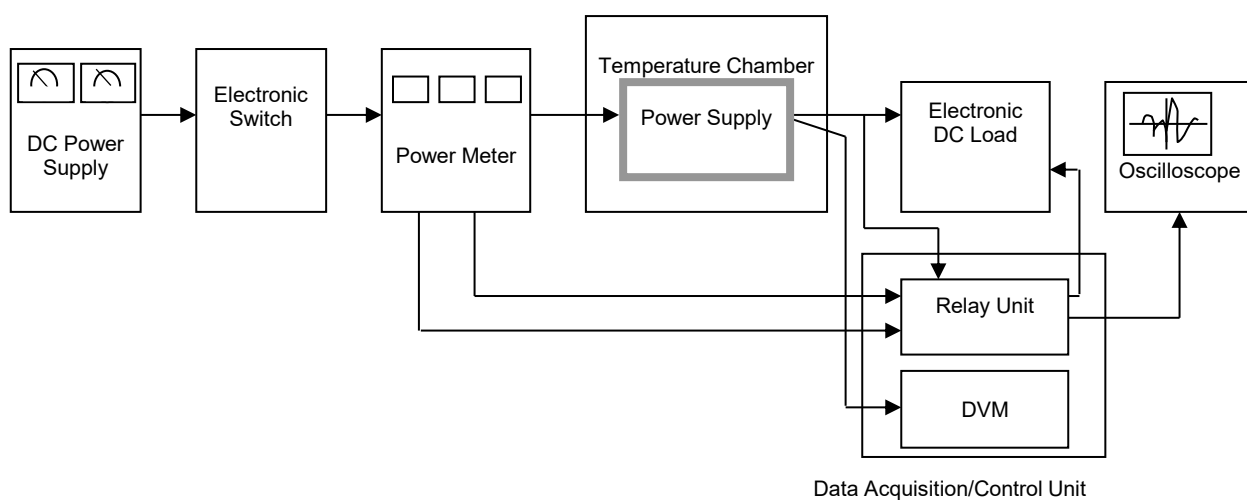


Figure A

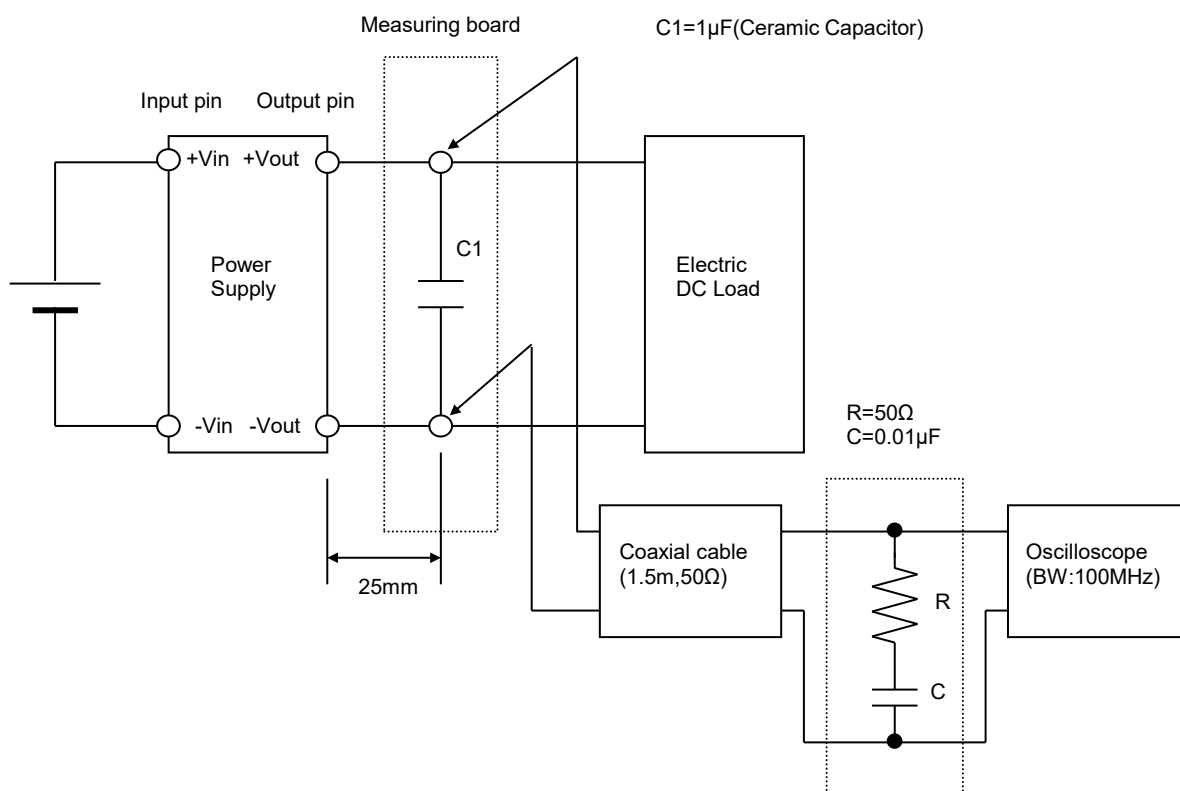


Figure B