



TEST DATA OF MUS304812

Regulated DC Power Supply
July 27, 2026

Approved by : Masahiro Shima
Design Manager

Prepared by : Kosei Oba
Design Engineer

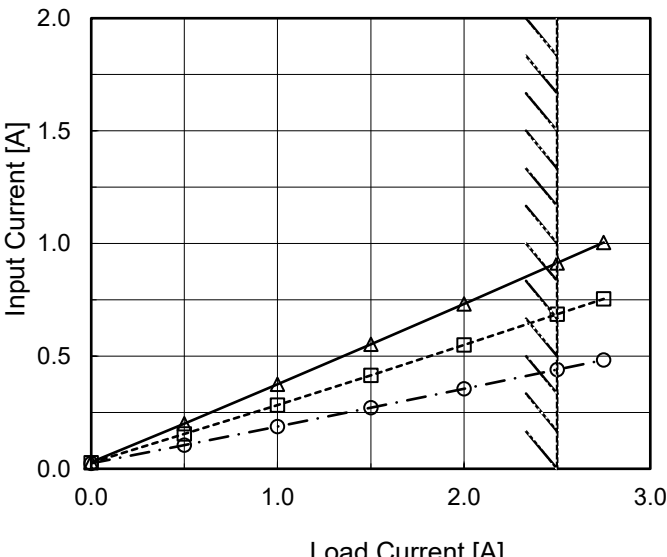
COSEL CO.,LTD.

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		MUS304812	Temperature		25°C																																																			
Item		Input Current (by Load Current)	Testing Circuitry		Figure A																																																			
Object																																																								
1.Graph		—△— Input Volt. 36V ---□--- Input Volt. 48V ---○--- Input Volt. 76V 	2.Values																																																					
			<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>0.029</td><td>0.027</td><td>0.024</td></tr><tr><td>0.50</td><td>0.200</td><td>0.154</td><td>0.105</td></tr><tr><td>1.00</td><td>0.374</td><td>0.283</td><td>0.187</td></tr><tr><td>1.50</td><td>0.552</td><td>0.415</td><td>0.271</td></tr><tr><td>2.00</td><td>0.731</td><td>0.550</td><td>0.355</td></tr><tr><td>2.50</td><td>0.913</td><td>0.686</td><td>0.440</td></tr><tr><td>2.75</td><td>1.005</td><td>0.754</td><td>0.483</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0.00	0.029	0.027	0.024	0.50	0.200	0.154	0.105	1.00	0.374	0.283	0.187	1.50	0.552	0.415	0.271	2.00	0.731	0.550	0.355	2.50	0.913	0.686	0.440	2.75	1.005	0.754	0.483	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Current [A]																																																							
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																					
0.00	0.029	0.027	0.024																																																					
0.50	0.200	0.154	0.105																																																					
1.00	0.374	0.283	0.187																																																					
1.50	0.552	0.415	0.271																																																					
2.00	0.731	0.550	0.355																																																					
2.50	0.913	0.686	0.440																																																					
2.75	1.005	0.754	0.483																																																					
--	-	-	-																																																					
--	-	-	-																																																					
--	-	-	-																																																					
--	-	-	-																																																					
Note: Slanted line shows the range of the rated load current.																																																								

-

1

-

BC-12265

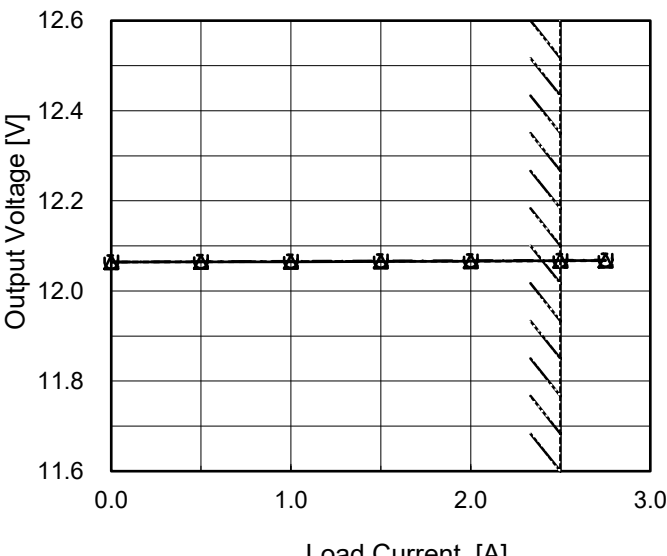
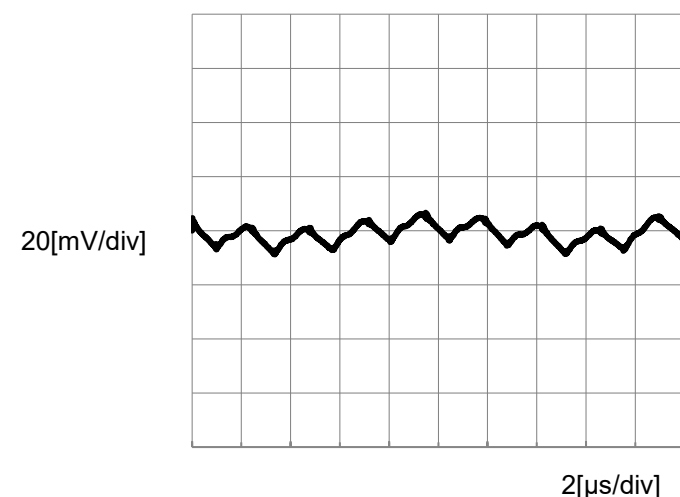
COSEL

Model		MUS304812	Temperature 25°C																																																	
Item		Efficiency (by Load Current)	Testing Circuitry Figure A																																																	
Object																																																				
1.Graph		—△— ---□--- ---○--- Input Volt. 36V Input Volt. 48V Input Volt. 76V <table><thead><tr><th>Load Current [A]</th><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr></thead><tbody><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.50</td><td>84.1</td><td>81.6</td><td>75.6</td></tr><tr><td>1.00</td><td>89.6</td><td>88.8</td><td>84.9</td></tr><tr><td>1.50</td><td>91.2</td><td>91.1</td><td>88.1</td></tr><tr><td>2.00</td><td>91.9</td><td>91.5</td><td>89.5</td></tr><tr><td>2.50</td><td>92.0</td><td>91.8</td><td>90.3</td></tr><tr><td>2.75</td><td>92.0</td><td>91.9</td><td>90.5</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></tbody></table>	Load Current [A]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0.00	-	-	-	0.50	84.1	81.6	75.6	1.00	89.6	88.8	84.9	1.50	91.2	91.1	88.1	2.00	91.9	91.5	89.5	2.50	92.0	91.8	90.3	2.75	92.0	91.9	90.5	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	2.Values	
Load Current [A]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																	
0.00	-	-	-																																																	
0.50	84.1	81.6	75.6																																																	
1.00	89.6	88.8	84.9																																																	
1.50	91.2	91.1	88.1																																																	
2.00	91.9	91.5	89.5																																																	
2.50	92.0	91.8	90.3																																																	
2.75	92.0	91.9	90.5																																																	
--	-	-	-																																																	
--	-	-	-																																																	
--	-	-	-																																																	
--	-	-	-																																																	
Note: Slanted line shows the range of the rated load current.																																																				

COSEL

Model		MUS304812	Temperature Testing Circuitry	25°C Figure A
Item		Line Regulation		
Object		+12V2.5A		
1.Graph			2.Values	

COSEL

Model	MUS304812																																																					
Item	Load Regulation	Temperature	25°C																																																			
Object	+12V2.5A	Testing Circuitry	Figure A																																																			
1.Graph		2.Values																																																				
Input Volt. 36V Input Volt. 48V Input Volt. 76V  Note: Slanted line shows the range of the rated load current.		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>12.064</td><td>12.064</td><td>12.064</td></tr><tr><td>0.50</td><td>12.065</td><td>12.065</td><td>12.065</td></tr><tr><td>1.00</td><td>12.065</td><td>12.065</td><td>12.066</td></tr><tr><td>1.50</td><td>12.065</td><td>12.066</td><td>12.067</td></tr><tr><td>2.00</td><td>12.066</td><td>12.066</td><td>12.067</td></tr><tr><td>2.50</td><td>12.067</td><td>12.067</td><td>12.068</td></tr><tr><td>2.75</td><td>12.068</td><td>12.067</td><td>12.069</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0.00	12.064	12.064	12.064	0.50	12.065	12.065	12.065	1.00	12.065	12.065	12.066	1.50	12.065	12.066	12.067	2.00	12.066	12.066	12.067	2.50	12.067	12.067	12.068	2.75	12.068	12.067	12.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																					
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																			
0.00	12.064	12.064	12.064																																																			
0.50	12.065	12.065	12.065																																																			
1.00	12.065	12.065	12.066																																																			
1.50	12.065	12.066	12.067																																																			
2.00	12.066	12.066	12.067																																																			
2.50	12.067	12.067	12.068																																																			
2.75	12.068	12.067	12.069																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
Item	Ripple-Noise	Temperature	25°C																																																			
Object	+12V2.5A	Testing Circuitry	Figure B																																																			
1.Graph																																																						
Input Voltage 48V Load 100%  20[mV/div] 2[μs/div]																																																						

-

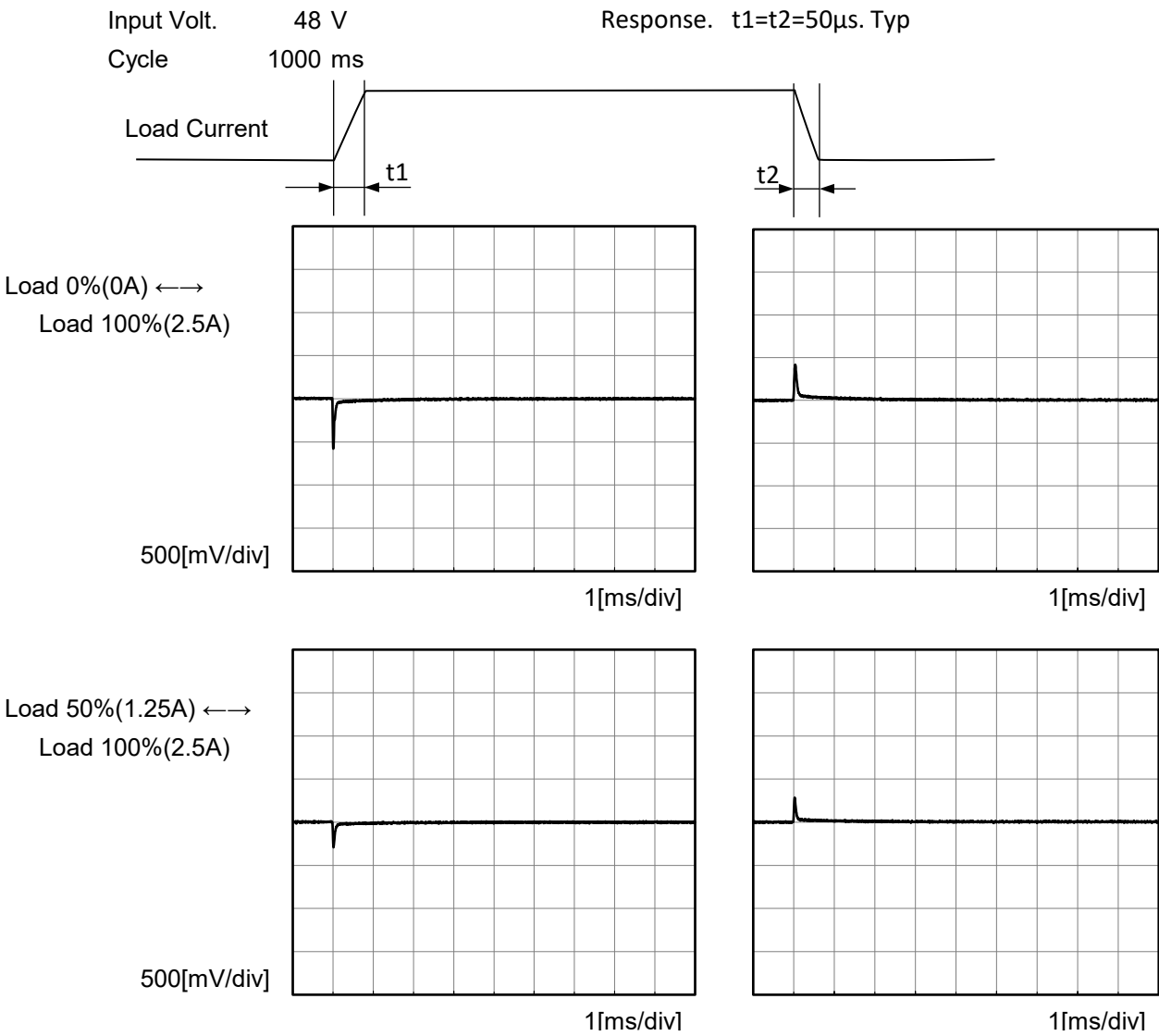
4

-

BC-12265



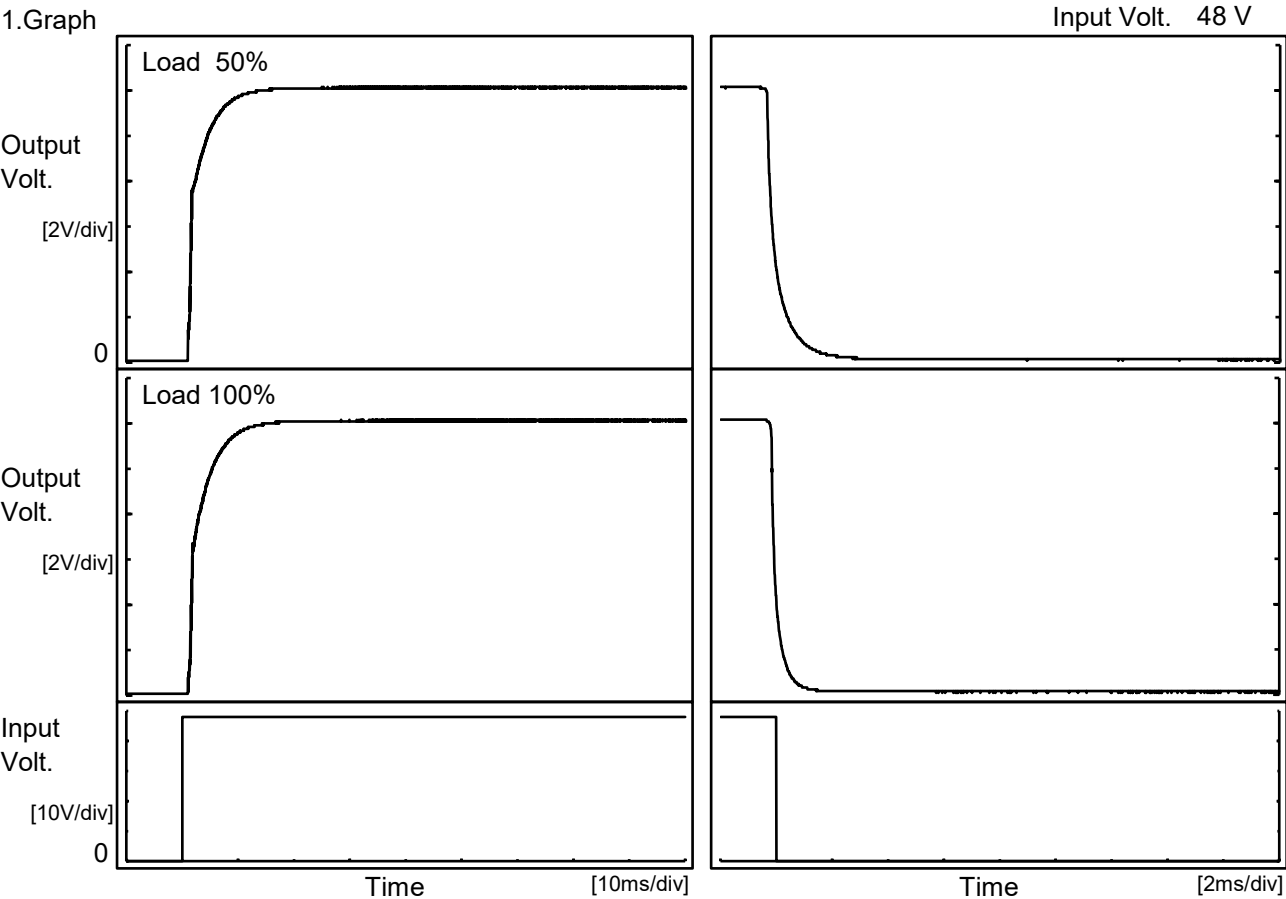
Model		MUS304812	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V2.5A	





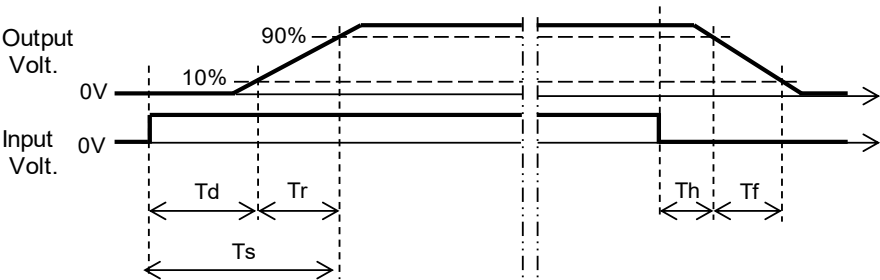
Model		MUS304812	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V2.5A	

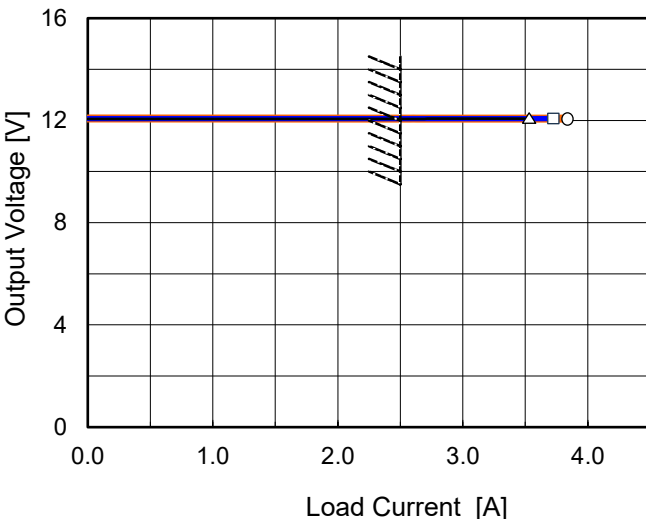
1.Graph



2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		1.1	5.1	6.2	0.3	1.0
100 %		1.3	5.8	7.1	0.2	0.5



Model		MUS304812	Temperature 25°C Testing Circuitry Figure A																																																								
Item		Overcurrent Protection																																																									
Object		+12V2.5A																																																									
1.Graph		—△ —□ —○ Input Volt. 36V Input Volt. 48V Input Volt. 76V  Note: Slanted line shows the range of the rated load current. Overcurrent protection is Hiccup mode.	2.Values																																																								
		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>12.0</td><td>3.49</td><td>3.69</td><td>3.82</td></tr><tr><td>11.4</td><td>-</td><td>-</td><td>-</td></tr><tr><td>10.8</td><td>-</td><td>-</td><td>-</td></tr><tr><td>9.6</td><td>-</td><td>-</td><td>-</td></tr><tr><td>8.4</td><td>-</td><td>-</td><td>-</td></tr><tr><td>7.2</td><td>-</td><td>-</td><td>-</td></tr><tr><td>6.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>4.8</td><td>-</td><td>-</td><td>-</td></tr><tr><td>3.6</td><td>-</td><td>-</td><td>-</td></tr><tr><td>2.4</td><td>-</td><td>-</td><td>-</td></tr><tr><td>1.2</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr></table>	Output Voltage [V]	Load Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	12.0	3.49	3.69	3.82	11.4	-	-	-	10.8	-	-	-	9.6	-	-	-	8.4	-	-	-	7.2	-	-	-	6.0	-	-	-	4.8	-	-	-	3.6	-	-	-	2.4	-	-	-	1.2	-	-	-	0.0	-	-	-		
Output Voltage [V]	Load Current [A]																																																										
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																								
12.0	3.49	3.69	3.82																																																								
11.4	-	-	-																																																								
10.8	-	-	-																																																								
9.6	-	-	-																																																								
8.4	-	-	-																																																								
7.2	-	-	-																																																								
6.0	-	-	-																																																								
4.8	-	-	-																																																								
3.6	-	-	-																																																								
2.4	-	-	-																																																								
1.2	-	-	-																																																								
0.0	-	-	-																																																								



Model		MUS304812	Testing Circuitry Figure A
Item		Ambient Temperature Drift	
Object		+12V2.5A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-40	11.967	11.968	11.972
25	12.067	12.067	12.068
85	12.104	12.104	12.105

Item		Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object		+12V2.5A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	28.3	28.3
25	28.4	28.5
85	28.5	28.5

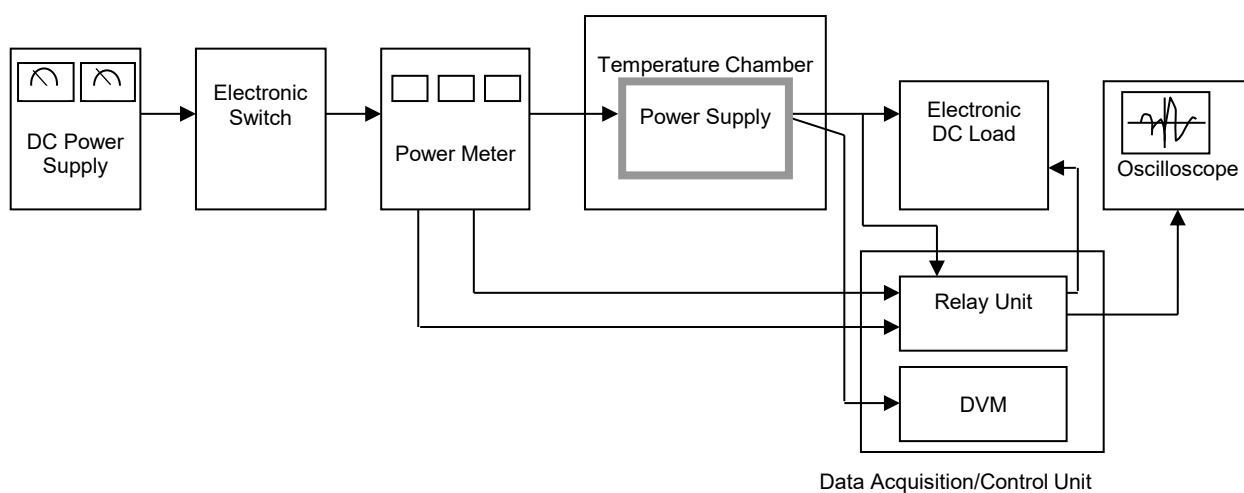


Figure A

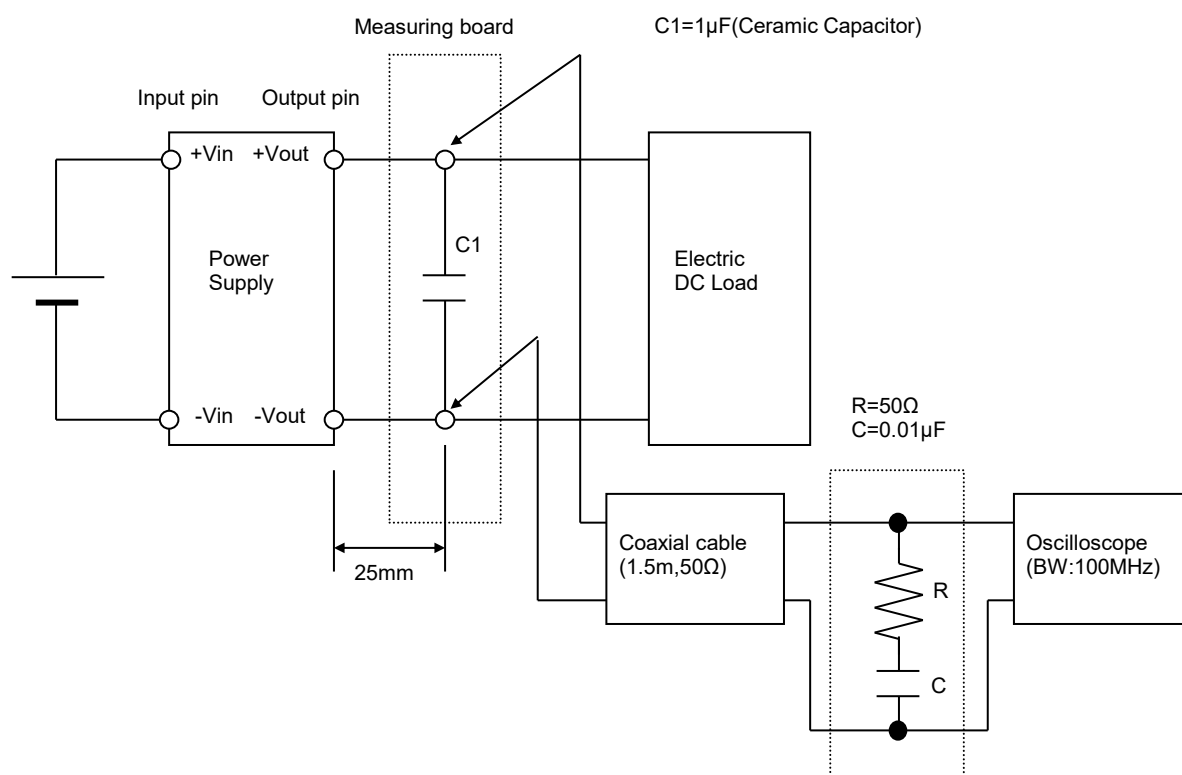


Figure B