

TEST DATA OF MGFS62412

Regulated DC Power Supply
December 16, 2016

Approved by : Takayuki Fukuda
Takayuki Fukuda Design Manager

Prepared by : Takaaki Sekiguchi
Takaaki Sekiguchi Design Engineer

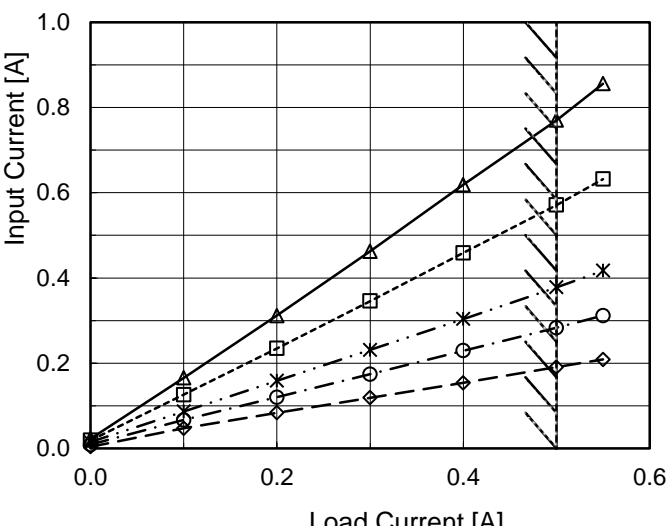
COSEL CO.,LTD.

CONTENTS

1.Input Current (by Input Voltage)	1
2.Input Current (by Load Current)	2
3.Input Power (by Load Current)	3
4.Efficiency (by Input Voltage)	4
5.Efficiency (by Load Current)	5
6.Line Regulation	6
7.Load Regulation	7
8.Dynamic Load Response	8
9.Ripple Voltage (by Load Current)	9
10.Ripple-Noise	10
11.Ripple Voltage (by Ambient Temperature)	11
12.Ambient Temperature Drift	12
13.Output Voltage Accuracy	13
14.Time Lapse Drift	14
15.Rise and Fall Time	15
16.Minimum Input Voltage for Regulated Output Voltage	16
17.Overcurrent Protection	17
18.Switching frequency (by Load Current)	18
19.Figure of Testing Circuitry	19

(Final Page 19)

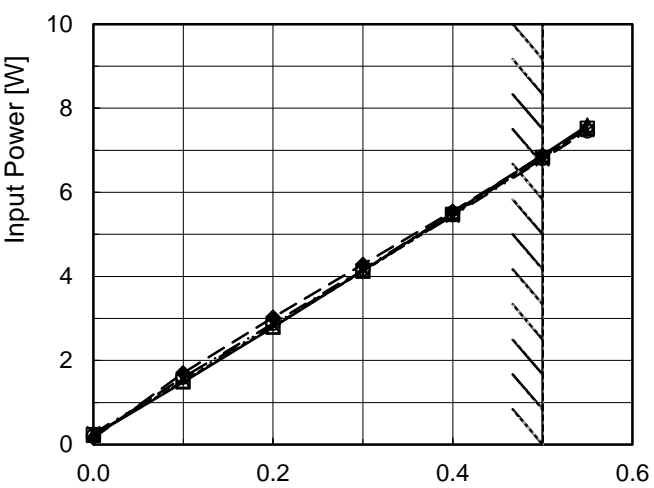
Model		MGFS62412		Temperature 25°C																																																																																
Item		Input Current (by Input Voltage)		Testing Circuitry Figure A																																																																																
Object																																																																																				
1.Graph		<div><div><div>—△—</div><div>Load 100%</div></div><div><div>---□---</div><div>Load 50%</div></div><div><div>-·-○-·-</div><div>Load 0%</div></div></div> <p>Note: Slanted line shows the range of the rated input voltage.</p>		2.Values																																																																																
		<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Load 0%</th><th>Load 50%</th><th>Load 100%</th></tr><tr><td>0.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr><tr><td>6.0</td><td>0.003</td><td>0.003</td><td>0.003</td></tr><tr><td>8.0</td><td>0.003</td><td>0.003</td><td>0.003</td></tr><tr><td>8.2</td><td>0.003</td><td>0.003</td><td>0.003</td></tr><tr><td>8.4</td><td>0.024</td><td>0.413</td><td>0.834</td></tr><tr><td>8.6</td><td>0.024</td><td>0.403</td><td>0.812</td></tr><tr><td>8.8</td><td>0.024</td><td>0.394</td><td>0.789</td></tr><tr><td>9.0</td><td>0.023</td><td>0.385</td><td>0.770</td></tr><tr><td>12.0</td><td>0.019</td><td>0.289</td><td>0.571</td></tr><tr><td>18.0</td><td>0.015</td><td>0.193</td><td>0.378</td></tr><tr><td>24.0</td><td>0.009</td><td>0.148</td><td>0.283</td></tr><tr><td>30.0</td><td>0.004</td><td>0.119</td><td>0.228</td></tr><tr><td>36.0</td><td>0.004</td><td>0.100</td><td>0.191</td></tr><tr><td>40.0</td><td>0.004</td><td>0.091</td><td>0.173</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>				Input Voltage [V]	Input Current [A]			Load 0%	Load 50%	Load 100%	0.0	0.000	0.000	0.000	6.0	0.003	0.003	0.003	8.0	0.003	0.003	0.003	8.2	0.003	0.003	0.003	8.4	0.024	0.413	0.834	8.6	0.024	0.403	0.812	8.8	0.024	0.394	0.789	9.0	0.023	0.385	0.770	12.0	0.019	0.289	0.571	18.0	0.015	0.193	0.378	24.0	0.009	0.148	0.283	30.0	0.004	0.119	0.228	36.0	0.004	0.100	0.191	40.0	0.004	0.091	0.173	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Input Voltage [V]	Input Current [A]																																																																																			
	Load 0%	Load 50%	Load 100%																																																																																	
0.0	0.000	0.000	0.000																																																																																	
6.0	0.003	0.003	0.003																																																																																	
8.0	0.003	0.003	0.003																																																																																	
8.2	0.003	0.003	0.003																																																																																	
8.4	0.024	0.413	0.834																																																																																	
8.6	0.024	0.403	0.812																																																																																	
8.8	0.024	0.394	0.789																																																																																	
9.0	0.023	0.385	0.770																																																																																	
12.0	0.019	0.289	0.571																																																																																	
18.0	0.015	0.193	0.378																																																																																	
24.0	0.009	0.148	0.283																																																																																	
30.0	0.004	0.119	0.228																																																																																	
36.0	0.004	0.100	0.191																																																																																	
40.0	0.004	0.091	0.173																																																																																	
--	-	-	-																																																																																	
--	-	-	-																																																																																	
--	-	-	-																																																																																	
--	-	-	-																																																																																	

Model		MGFS62412	
Item		Input Current (by Load Current)	
Object			
1.Graph		<div><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><div>---○---</div><div>Input Volt.</div><div>24V</div></div><div><div>---◇---</div><div>Input Volt.</div><div>36V</div></div></div></div>	
Note: Slanted line shows the range of the rated load current.			

Temperature		25°C	
Testing Circuitry		Figure A	

2.Values

Load Current [A]	Input Current [A]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	0.023	0.019	0.015	0.009	0.004
0.10	0.165	0.126	0.087	0.067	0.047
0.20	0.312	0.235	0.159	0.120	0.084
0.30	0.463	0.346	0.231	0.174	0.119
0.40	0.619	0.459	0.304	0.230	0.154
0.50	0.770	0.571	0.378	0.283	0.191
0.55	0.856	0.632	0.417	0.312	0.209
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

Model		MGFS62412		Temperature 25°C																																																																														
Item		Input Power (by Load Current)		Testing Circuitry Figure A																																																																														
Object																																																																																		
1.Graph		<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><div>---○---</div><div>Input Volt.</div><div>24V</div></div><div><div>---◇---</div><div>Input Volt.</div><div>36V</div></div></div> 																																																																																
				2.Values																																																																														
				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Input Power [W]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>0.00</td><td>0.22</td><td>0.23</td><td>0.27</td><td>0.20</td><td>0.15</td></tr><tr><td>0.10</td><td>1.49</td><td>1.51</td><td>1.56</td><td>1.60</td><td>1.70</td></tr><tr><td>0.20</td><td>2.79</td><td>2.81</td><td>2.85</td><td>2.88</td><td>3.02</td></tr><tr><td>0.30</td><td>4.13</td><td>4.12</td><td>4.14</td><td>4.17</td><td>4.28</td></tr><tr><td>0.40</td><td>5.51</td><td>5.47</td><td>5.44</td><td>5.50</td><td>5.55</td></tr><tr><td>0.50</td><td>6.89</td><td>6.83</td><td>6.78</td><td>6.80</td><td>6.88</td></tr><tr><td>0.55</td><td>7.59</td><td>7.52</td><td>7.48</td><td>7.46</td><td>7.53</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Input Power [W]					Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	0.22	0.23	0.27	0.20	0.15	0.10	1.49	1.51	1.56	1.60	1.70	0.20	2.79	2.81	2.85	2.88	3.02	0.30	4.13	4.12	4.14	4.17	4.28	0.40	5.51	5.47	5.44	5.50	5.55	0.50	6.89	6.83	6.78	6.80	6.88	0.55	7.59	7.52	7.48	7.46	7.53	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
Load Current [A]	Input Power [W]																																																																																	
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																																													
0.00	0.22	0.23	0.27	0.20	0.15																																																																													
0.10	1.49	1.51	1.56	1.60	1.70																																																																													
0.20	2.79	2.81	2.85	2.88	3.02																																																																													
0.30	4.13	4.12	4.14	4.17	4.28																																																																													
0.40	5.51	5.47	5.44	5.50	5.55																																																																													
0.50	6.89	6.83	6.78	6.80	6.88																																																																													
0.55	7.59	7.52	7.48	7.46	7.53																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
Note: Slanted line shows the range of the rated load current.																																																																																		

Model		MGFS62412		Temperature 25°C																																	
Item		Efficiency (by Input Voltage)		Testing Circuitry Figure A																																	
Object																																					
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>Load 100%</div></div> <table><thead><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Efficiency [%]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>8.6</td><td>86.4</td><td>87.2</td></tr><tr><td>9.0</td><td>87.2</td><td>87.5</td></tr><tr><td>12.0</td><td>87.1</td><td>88.3</td></tr><tr><td>15.0</td><td>86.9</td><td>88.7</td></tr><tr><td>18.0</td><td>86.3</td><td>88.9</td></tr><tr><td>24.0</td><td>85.3</td><td>88.8</td></tr><tr><td>30.0</td><td>84.6</td><td>88.4</td></tr><tr><td>36.0</td><td>82.9</td><td>87.7</td></tr><tr><td>40.0</td><td>82.2</td><td>86.8</td></tr></tbody></table>				Input Voltage [V]	Efficiency [%]		Load 50%	Load 100%	8.6	86.4	87.2	9.0	87.2	87.5	12.0	87.1	88.3	15.0	86.9	88.7	18.0	86.3	88.9	24.0	85.3	88.8	30.0	84.6	88.4	36.0	82.9	87.7	40.0	82.2	86.8		
Input Voltage [V]	Efficiency [%]																																				
	Load 50%	Load 100%																																			
8.6	86.4	87.2																																			
9.0	87.2	87.5																																			
12.0	87.1	88.3																																			
15.0	86.9	88.7																																			
18.0	86.3	88.9																																			
24.0	85.3	88.8																																			
30.0	84.6	88.4																																			
36.0	82.9	87.7																																			
40.0	82.2	86.8																																			
Note: Slanted line shows the range of the rated input voltage.																																					

Model		MGFS62412		Temperature 25°C																																																																														
Item		Efficiency (by Load Current)		Testing Circuitry Figure A																																																																														
Object																																																																																		
1.Graph		<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><div>---○---</div><div>Input Volt.</div><div>24V</div></div><div><div>---◇---</div><div>Input Volt.</div><div>36V</div></div></div> <div><div>Efficiency [%]</div><div><div>95</div><div>85</div><div>75</div><div>65</div><div>55</div></div><div><div>0.0</div><div>0.2</div><div>0.4</div><div>0.6</div></div><div><div>Load Current [A]</div><div>Note: Slanted line shows the range of the rated load current.</div></div></div>		2.Values																																																																														
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Efficiency [%]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.10</td><td>80.8</td><td>79.6</td><td>77.0</td><td>75.3</td><td>70.7</td></tr><tr><td>0.20</td><td>86.6</td><td>85.8</td><td>84.6</td><td>83.7</td><td>79.8</td></tr><tr><td>0.30</td><td>87.5</td><td>87.7</td><td>87.3</td><td>86.6</td><td>84.4</td></tr><tr><td>0.40</td><td>87.5</td><td>88.2</td><td>88.7</td><td>87.7</td><td>86.9</td></tr><tr><td>0.50</td><td>87.5</td><td>88.3</td><td>88.9</td><td>88.8</td><td>87.7</td></tr><tr><td>0.55</td><td>87.3</td><td>88.2</td><td>88.7</td><td>88.9</td><td>88.1</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><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]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	-	-	-	-	-	0.10	80.8	79.6	77.0	75.3	70.7	0.20	86.6	85.8	84.6	83.7	79.8	0.30	87.5	87.7	87.3	86.6	84.4	0.40	87.5	88.2	88.7	87.7	86.9	0.50	87.5	88.3	88.9	88.8	87.7	0.55	87.3	88.2	88.7	88.9	88.1	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-		
Load Current [A]	Efficiency [%]																																																																																	
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																																													
0.00	-	-	-	-	-																																																																													
0.10	80.8	79.6	77.0	75.3	70.7																																																																													
0.20	86.6	85.8	84.6	83.7	79.8																																																																													
0.30	87.5	87.7	87.3	86.6	84.4																																																																													
0.40	87.5	88.2	88.7	87.7	86.9																																																																													
0.50	87.5	88.3	88.9	88.8	87.7																																																																													
0.55	87.3	88.2	88.7	88.9	88.1																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													



Model		MGFS62412		Temperature 25°C																																	
Item		Line Regulation		Testing Circuitry Figure A																																	
Object		+12V0.5A																																			
1.Graph				2.Values																																	
<div><div><div><div><div></div><div></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></div><div><div></div><div></div></div><div>Load 100%</div></div></div> <div><div><div><div><div></div><div></div></div><div></div></div><div><div></div><div></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>Input Voltage [V]</div></div></div> <div><div>Note: Slanted line shows the range of the rated input voltage.</div></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>8.6</td><td>12.024</td><td>12.025</td></tr><tr><td>9.0</td><td>12.024</td><td>12.025</td></tr><tr><td>12.0</td><td>12.024</td><td>12.025</td></tr><tr><td>15.0</td><td>12.024</td><td>12.025</td></tr><tr><td>18.0</td><td>12.024</td><td>12.025</td></tr><tr><td>24.0</td><td>12.024</td><td>12.024</td></tr><tr><td>30.0</td><td>12.023</td><td>12.024</td></tr><tr><td>36.0</td><td>12.023</td><td>12.024</td></tr><tr><td>40.0</td><td>12.023</td><td>12.024</td></tr></table>		Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	8.6	12.024	12.025	9.0	12.024	12.025	12.0	12.024	12.025	15.0	12.024	12.025	18.0	12.024	12.025	24.0	12.024	12.024	30.0	12.023	12.024	36.0	12.023	12.024	40.0	12.023	12.024
Input Voltage [V]	Output Voltage [V]																																				
	Load 50%	Load 100%																																			
8.6	12.024	12.025																																			
9.0	12.024	12.025																																			
12.0	12.024	12.025																																			
15.0	12.024	12.025																																			
18.0	12.024	12.025																																			
24.0	12.024	12.024																																			
30.0	12.023	12.024																																			
36.0	12.023	12.024																																			
40.0	12.023	12.024																																			

COSEL

Model		MGFS62412		Temperature25°C																																																																														
Item		Load Regulation		Testing CircuitryFigure A																																																																														
Object		+12V0.5A																																																																																
1.Graph		<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><div>---○---</div><div>Input Volt.</div><div>24V</div></div><div><div>---◇---</div><div>Input Volt.</div><div>36V</div></div></div> <div><div>Output Voltage [V]</div><div>0.00.20.40.60</div><div>Load Current [A]</div></div> <div>Note: Slanted line shows the range of the rated load current.</div>		2.Values																																																																														
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Output Voltage [V]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>0.00</td><td>12.033</td><td>12.033</td><td>12.032</td><td>12.032</td><td>12.033</td></tr><tr><td>0.10</td><td>12.031</td><td>12.031</td><td>12.030</td><td>12.029</td><td>12.028</td></tr><tr><td>0.20</td><td>12.030</td><td>12.030</td><td>12.029</td><td>12.028</td><td>12.027</td></tr><tr><td>0.30</td><td>12.029</td><td>12.028</td><td>12.027</td><td>12.027</td><td>12.025</td></tr><tr><td>0.40</td><td>12.027</td><td>12.027</td><td>12.026</td><td>12.025</td><td>12.025</td></tr><tr><td>0.50</td><td>12.025</td><td>12.025</td><td>12.025</td><td>12.024</td><td>12.024</td></tr><tr><td>0.55</td><td>12.025</td><td>12.025</td><td>12.025</td><td>12.024</td><td>12.023</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><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]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	12.033	12.033	12.032	12.032	12.033	0.10	12.031	12.031	12.030	12.029	12.028	0.20	12.030	12.030	12.029	12.028	12.027	0.30	12.029	12.028	12.027	12.027	12.025	0.40	12.027	12.027	12.026	12.025	12.025	0.50	12.025	12.025	12.025	12.024	12.024	0.55	12.025	12.025	12.025	12.024	12.023	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
Load Current [A]	Output Voltage [V]																																																																																	
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																																													
0.00	12.033	12.033	12.032	12.032	12.033																																																																													
0.10	12.031	12.031	12.030	12.029	12.028																																																																													
0.20	12.030	12.030	12.029	12.028	12.027																																																																													
0.30	12.029	12.028	12.027	12.027	12.025																																																																													
0.40	12.027	12.027	12.026	12.025	12.025																																																																													
0.50	12.025	12.025	12.025	12.024	12.024																																																																													
0.55	12.025	12.025	12.025	12.024	12.023																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													

COSEL

Model	MGFS62412	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	+12V0.5A	

Input Volt. 24 V
Cycle 100 ms

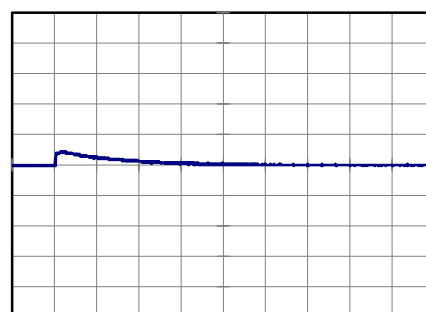
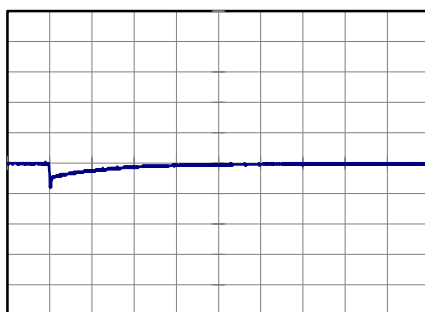
$t_1, t_2 = 100 \mu s$



Min.Load (0A) ←→
Load 100% (0.5A)

500 mV/div

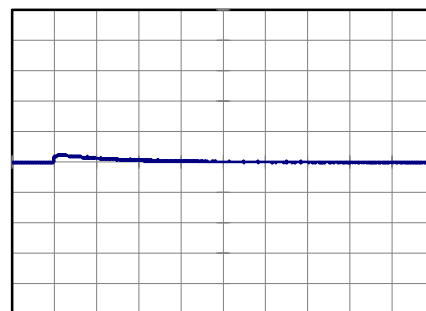
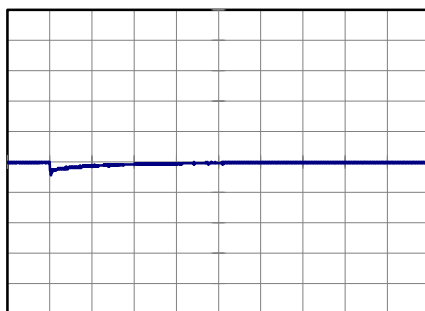
2 ms/div



Min.Load (0A) ←→
Load 50% (0.25A)

500 mV/div

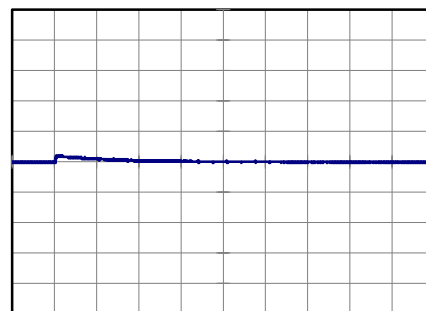
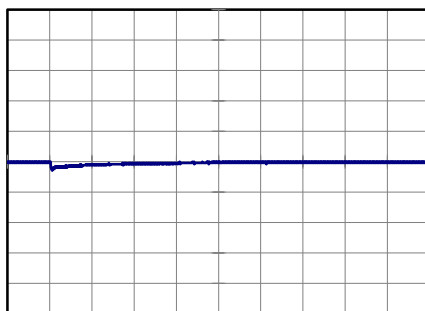
2 ms/div



Load 50% (0.25A) ←→
Load 100% (0.5A)

500 mV/div

2 ms/div

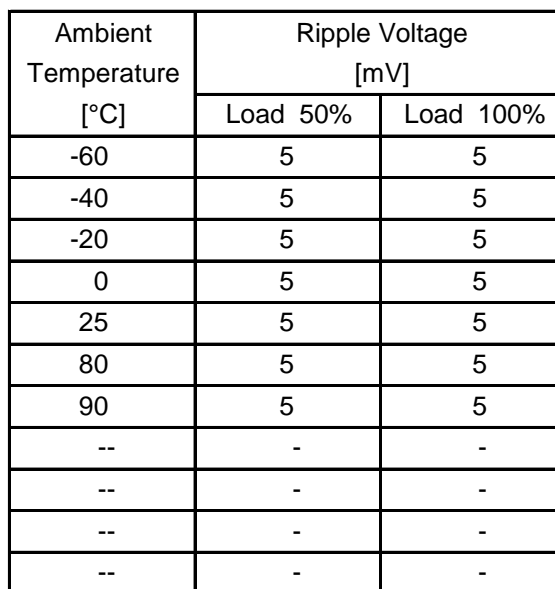


COSEL																																									
Model	MGFS62412																																								
Item	Ripple Voltage (by Load Current)	Temperature	25°C																																						
		Testing Circuitry	Figure B																																						
Object	+12V0.5A																																								
1.Graph		2.Values																																							
<div><div><div>—△—</div><div>Input Volt.</div><div>9V</div></div><div><div>- - ○ - -</div><div>Input Volt.</div><div>36V</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> <p>Ripple [mVp-p]</p>		<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. 36 [V]</th></tr><tr><td>0.00</td><td>5</td><td>30</td></tr><tr><td>0.10</td><td>5</td><td>5</td></tr><tr><td>0.20</td><td>5</td><td>5</td></tr><tr><td>0.30</td><td>5</td><td>5</td></tr><tr><td>0.40</td><td>10</td><td>5</td></tr><tr><td>0.50</td><td>15</td><td>5</td></tr><tr><td>0.55</td><td>20</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. 36 [V]	0.00	5	30	0.10	5	5	0.20	5	5	0.30	5	5	0.40	10	5	0.50	15	5	0.55	20	5	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																								
	Input Volt. 9 [V]	Input Volt. 36 [V]																																							
0.00	5	30																																							
0.10	5	5																																							
0.20	5	5																																							
0.30	5	5																																							
0.40	10	5																																							
0.50	15	5																																							
0.55	20	5																																							
--	-	-																																							
--	-	-																																							
--	-	-																																							
--	-	-																																							
Fig.Complex Ripple Wave Form																																									

Model		MGFS62412		Temperature 25°C																																							
Item		Ripple-Noise		Testing Circuitry Figure B																																							
Object		+12V0.5A																																									
1.Graph				2.Values																																							
<div><div><div>—△—</div><div>Input Volt.</div><div>9V</div></div><div><div>- - ○ - -</div><div>Input Volt.</div><div>36V</div></div></div> <p>Ripple Voltage [mV]</p> <p>Load Current [A]</p>				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 9 [V]</th><th>Input Volt. 36 [V]</th></tr><tr><td>0.00</td><td>5</td><td>30</td></tr><tr><td>0.10</td><td>5</td><td>5</td></tr><tr><td>0.20</td><td>5</td><td>5</td></tr><tr><td>0.30</td><td>10</td><td>5</td></tr><tr><td>0.40</td><td>10</td><td>10</td></tr><tr><td>0.50</td><td>20</td><td>10</td></tr><tr><td>0.55</td><td>25</td><td>10</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-Noise [mV]		Input Volt. 9 [V]	Input Volt. 36 [V]	0.00	5	30	0.10	5	5	0.20	5	5	0.30	10	5	0.40	10	10	0.50	20	10	0.55	25	10	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple-Noise [mV]																																										
	Input Volt. 9 [V]	Input Volt. 36 [V]																																									
0.00	5	30																																									
0.10	5	5																																									
0.20	5	5																																									
0.30	10	5																																									
0.40	10	10																																									
0.50	20	10																																									
0.55	25	10																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
<p>Measured by 100 MHz Oscilloscope.</p> <p>Ripple-Noise is shown as p-p in the figure below.</p> <p>Note: Slanted line shows the range of the rated load current.</p> <p>Ripple Noise[mVp-p]</p>																																											
<p>Fig.Complex Ripple Noise Wave Form</p>																																											

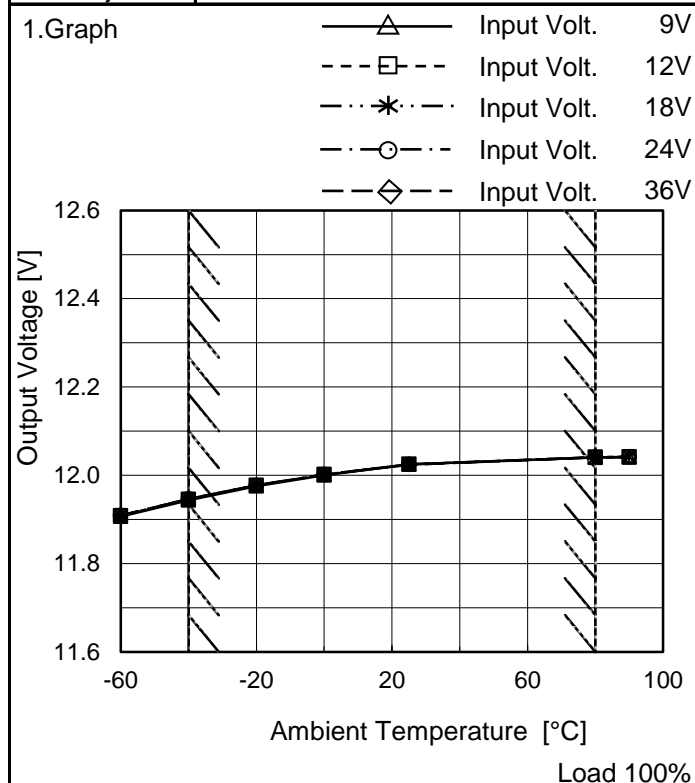
Testing Circuitry Figure B

2.Values



Note: Slanted line shows the range of the rated ambient temperature.

Model	MGFS62412
Item	Ambient Temperature Drift
Object	+12V0.5A



Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Output Voltage [V]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
-60	11.907	11.908	11.909	11.909	11.909
-40	11.944	11.946	11.946	11.947	11.946
-20	11.976	11.977	11.977	11.977	11.977
0	12.000	12.002	12.002	12.002	12.001
25	12.025	12.025	12.025	12.024	12.024
80	12.040	12.041	12.041	12.041	12.040
90	12.041	12.042	12.042	12.042	12.041
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

COSEL

		Testing Circuitry Figure A
Model	MGFS62412	
Item	Output Voltage Accuracy	
Object	+12V0.5A	

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 - 80°C

Input Voltage : 9 - 36V

Load Current : 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

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	75	9	0	12.050	±53	±0.4
Minimum Voltage	-40	9	0.5	11.944		

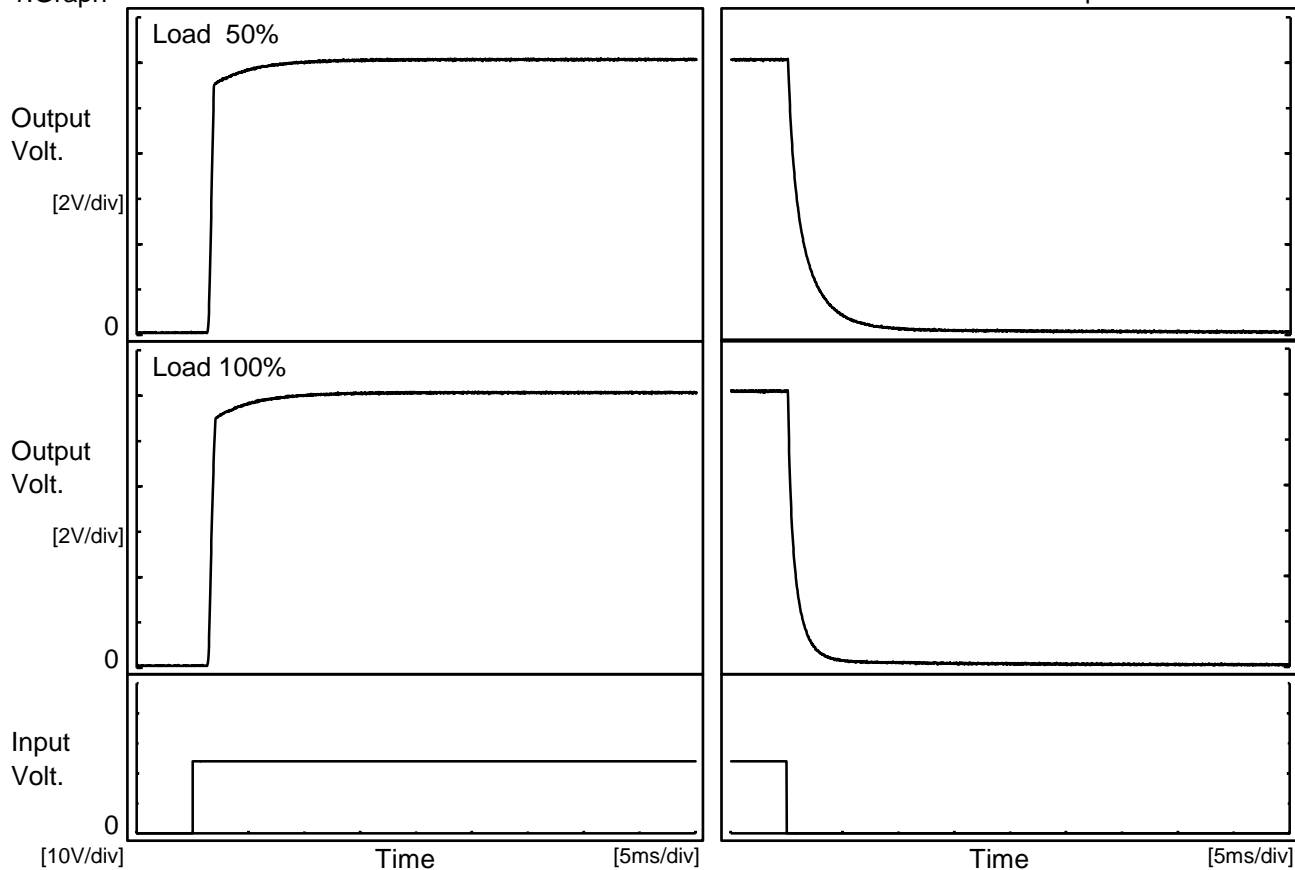


Model		MGFS62412		Temperature25°C Testing CircuitryFigure A	
Item		Time Lapse Drift			
Object		+12V0.5A			
1.Graph				2.Values	
<div><div><div><div>Output Voltage [V]</div><div><div>12.6</div><div>12.4</div><div>12.2</div><div>12.0</div><div>11.8</div><div>11.6</div></div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div></div></div></div></div>					

COSEL

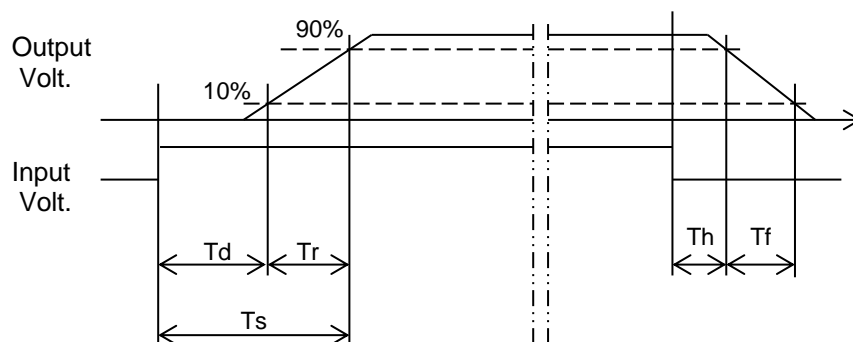
Model	MGFS62412	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+12V0.5A		

1.Graph



2.Values

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	1.5	0.4	1.9	0.2	3.8
100 %	1.5	0.6	2.1	0.2	1.8



1. Graph

The graph plots Input Voltage [V] on the Y-axis (0 to 10) against Ambient Temperature [°C] on the X-axis (-60 to 100). Two data series are shown: Load 50% (dashed line with square markers) and Load 100% (solid line with triangle markers). Both series show a slight decrease in input voltage as temperature increases. A slanted line indicates the range of rated ambient temperature, which is approximately from -40°C to 80°C.

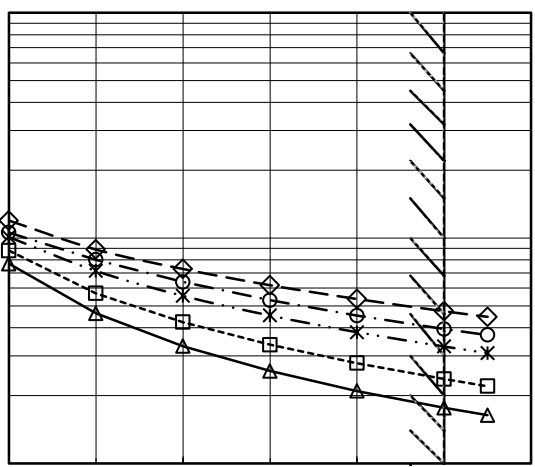
Ambient Temperature [°C]	Input Voltage [V] (Load 50%)	Input Voltage [V] (Load 100%)
-60	7.5	7.5
-40	7.4	7.4
-20	7.4	7.4
0	7.4	7.4
20	7.3	7.3
40	7.3	7.3
60	7.2	7.2
80	7.2	7.2
90	7.2	7.2

Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	7.6	7.7
-40	7.5	7.6
-20	7.5	7.6
0	7.5	7.6
25	7.4	7.5
80	7.3	7.4
90	7.3	7.4
--	-	-
--	-	-
--	-	-
--	-	-

Model		MGFS62412																																																																																				
Item		Overcurrent Protection																																																																																				
Object		+12V0.5A																																																																																				
1.Graph		<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><div></div><div>Input Volt.</div><div>24V</div></div><div><div></div><div>Input Volt.</div><div>36V</div></div></div> <div><div><div>Output Voltage [V]</div><div>16</div><div>12</div><div>8</div><div>4</div><div>0</div></div><div><div>0.0</div><div>0.4</div><div>0.8</div><div>1.2</div><div>1.6</div><div>2.0</div></div><div>Load Current [A]</div></div> <div>Note: Slanted line shows the range of the rated load current.</div>																																																																																				
2.Values		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="5">Load Current [A]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>11.4</td><td>0.644</td><td>0.680</td><td>0.678</td><td>0.676</td><td>0.682</td></tr><tr><td>10.8</td><td>0.670</td><td>0.704</td><td>0.701</td><td>0.694</td><td>0.695</td></tr><tr><td>9.6</td><td>0.723</td><td>0.761</td><td>0.752</td><td>0.734</td><td>0.725</td></tr><tr><td>8.4</td><td>0.787</td><td>0.823</td><td>0.802</td><td>0.775</td><td>0.756</td></tr><tr><td>7.2</td><td>0.862</td><td>0.892</td><td>0.851</td><td>0.818</td><td>0.792</td></tr><tr><td>6.0</td><td>0.951</td><td>0.966</td><td>0.907</td><td>0.865</td><td>0.832</td></tr><tr><td>4.8</td><td>1.051</td><td>1.048</td><td>0.968</td><td>0.917</td><td>0.873</td></tr><tr><td>3.6</td><td>1.169</td><td>1.141</td><td>1.038</td><td>0.975</td><td>0.919</td></tr><tr><td>2.4</td><td>1.289</td><td>1.264</td><td>1.119</td><td>1.036</td><td>0.969</td></tr><tr><td>1.2</td><td>1.418</td><td>1.378</td><td>1.202</td><td>1.102</td><td>1.014</td></tr><tr><td>0.0</td><td>1.642</td><td>1.552</td><td>1.257</td><td>1.093</td><td>0.973</td></tr><tr><td>--</td><td>-</td><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]	Input Volt. 24[V]	Input Volt. 36[V]	11.4	0.644	0.680	0.678	0.676	0.682	10.8	0.670	0.704	0.701	0.694	0.695	9.6	0.723	0.761	0.752	0.734	0.725	8.4	0.787	0.823	0.802	0.775	0.756	7.2	0.862	0.892	0.851	0.818	0.792	6.0	0.951	0.966	0.907	0.865	0.832	4.8	1.051	1.048	0.968	0.917	0.873	3.6	1.169	1.141	1.038	0.975	0.919	2.4	1.289	1.264	1.119	1.036	0.969	1.2	1.418	1.378	1.202	1.102	1.014	0.0	1.642	1.552	1.257	1.093	0.973	--	-	-	-	-	-
Output Voltage [V]	Load Current [A]																																																																																					
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																																																	
11.4	0.644	0.680	0.678	0.676	0.682																																																																																	
10.8	0.670	0.704	0.701	0.694	0.695																																																																																	
9.6	0.723	0.761	0.752	0.734	0.725																																																																																	
8.4	0.787	0.823	0.802	0.775	0.756																																																																																	
7.2	0.862	0.892	0.851	0.818	0.792																																																																																	
6.0	0.951	0.966	0.907	0.865	0.832																																																																																	
4.8	1.051	1.048	0.968	0.917	0.873																																																																																	
3.6	1.169	1.141	1.038	0.975	0.919																																																																																	
2.4	1.289	1.264	1.119	1.036	0.969																																																																																	
1.2	1.418	1.378	1.202	1.102	1.014																																																																																	
0.0	1.642	1.552	1.257	1.093	0.973																																																																																	
--	-	-	-	-	-																																																																																	

Model		MGFS62412		Temperature 25°C																																																																														
Item		Switching frequency (by Load Current)		Testing Circuitry Figure A																																																																														
Object		+12V0.5A																																																																																
1.Graph		<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><div>---○---</div><div>Input Volt.</div><div>24V</div></div><div><div>---◇---</div><div>Input Volt.</div><div>36V</div></div></div> <div><div>Switching Frequency [kHz]</div><div>10000</div><div>1000</div><div>100</div><div>0.0</div><div>0.2</div><div>0.4</div><div>0.6</div><div>Load Current [A]</div></div> 		2.Values																																																																														
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Input Current [A]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>0.00</td><td>770</td><td>880</td><td>1011</td><td>1059</td><td>1197</td></tr><tr><td>0.10</td><td>463</td><td>568</td><td>715</td><td>802</td><td>890</td></tr><tr><td>0.20</td><td>331</td><td>424</td><td>554</td><td>638</td><td>730</td></tr><tr><td>0.30</td><td>257</td><td>336</td><td>453</td><td>530</td><td>618</td></tr><tr><td>0.40</td><td>210</td><td>279</td><td>382</td><td>453</td><td>537</td></tr><tr><td>0.50</td><td>176</td><td>237</td><td>330</td><td>395</td><td>474</td></tr><tr><td>0.55</td><td>164</td><td>220</td><td>309</td><td>371</td><td>447</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><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]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	770	880	1011	1059	1197	0.10	463	568	715	802	890	0.20	331	424	554	638	730	0.30	257	336	453	530	618	0.40	210	279	382	453	537	0.50	176	237	330	395	474	0.55	164	220	309	371	447	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
Load Current [A]	Input Current [A]																																																																																	
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																																													
0.00	770	880	1011	1059	1197																																																																													
0.10	463	568	715	802	890																																																																													
0.20	331	424	554	638	730																																																																													
0.30	257	336	453	530	618																																																																													
0.40	210	279	382	453	537																																																																													
0.50	176	237	330	395	474																																																																													
0.55	164	220	309	371	447																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
--	-	-	-	-	-																																																																													
Note: Slanted line shows the range of the rated load current.																																																																																		
When load current is low, MG operates intermittently, so switching frequency would not become constant.																																																																																		

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

When load current is low, MG operates intermittently, so switching frequency would not become constant.

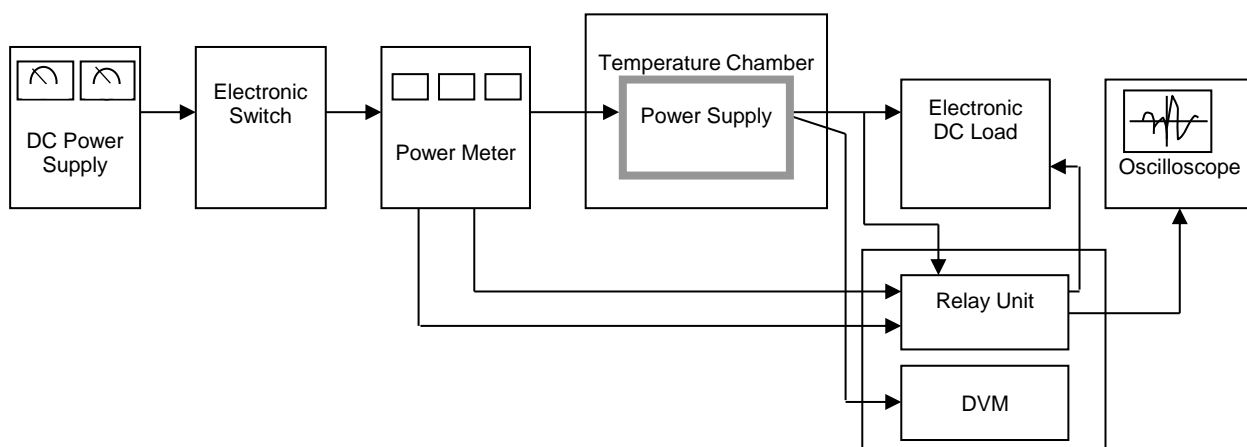


Figure A

Data Acquisition/Control Unit

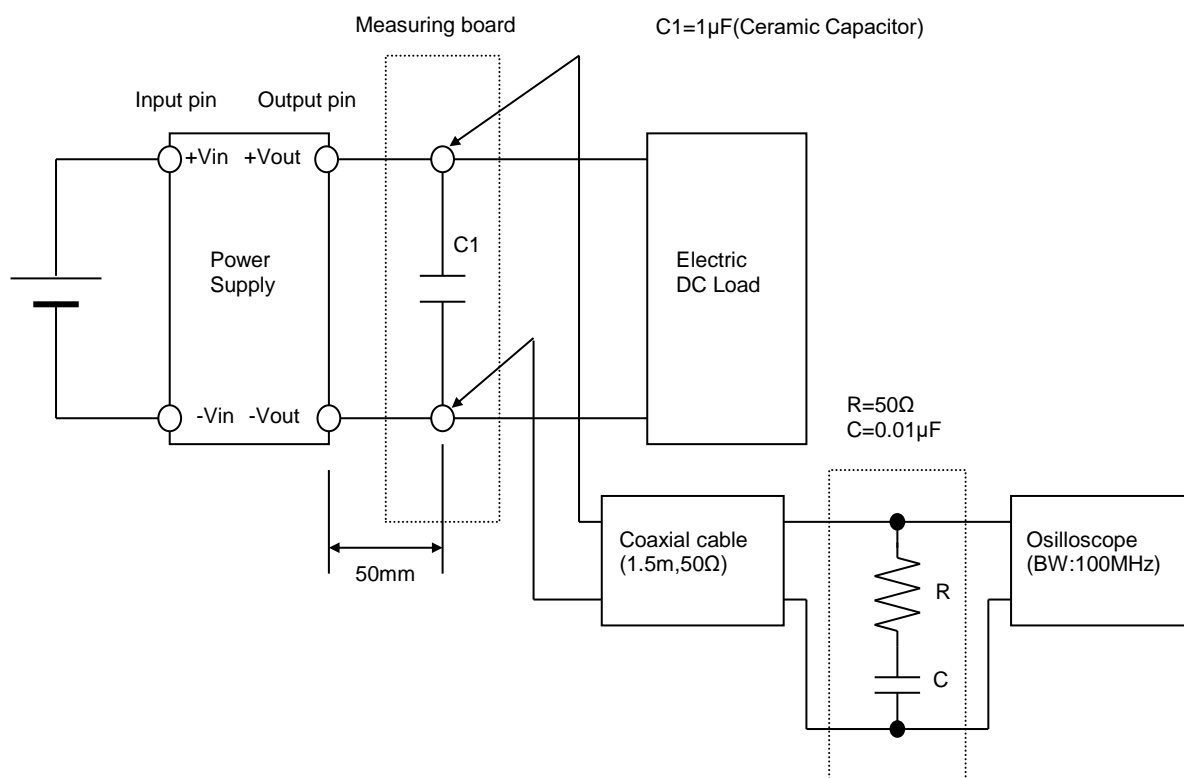


Figure B (Ripple and Ripple noise Characteristic)