

# TEST DATA OF FETA7000T-144

Regulated DC Power Supply  
June 28, 2017

Approved by : Koji Todo  
Koji Todo Design Manager

Prepared by : Nobuto Kawataka  
Nobuto Kawataka Design Engineer

**COSEL CO.,LTD.**



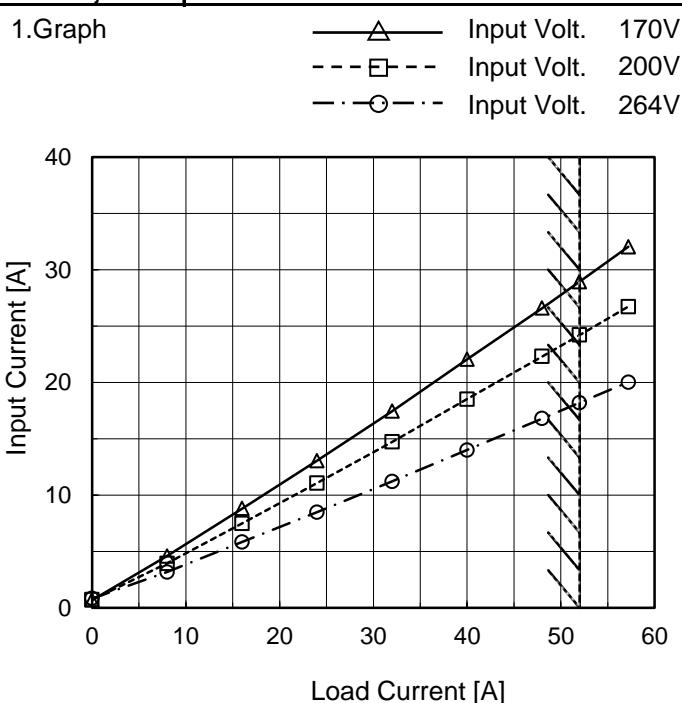
## CONTENTS

1.Input Current (by Load Current) . . . . .	1
2.Input Power (by Load Current) . . . . .	2
3.Efficiency (by Input Voltage) . . . . .	3
4.Efficiency (by Load Current) . . . . .	4
5.Power Factor (by Input Voltage) . . . . .	5
6.Power Factor (by Load Current) . . . . .	6
7.Inrush Current . . . . .	7
8.Leakage Current . . . . .	8
9.Line Regulation . . . . .	9
10.Load Regulation . . . . .	10
11.Dynamic Load Response . . . . .	11
12.Ripple Voltage (by Load Current) . . . . .	12
13.Ripple-Noise . . . . .	13
14.Ripple Voltage (by Ambient Temperature) . . . . .	14
15.Ambient Temperature Drift . . . . .	15
16.Output Voltage Accuracy . . . . .	16
17.Time Lapse Drift . . . . .	17
18.Rise and Fall Time . . . . .	18
19.Hold-Up Time . . . . .	19
20.Instantaneous Interruption Compensation . . . . .	20
21.Minimum Input Voltage for Regulated Output Voltage . . . . .	21
22.Overcurrent Protection . . . . .	22
23.Oversupply Protection . . . . .	23
24.Figure of Testing Circuitry . . . . .	24

(Final Page 24)

**COSEL**

Model	FETA7000T-144
Item	Input Current (by Load Current)
Object	_____


 Temperature 25°C  
 Testing Circuitry Figure A

## 2.Values

Load Current [A]	Input Current [A]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	0.679	0.712	0.829
8.0	4.599	3.937	3.173
16.0	8.813	7.495	5.845
24.0	13.067	11.074	8.492
32.0	17.450	14.726	11.214
40.0	22.059	18.522	14.005
48.0	26.603	22.309	16.800
52.0	28.944	24.212	18.203
57.2	32.045	26.733	20.024
--	-	-	-
--	-	-	-

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

**COSEL**

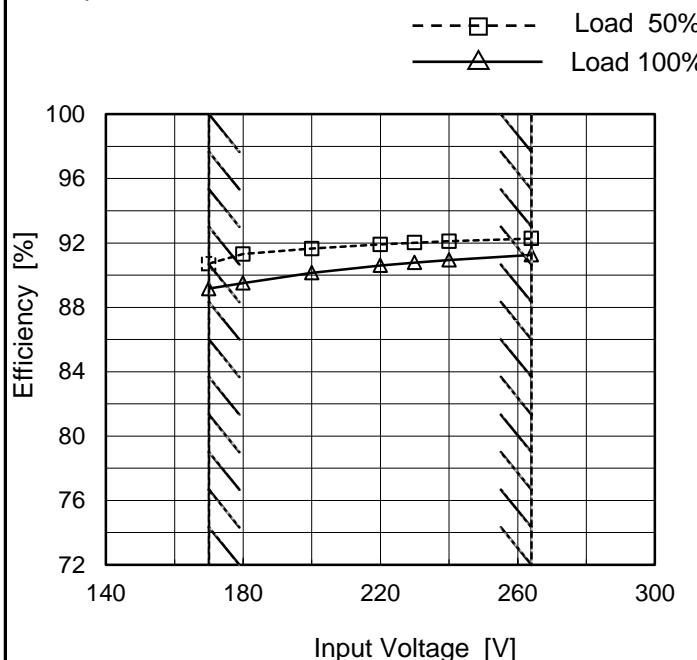
Model	FETA7000T-144																																																					
Item	Input Power (by Load Current)	Temperature 25°C	Testing Circuitry Figure A																																																			
Object	_____																																																					
1.Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 170V</li> <li>Input Volt. 200V</li> <li>Input Volt. 264V</li> </ul> <p>Approximate data points from the graph:</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Input Power [W] (170V)</th> <th>Input Power [W] (200V)</th> <th>Input Power [W] (264V)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>10</td><td>106</td><td>104</td><td>105</td></tr> <tr><td>20</td><td>2570</td><td>2553</td><td>2542</td></tr> <tr><td>30</td><td>3824</td><td>3801</td><td>3771</td></tr> <tr><td>40</td><td>5103</td><td>5064</td><td>5024</td></tr> <tr><td>50</td><td>6447</td><td>6370</td><td>6302</td></tr> <tr><td>57.2</td><td>7771</td><td>7682</td><td>7582</td></tr> <tr><td>52.0</td><td>8452</td><td>8339</td><td>8225</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 Power [W] (170V)	Input Power [W] (200V)	Input Power [W] (264V)	0	0	0	0	10	106	104	105	20	2570	2553	2542	30	3824	3801	3771	40	5103	5064	5024	50	6447	6370	6302	57.2	7771	7682	7582	52.0	8452	8339	8225	--	-	-	-	--	-	-	-							
Load Current [A]	Input Power [W] (170V)	Input Power [W] (200V)	Input Power [W] (264V)																																																			
0	0	0	0																																																			
10	106	104	105																																																			
20	2570	2553	2542																																																			
30	3824	3801	3771																																																			
40	5103	5064	5024																																																			
50	6447	6370	6302																																																			
57.2	7771	7682	7582																																																			
52.0	8452	8339	8225																																																			
--	-	-	-																																																			
--	-	-	-																																																			
2.Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 170[V]</th> <th>Input Volt. 200[V]</th> <th>Input Volt. 264[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>106</td><td>104</td><td>105</td></tr> <tr><td>8.0</td><td>1328</td><td>1318</td><td>1316</td></tr> <tr><td>16.0</td><td>2570</td><td>2553</td><td>2542</td></tr> <tr><td>24.0</td><td>3824</td><td>3801</td><td>3771</td></tr> <tr><td>32.0</td><td>5103</td><td>5064</td><td>5024</td></tr> <tr><td>40.0</td><td>6447</td><td>6370</td><td>6302</td></tr> <tr><td>48.0</td><td>7771</td><td>7682</td><td>7582</td></tr> <tr><td>52.0</td><td>8452</td><td>8339</td><td>8225</td></tr> <tr><td>57.2</td><td>9346</td><td>9207</td><td>9060</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 Power [W]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	106	104	105	8.0	1328	1318	1316	16.0	2570	2553	2542	24.0	3824	3801	3771	32.0	5103	5064	5024	40.0	6447	6370	6302	48.0	7771	7682	7582	52.0	8452	8339	8225	57.2	9346	9207	9060	--	-	-	-	--	-	-	-
Load Current [A]	Input Power [W]																																																					
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																			
0.0	106	104	105																																																			
8.0	1328	1318	1316																																																			
16.0	2570	2553	2542																																																			
24.0	3824	3801	3771																																																			
32.0	5103	5064	5024																																																			
40.0	6447	6370	6302																																																			
48.0	7771	7682	7582																																																			
52.0	8452	8339	8225																																																			
57.2	9346	9207	9060																																																			
--	-	-	-																																																			
--	-	-	-																																																			
<p>Note: Slanted line shows the range of the rated load current.</p>																																																						

**COSEL**

Model	FETA7000T-144
Item	Efficiency (by Input Voltage)
Object	_____

 Temperature 25°C  
 Testing Circuitry Figure A

## 1.Graph

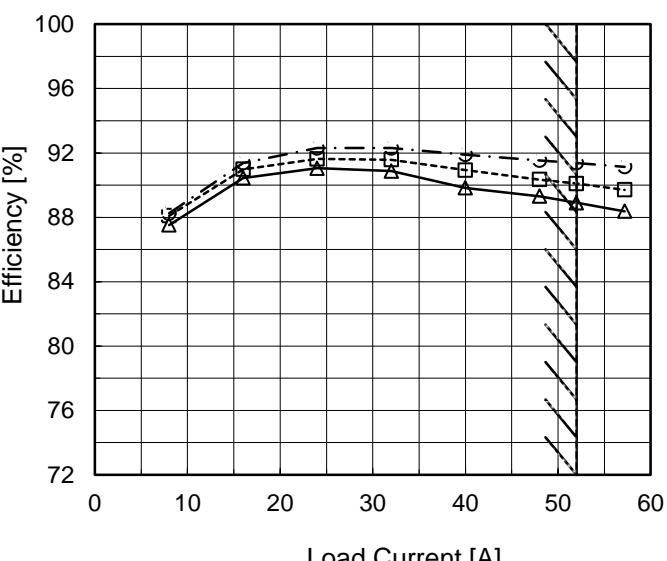


## 2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
170	90.7	89.2
180	91.3	89.5
200	91.7	90.1
220	91.9	90.6
230	92.0	90.8
240	92.1	90.9
264	92.3	91.3
--	-	-
--	-	-

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

**COSEL**

Model	FETA7000T-144																																																					
Item	Efficiency (by Load Current)	Temperature 25°C	Testing Circuitry Figure A																																																			
Object	<hr/>																																																					
1.Graph	<p style="text-align: center;"> <span style="display: inline-block; width: 15px; height: 10px; border-left: 2px solid black; border-bottom: 2px solid black; transform: rotate(45deg); margin-right: 5px;"></span> Input Volt. 170V  <span style="display: inline-block; width: 15px; height: 10px; border: 2px dashed black; margin-right: 5px;"></span> Input Volt. 200V  <span style="display: inline-block; width: 15px; height: 10px; border: 2px dashed black; border-radius: 50%; margin-right: 5px;"></span> Input Volt. 264V         </p>  <p>Efficiency [%]</p> <p>Load Current [A]</p>																																																					
2.Values	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Efficiency [%]</th> </tr> <tr> <th>Input Volt. 170[V]</th> <th>Input Volt. 200[V]</th> <th>Input Volt. 264[V]</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>8.0</td> <td>87.5</td> <td>88.1</td> <td>88.2</td> </tr> <tr> <td>16.0</td> <td>90.4</td> <td>91.0</td> <td>91.4</td> </tr> <tr> <td>24.0</td> <td>91.1</td> <td>91.6</td> <td>92.3</td> </tr> <tr> <td>32.0</td> <td>90.9</td> <td>91.6</td> <td>92.3</td> </tr> <tr> <td>40.0</td> <td>89.8</td> <td>90.9</td> <td>91.9</td> </tr> <tr> <td>48.0</td> <td>89.3</td> <td>90.3</td> <td>91.5</td> </tr> <tr> <td>52.0</td> <td>88.9</td> <td>90.1</td> <td>91.4</td> </tr> <tr> <td>57.2</td> <td>88.4</td> <td>89.7</td> <td>91.1</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]	Efficiency [%]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	-	-	-	8.0	87.5	88.1	88.2	16.0	90.4	91.0	91.4	24.0	91.1	91.6	92.3	32.0	90.9	91.6	92.3	40.0	89.8	90.9	91.9	48.0	89.3	90.3	91.5	52.0	88.9	90.1	91.4	57.2	88.4	89.7	91.1	--	-	-	-	--	-	-	-
Load Current [A]	Efficiency [%]																																																					
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																			
0.0	-	-	-																																																			
8.0	87.5	88.1	88.2																																																			
16.0	90.4	91.0	91.4																																																			
24.0	91.1	91.6	92.3																																																			
32.0	90.9	91.6	92.3																																																			
40.0	89.8	90.9	91.9																																																			
48.0	89.3	90.3	91.5																																																			
52.0	88.9	90.1	91.4																																																			
57.2	88.4	89.7	91.1																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note:	Slanted line shows the range of the rated load current.																																																					

**COSEL**

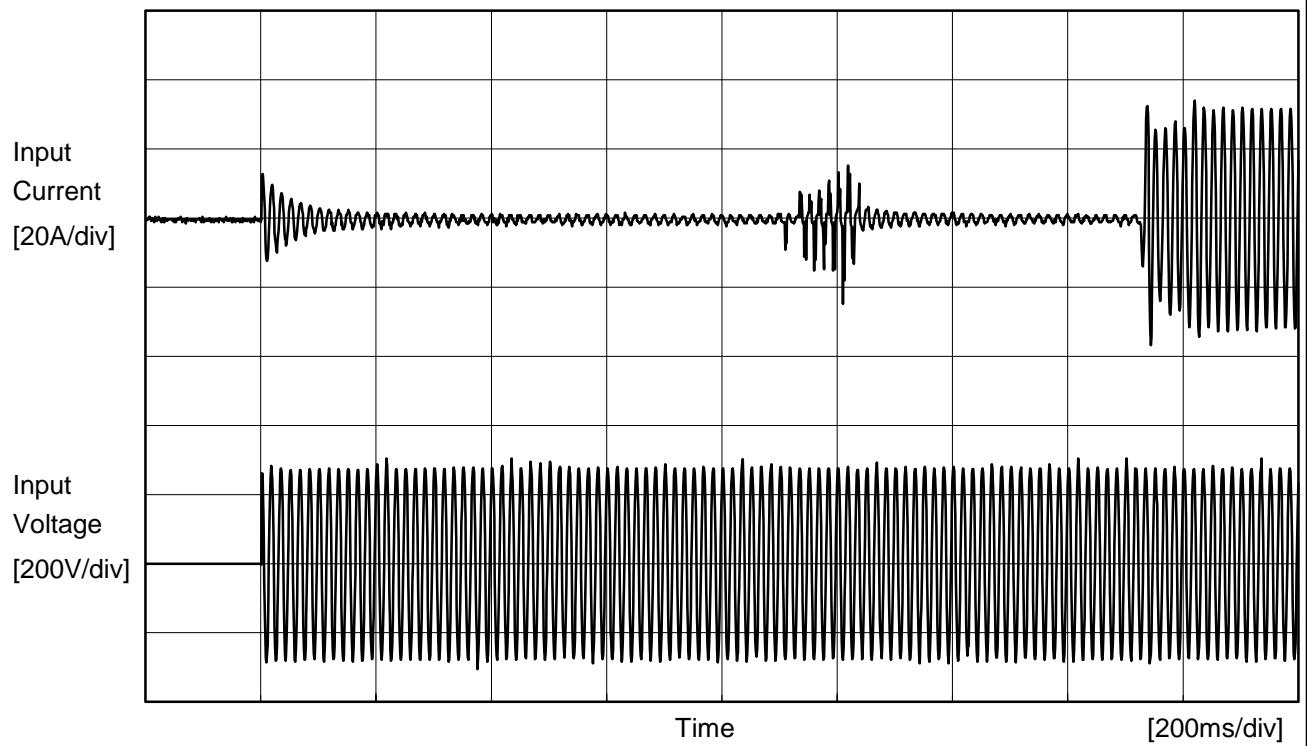
Model	FETA7000T-144																																	
Item	Power Factor (by Input Voltage)	Temperature 25°C Testing Circuitry Figure A																																
Object	<hr/>																																	
1.Graph																																		
<p>Legend:</p> <ul style="list-style-type: none"> <li>Dashed line with squares: Load 50%</li> <li>Solid line with triangles: Load 100%</li> </ul> <p>Input Voltage [V]</p>																																		
<p>Note: Slanted line shows the range of the rated input voltage.</p>																																		
2.Values																																		
<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Power Factor</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr> <td>170</td> <td>0.999</td> <td>0.999</td> </tr> <tr> <td>180</td> <td>0.996</td> <td>0.999</td> </tr> <tr> <td>200</td> <td>0.993</td> <td>0.999</td> </tr> <tr> <td>220</td> <td>0.988</td> <td>0.999</td> </tr> <tr> <td>230</td> <td>0.986</td> <td>0.998</td> </tr> <tr> <td>240</td> <td>0.983</td> <td>0.997</td> </tr> <tr> <td>264</td> <td>0.975</td> <td>0.993</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> </tbody> </table>			Input Voltage [V]	Power Factor		Load 50%	Load 100%	170	0.999	0.999	180	0.996	0.999	200	0.993	0.999	220	0.988	0.999	230	0.986	0.998	240	0.983	0.997	264	0.975	0.993	--	-	-	--	-	-
Input Voltage [V]	Power Factor																																	
	Load 50%	Load 100%																																
170	0.999	0.999																																
180	0.996	0.999																																
200	0.993	0.999																																
220	0.988	0.999																																
230	0.986	0.998																																
240	0.983	0.997																																
264	0.975	0.993																																
--	-	-																																
--	-	-																																

**COSEL**

Model	FETA7000T-144																																																		
Item	Power Factor (by Load Current)	Temperature 25°C	Testing Circuitry Figure A																																																
Object																																																			
1.Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 170V</li> <li>Input Volt. 200V</li> <li>Input Volt. 264V</li> </ul> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Input Volt. 170[V]</th> <th>Input Volt. 200[V]</th> <th>Input Volt. 264[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.527</td><td>0.421</td><td>0.277</td></tr> <tr><td>8.0</td><td>0.978</td><td>0.964</td><td>0.906</td></tr> <tr><td>16.0</td><td>0.991</td><td>0.983</td><td>0.953</td></tr> <tr><td>24.0</td><td>0.997</td><td>0.992</td><td>0.973</td></tr> <tr><td>32.0</td><td>0.999</td><td>0.996</td><td>0.982</td></tr> <tr><td>40.0</td><td>0.999</td><td>0.998</td><td>0.987</td></tr> <tr><td>48.0</td><td>0.999</td><td>0.999</td><td>0.991</td></tr> <tr><td>52.0</td><td>0.999</td><td>0.999</td><td>0.992</td></tr> <tr><td>57.2</td><td>0.999</td><td>0.999</td><td>0.994</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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	0.527	0.421	0.277	8.0	0.978	0.964	0.906	16.0	0.991	0.983	0.953	24.0	0.997	0.992	0.973	32.0	0.999	0.996	0.982	40.0	0.999	0.998	0.987	48.0	0.999	0.999	0.991	52.0	0.999	0.999	0.992	57.2	0.999	0.999	0.994	--	-	-	-	--	-	-	-
Load Current [A]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																
0.0	0.527	0.421	0.277																																																
8.0	0.978	0.964	0.906																																																
16.0	0.991	0.983	0.953																																																
24.0	0.997	0.992	0.973																																																
32.0	0.999	0.996	0.982																																																
40.0	0.999	0.998	0.987																																																
48.0	0.999	0.999	0.991																																																
52.0	0.999	0.999	0.992																																																
57.2	0.999	0.999	0.994																																																
--	-	-	-																																																
--	-	-	-																																																
2.Values																																																			
Note: Slanted line shows the range of the rated load current.																																																			

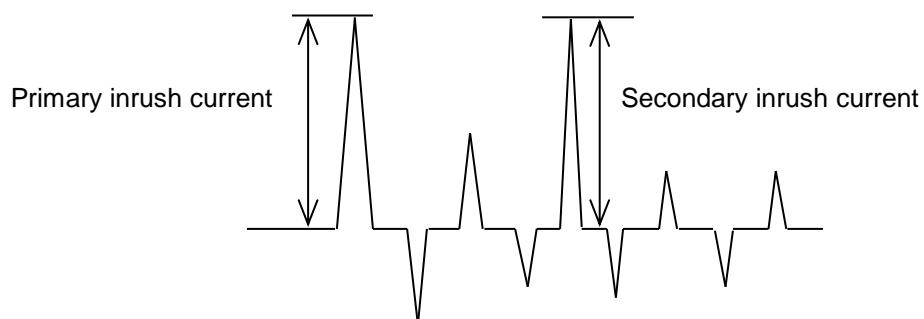
COSEL

Model	FETA7000T-144	Temperature Testing Circuitry	25°C Figure A
Item	Inrush Current		
Object	<hr/>		



Input Voltage      200 V  
 Frequency          50 Hz  
 Load                100 %

Primary inrush current    12.8 A  
 Secondary inrush current    36.8 A





Model	FETA7000T-144	Temperature	25°C
Item	Leakage Current	Testing Circuitry	Figure B
Object	<hr/>		

### 1. Results

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 240 [V]	Input Volt. 264 [V]
(B)IEC60950-1	2.00	2.80	3.10

### 2. Condition

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

**COSEL**

Model	FETA7000T-144																																	
Item	Line Regulation	Temperature 25°C Testing Circuitry Figure A																																
Object	+144V52A																																	
1.Graph																																		
<p>Output Voltage [V]</p> <p>Input Voltage [V]</p> <p>Legend: ---□--- Load 50% —△— Load 100%</p>																																		
<p>Note: Slanted line shows the range of the rated input voltage.</p>																																		
2.Values																																		
<table border="1"> <thead> <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> </thead> <tbody> <tr> <td>170</td><td>144.835</td><td>144.373</td> </tr> <tr> <td>180</td><td>144.845</td><td>144.375</td> </tr> <tr> <td>200</td><td>144.856</td><td>144.386</td> </tr> <tr> <td>220</td><td>144.866</td><td>144.378</td> </tr> <tr> <td>230</td><td>144.871</td><td>144.386</td> </tr> <tr> <td>240</td><td>144.853</td><td>144.391</td> </tr> <tr> <td>264</td><td>144.878</td><td>144.399</td> </tr> <tr> <td>--</td><td>-</td><td>-</td> </tr> <tr> <td>--</td><td>-</td><td>-</td> </tr> </tbody> </table>			Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	170	144.835	144.373	180	144.845	144.375	200	144.856	144.386	220	144.866	144.378	230	144.871	144.386	240	144.853	144.391	264	144.878	144.399	--	-	-	--	-	-
Input Voltage [V]	Output Voltage [V]																																	
	Load 50%	Load 100%																																
170	144.835	144.373																																
180	144.845	144.375																																
200	144.856	144.386																																
220	144.866	144.378																																
230	144.871	144.386																																
240	144.853	144.391																																
264	144.878	144.399																																
--	-	-																																
--	-	-																																

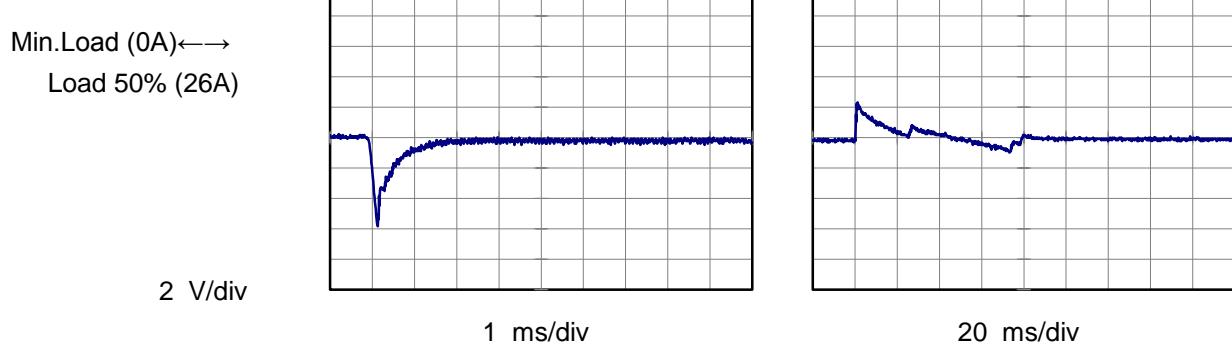
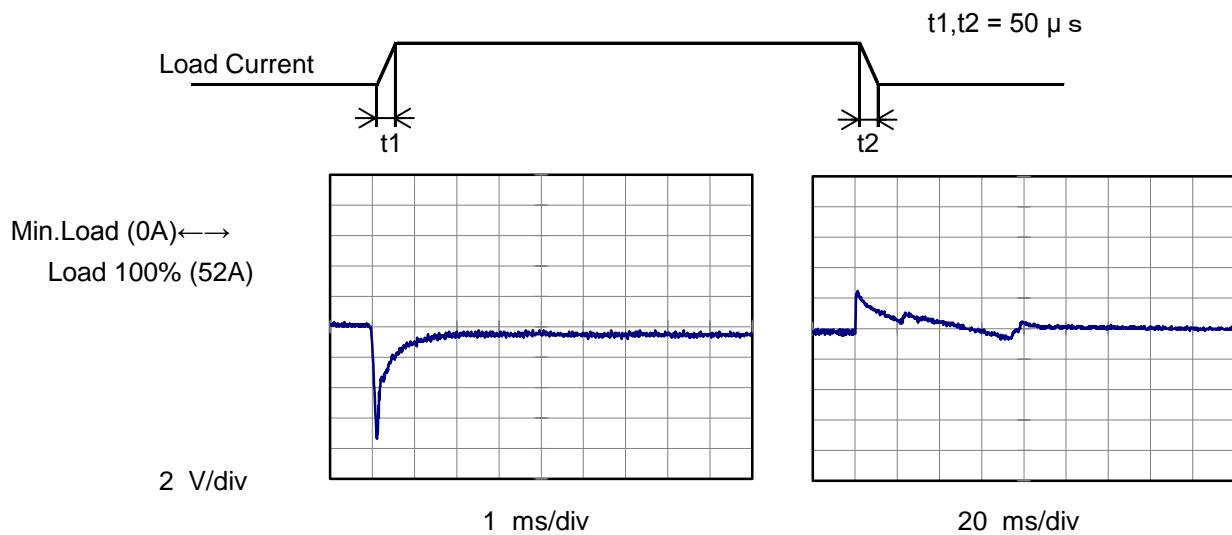
**COSEL**

Model	FETA7000T-144	Temperature	25°C																																																			
Item	Load Regulation	Testing Circuitry	Figure A																																																			
Object	+144V52A																																																					
1.Graph	<p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 170V</li> <li>Input Volt. 200V</li> <li>Input Volt. 264V</li> </ul>																																																					
2.Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 170[V]</th> <th>Input Volt. 200[V]</th> <th>Input Volt. 264[V]</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>145.497</td> <td>145.496</td> <td>145.539</td> </tr> <tr> <td>8.0</td> <td>145.359</td> <td>145.362</td> <td>145.361</td> </tr> <tr> <td>16.0</td> <td>145.224</td> <td>145.236</td> <td>145.229</td> </tr> <tr> <td>24.0</td> <td>145.082</td> <td>145.087</td> <td>145.088</td> </tr> <tr> <td>32.0</td> <td>144.929</td> <td>144.934</td> <td>144.935</td> </tr> <tr> <td>40.0</td> <td>144.770</td> <td>144.779</td> <td>144.774</td> </tr> <tr> <td>48.0</td> <td>144.589</td> <td>144.599</td> <td>144.600</td> </tr> <tr> <td>52.0</td> <td>144.488</td> <td>144.491</td> <td>144.491</td> </tr> <tr> <td>57.2</td> <td>144.394</td> <td>144.396</td> <td>144.392</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]	Output Voltage [V]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	145.497	145.496	145.539	8.0	145.359	145.362	145.361	16.0	145.224	145.236	145.229	24.0	145.082	145.087	145.088	32.0	144.929	144.934	144.935	40.0	144.770	144.779	144.774	48.0	144.589	144.599	144.600	52.0	144.488	144.491	144.491	57.2	144.394	144.396	144.392	--	-	-	-	--	-	-	-
Load Current [A]	Output Voltage [V]																																																					
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																			
0.0	145.497	145.496	145.539																																																			
8.0	145.359	145.362	145.361																																																			
16.0	145.224	145.236	145.229																																																			
24.0	145.082	145.087	145.088																																																			
32.0	144.929	144.934	144.935																																																			
40.0	144.770	144.779	144.774																																																			
48.0	144.589	144.599	144.600																																																			
52.0	144.488	144.491	144.491																																																			
57.2	144.394	144.396	144.392																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note:	Slanted line shows the range of the rated load current.																																																					

COSEL

Model	FETA7000T-144	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+148V52A		

Input Volt. 200 V  
 Cycle 1000 ms

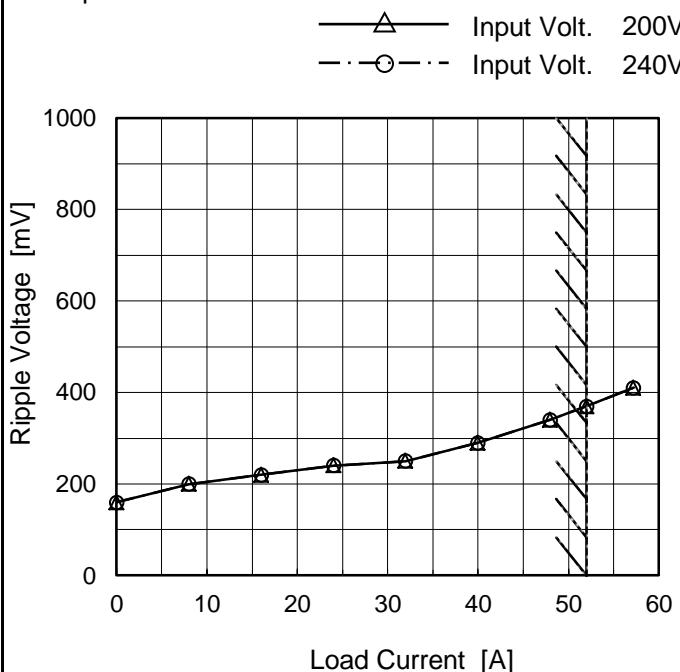


**COSEL**

Model	FETA7000T-144
Item	Ripple Voltage (by Load Current)
Object	+144V52A

Temperature 25°C  
Testing Circuitry Figure B

## 1. Graph



## 2. Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 200 [V]	Input Volt. 240 [V]
0.0	160	160
8.0	200	200
16.0	220	220
24.0	240	240
32.0	250	250
40.0	290	290
48.0	340	340
52.0	370	370
57.2	410	410
--	-	-
--	-	-

Measured by 500 MHz Oscilloscope.

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

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

Ripple [mVp-p]

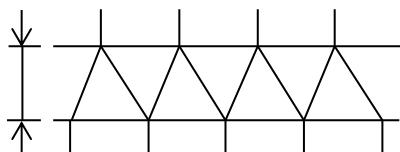
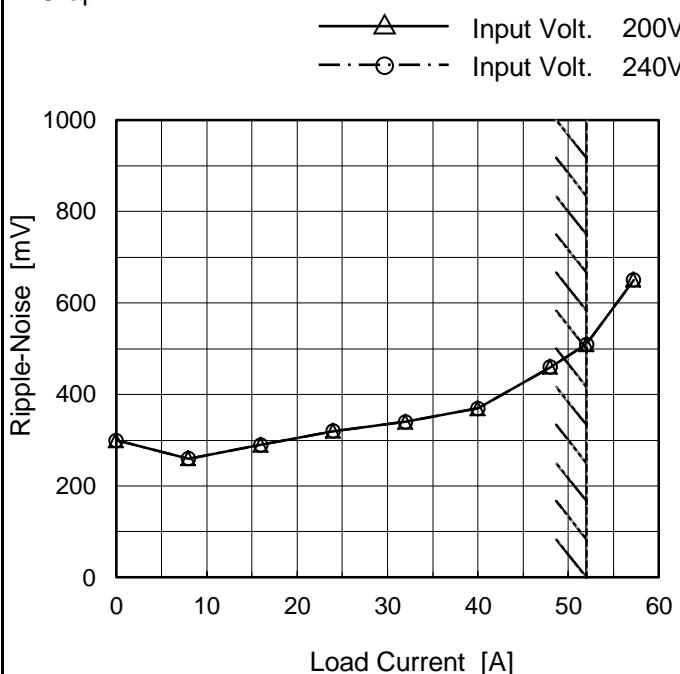


Fig.Complex Ripple Wave Form

**COSEL**

Model	FETA7000T-144	Temperature Testing Circuitry 25°C Figure B
Item	Ripple-Noise	
Object	+144V52A	

## 1. Graph



Measured by MHz Oscilloscope.

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

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

## 2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 200 [V]	Input Volt. 240 [V]
0.0	300	300
8.0	260	260
16.0	290	290
24.0	320	320
32.0	340	340
40.0	370	370
48.0	460	460
52.0	510	510
57.2	650	650
--	-	-
--	-	-

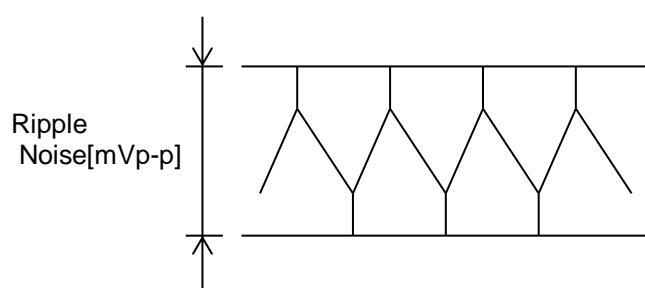
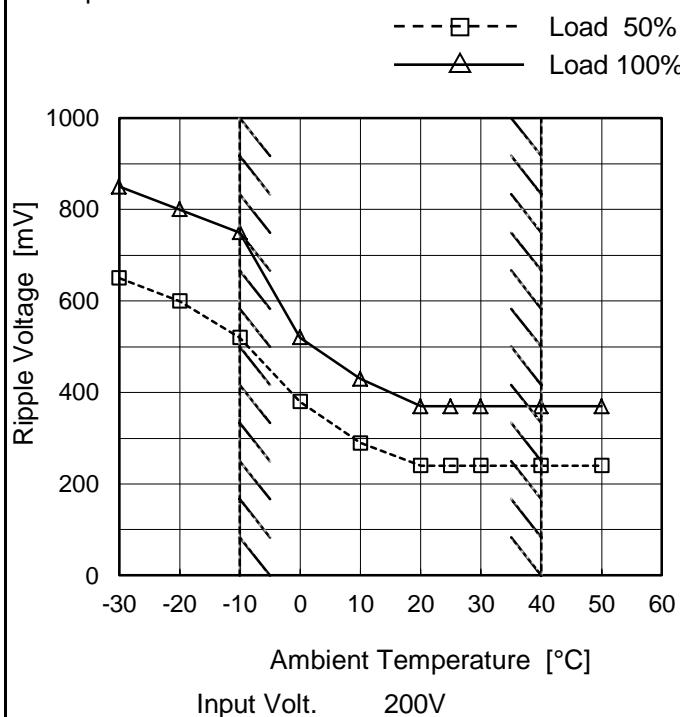


Fig.Complex Ripple Noise Wave Form

**COSEL**

Model	FETA7000T-144
Item	Ripple Voltage (by Ambient Temp.)
Object	+144V52A

## 1. Graph



Measured by 500 MHz Oscilloscope.

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

Testing Circuitry Figure A

## 2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-30	650	850
-20	600	800
-10	520	750
0	380	520
10	290	430
20	240	370
25	240	370
30	240	370
40	240	370
50	240	370
--	-	-

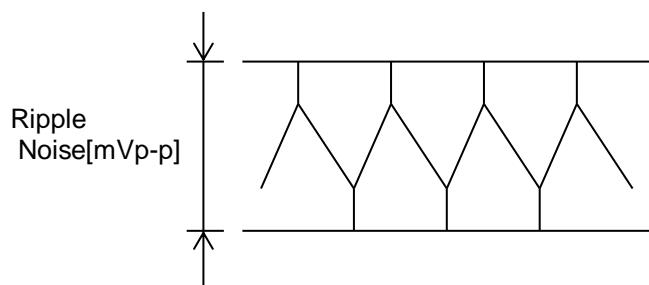
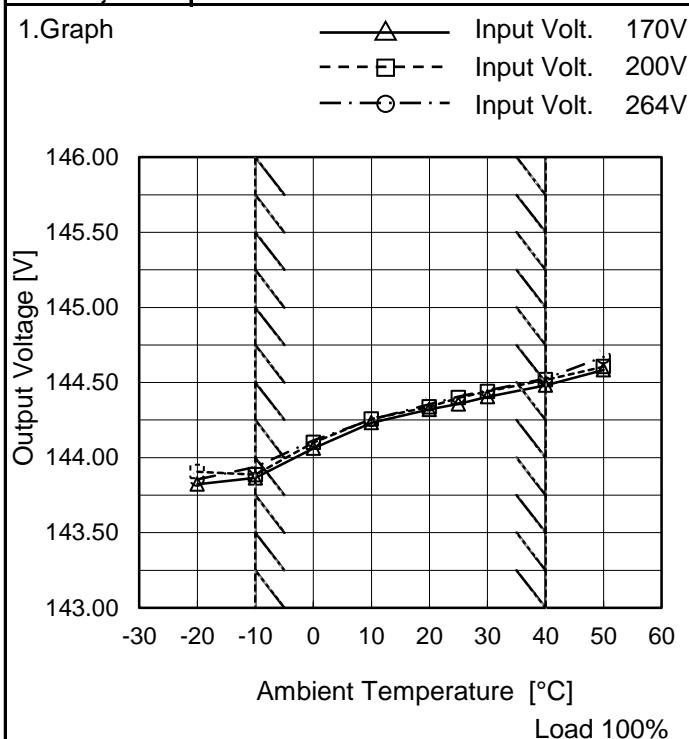


Fig.Complex Ripple Noise Wave Form

**COSEL**

Model	FETA7000T-144
Item	Ambient Temperature Drift
Object	+144V52A



Testing Circuitry Figure A

## 2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
-20	143.823	143.906	143.855
-10	143.864	143.886	143.937
0	144.062	144.101	144.115
10	144.232	144.257	144.254
20	144.320	144.338	144.356
25	144.357	144.398	144.406
30	144.405	144.440	144.446
40	144.482	144.517	144.525
50	144.584	144.605	144.672
--	-	-	-
--	-	-	-

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



Model	FETA7000T-144	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+144V52A	

### 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 : -10 - 40°C

Input Voltage : 170 - 264V

Load Current : 0 - 52A

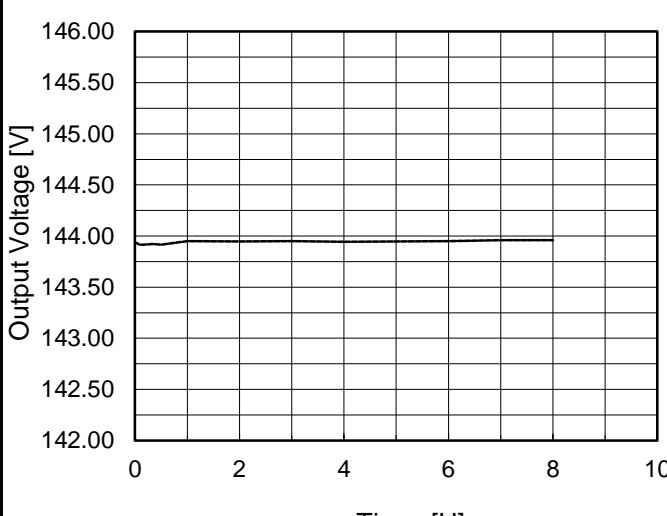
\* Output Voltage Accuracy =  $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

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

### 2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	40	263.91	0	145.543	±840	±0.6
Minimum Voltage	-10	170.07	52	143.864		

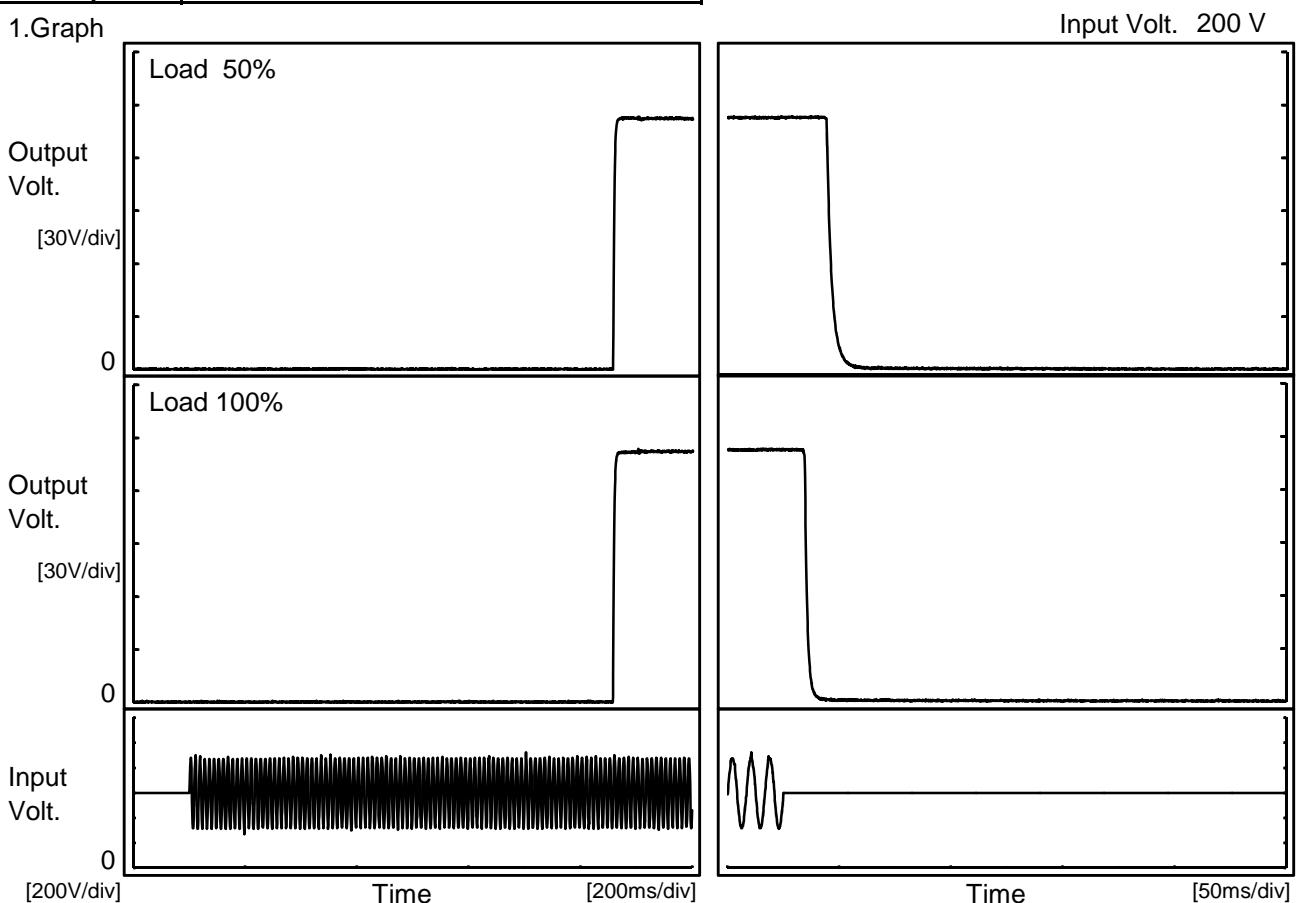
**COSEL**

Model	FETA7000T-144	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+144V52A																								
1. Graph			2. Values																						
 <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 200V Load 100%</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>143.942</td></tr> <tr><td>0.5</td><td>143.915</td></tr> <tr><td>1.0</td><td>143.951</td></tr> <tr><td>2.0</td><td>143.946</td></tr> <tr><td>3.0</td><td>143.949</td></tr> <tr><td>4.0</td><td>143.944</td></tr> <tr><td>5.0</td><td>143.948</td></tr> <tr><td>6.0</td><td>143.950</td></tr> <tr><td>7.0</td><td>143.958</td></tr> <tr><td>8.0</td><td>143.959</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	143.942	0.5	143.915	1.0	143.951	2.0	143.946	3.0	143.949	4.0	143.944	5.0	143.948	6.0	143.950	7.0	143.958	8.0	143.959
Time since start [H]	Output Voltage [V]																								
0.0	143.942																								
0.5	143.915																								
1.0	143.951																								
2.0	143.946																								
3.0	143.949																								
4.0	143.944																								
5.0	143.948																								
6.0	143.950																								
7.0	143.958																								
8.0	143.959																								

**COSSEL**

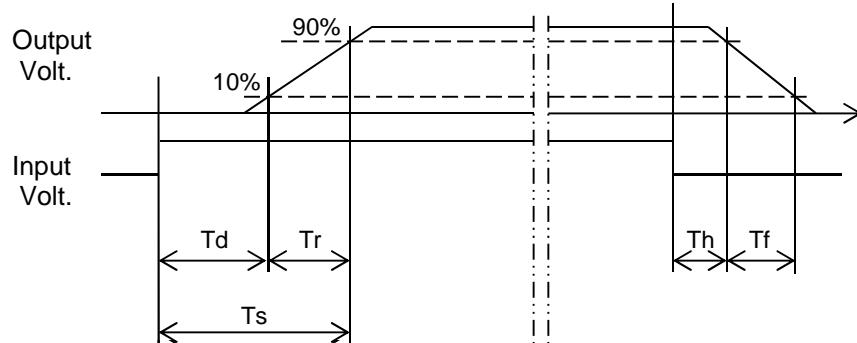
Model	FETA7000T-144	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+144V52A		

## 1.Graph



## 2.Values

Load	Time	Td	Tr	Ts	Th	Tf	[ms]
50 %		1517.0	12.0	1529.0	25.3	9.2	
100 %		1516.0	12.0	1528.0	14.2	4.5	

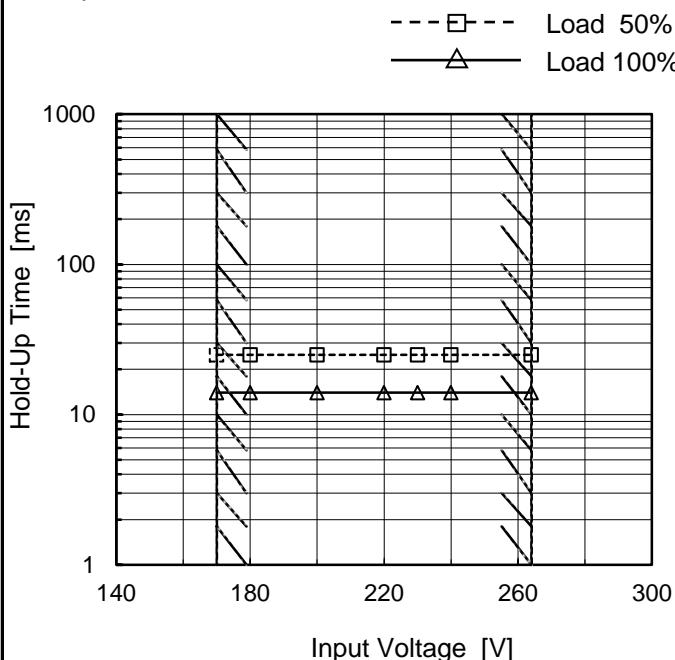


**COSEL**

Model	FETA7000T-144
Item	Hold-Up Time
Object	+144V52A

 Temperature 25°C  
 Testing Circuitry Figure A

## 1. Graph



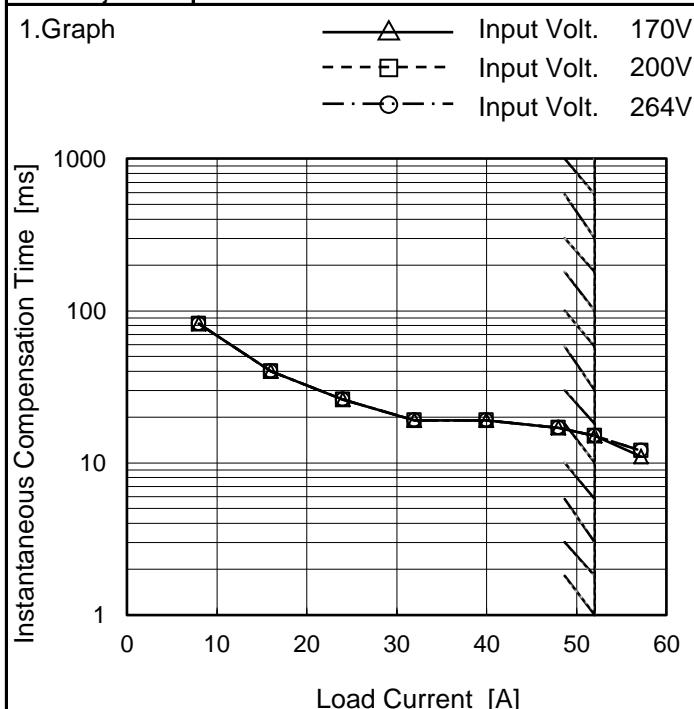
## 2. Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
170	25	14
180	25	14
200	25	14
220	25	14
230	25	14
240	25	14
264	25	14
--	-	-
--	-	-

This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.  
 Note: Slanted line shows the range of the rated input voltage.

**COSEL**

Model	FETA7000T-144
Item	Instantaneous Interruption Compensation
Object	+144V52A



Temperature 25°C  
Testing Circuitry Figure A

## 2. Values

Load Current [A]	Time [ms]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	-	-	-
8.0	82	82	82
16.0	40	40	40
24.0	26	26	26
32.0	19	19	19
40.0	19	19	19
48.0	17	17	17
52.0	15	15	15
57.2	11	12	12
--	-	-	-
--	-	-	-

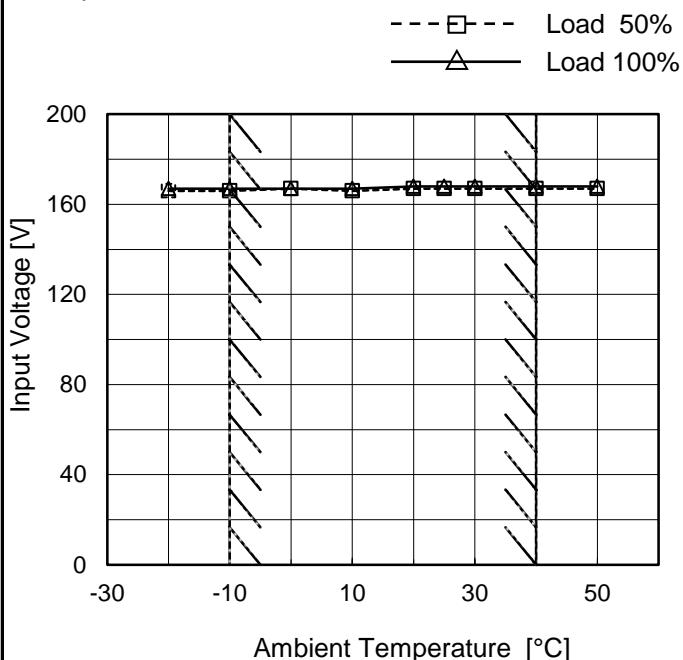
Note: Slanted line shows the range of the rated load current.

**COSEL**

Model	FETA7000T-144
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+144V52A

Testing Circuitry Figure A

## 1. Graph



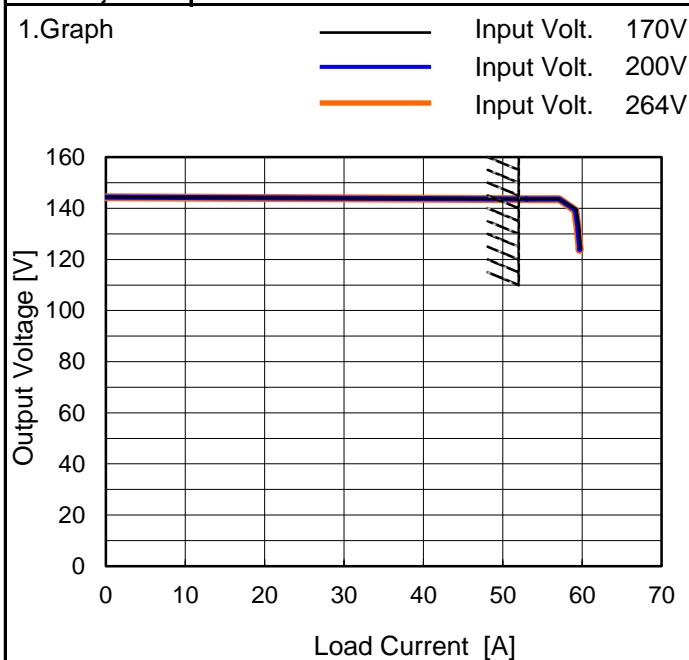
## 2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	166	167
-10	166	167
0	167	167
10	166	167
20	167	168
25	167	168
30	167	168
40	167	168
50	167	168
--	-	-
--	-	-

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

**COSEL**

Model	FETA7000T-144
Item	Overcurrent Protection
Object	+144V52A



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

Temperature 25°C  
Testing Circuitry Figure A

## 2.Values

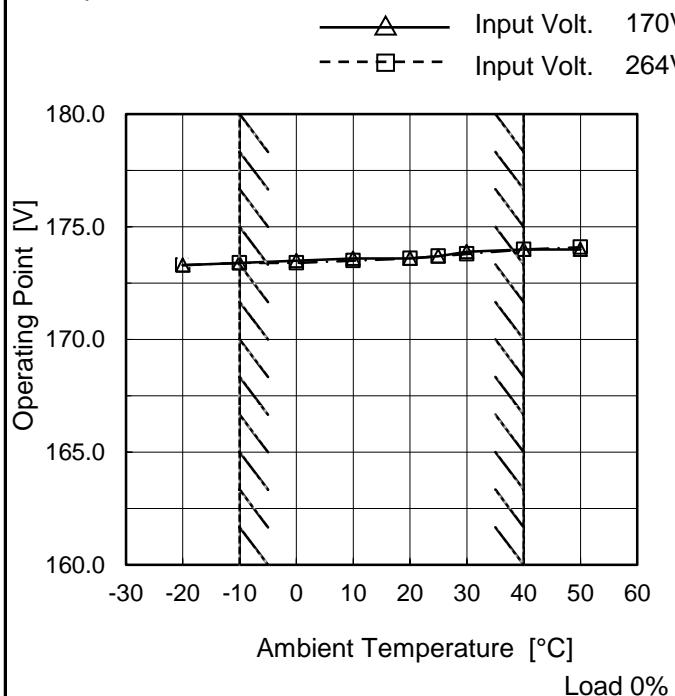
Output Voltage [V]	Load Current [A]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
143.6	52.99	53.00	53.00
139.3	59.10	59.10	59.10
131.5	59.50	59.40	59.40
123.8	59.70	59.60	59.60
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

**COSEL**

Model	FETA7000T-144
Item	Overvoltage Protection
Object	+144V52A

## Testing Circuitry Figure A

## 1.Graph



## 2.Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 170[V]	Input Volt. 264[V]
-20	173.30	173.30
-10	173.40	173.40
0	173.50	173.40
10	173.60	173.50
20	173.60	173.60
25	173.70	173.70
30	173.90	173.80
40	174.00	174.00
50	174.00	174.10
--	-	-
--	-	-

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

COSEL

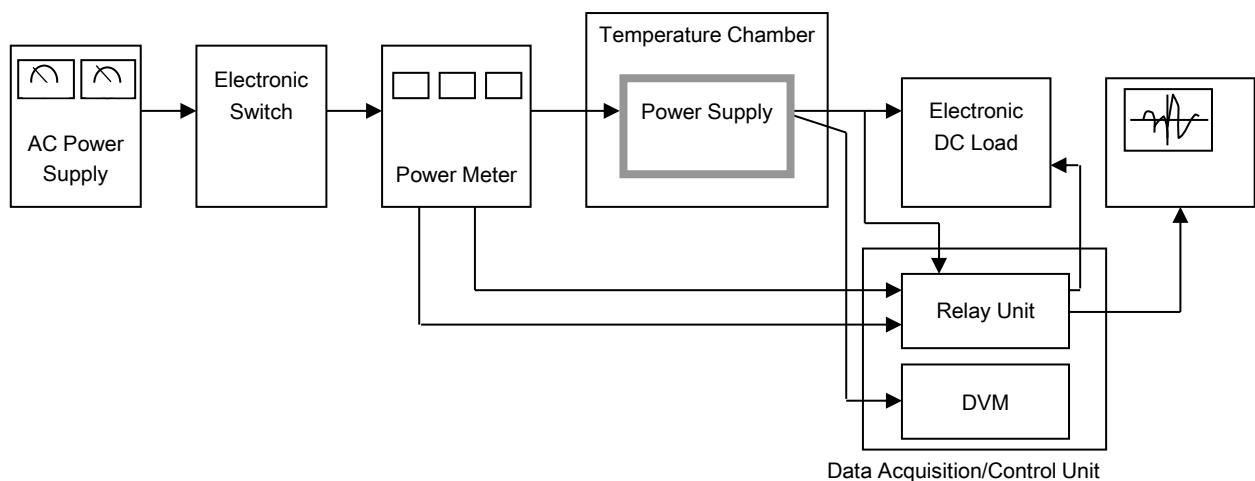


Figure A

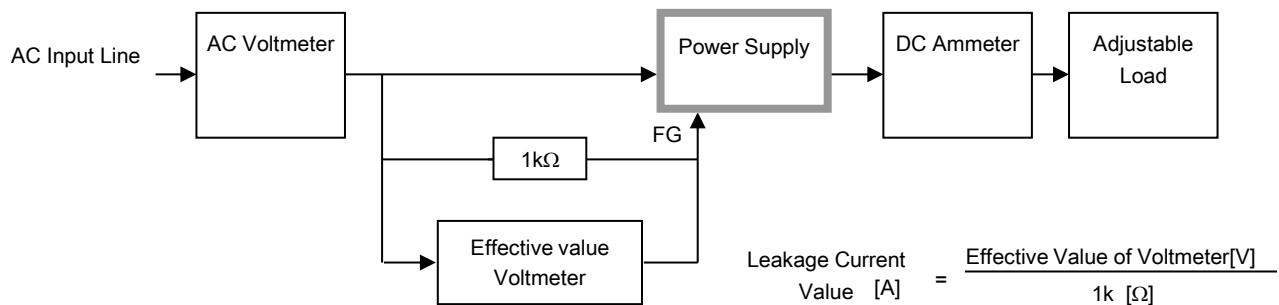


Figure B ( DEN-AN )

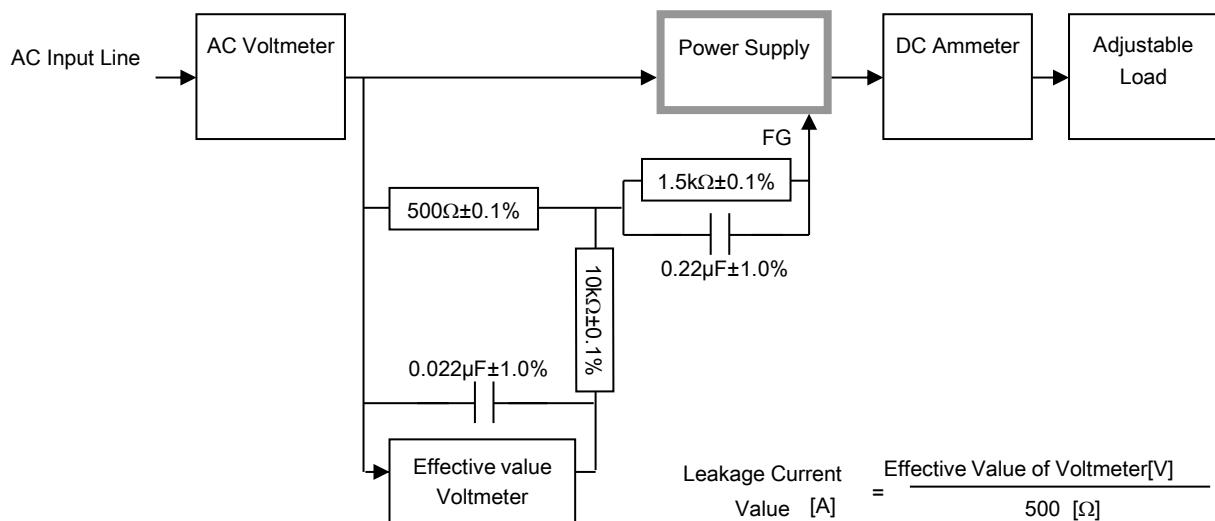


Figure B ( IEC60950-1 )