



## TEST DATA OF LEB225F-0524 (100V INPUT)

Regulated DC Power Supply

Mar. 21, 2000

Approved by : Tatsuya Mano  
Design Manager

Prepared by : Yadayuki Hoda  
Design Engineer

コーセル株式会社

COSEL CO., LTD.



## C O N T E N T S

1. Line Regulation	1
静的入力変動	
2. Input Current (by Load Power)	2
入力電流 (負荷特性)	
3. Input Power (by Load Power)	3
入力電力 (負荷特性)	
4. Efficiency (by Input Voltage)	4
効率 (入力電圧特性)	
5. Efficiency (by Load Power)	5
効率 (負荷特性)	
6. Power Factor (by Input Voltage)	6
力率 (入力電圧特性)	
7. Power Factor (by Load Power)	7
力率 (負荷特性)	
8. Hold-Up Time	8
出力保持時間	
9. Instantaneous Interruption Compensation	10
瞬時停電保障	
10. Load Regulation	12
静的負荷変動	
11. Ripple Voltage (by Load Current)	13
リップル電圧 (負荷特性)	
12. Ripple-Noise	15
リップルノイズ	
13. Overcurrent Protection	17
過電流保護	
14. Overvoltage Protection	18
過電圧保護	
15. Inrush Current	19
突入電流	
16. Dynamic Load Responce	20
動的負荷変動	
17. Rise and Fall Time	22
立ち上り、立下り時間	
18. Ambient Temperature Drift	24
周囲温度変動	
19. Minimum Input Voltage for Regulated Output Voltage	25
最低レギュレーション電圧	
20. Ripple Voltage (by Ambient Temperature)	26
リップル電圧 (周囲温度特性)	
21. Time Lapse Drift	27
経時ドリフト	
22. Output Voltage Accuracy	28
定電圧精度	
23. Harmonic Current	29
高調波電流	
24. Oscillator Frequency	31
発振周波数	
25. Condensation	32
結露特性	
26. Leakage Current	33
漏洩電流	
27. Line Noise Tolerance	34
入力雜音耐量	
28. Conducted Emission	35
雜音端子電圧	
29. Figure of Testing Circuitry	36
測定回路図	

(Final Page 37 )

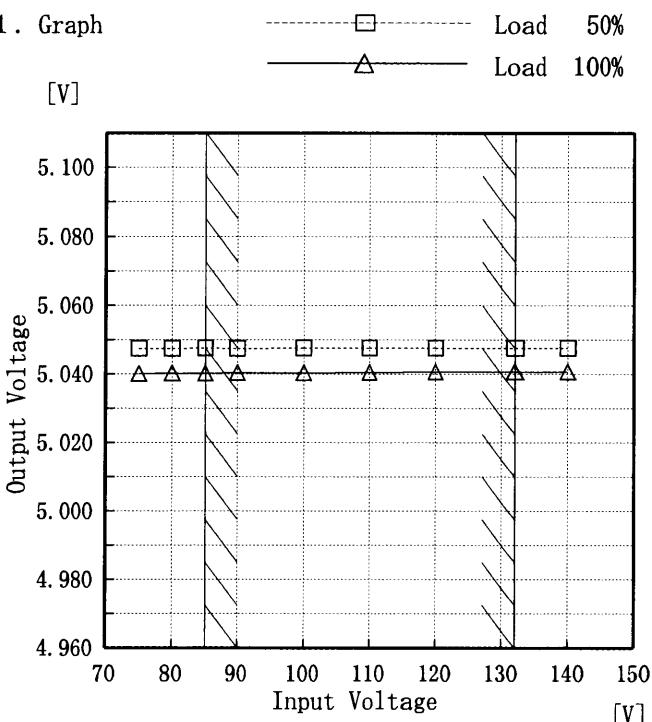
**COSEL**

Model LEB225F-0524

Item Line Regulation  
静的の入力変動

Object V1: +5.0V 5A

1. Graph

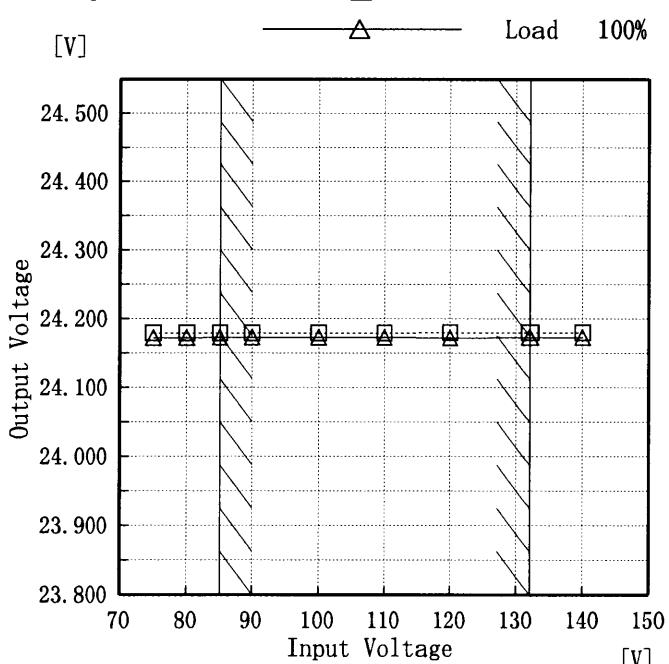
Temperature 25°C  
Testing Circuitry Figure A

2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	5.047	5.040
80	5.048	5.040
85	5.048	5.040
90	5.048	5.040
100	5.048	5.040
110	5.048	5.041
120	5.048	5.041
132	5.048	5.041
140	5.048	5.041

Object V2: +24.0V 9A

1. Graph



2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	24.179	24.172
80	24.179	24.173
85	24.179	24.173
90	24.179	24.173
100	24.179	24.173
110	24.180	24.173
120	24.180	24.173
132	24.180	24.173
140	24.180	24.173

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

(注)斜線は定格入力電圧範囲を示す。

**COSEL**

Model	LEB225F-0524	Temperature	25°C																																																			
Item	Input Current (by Load Power) 入力電流 (負荷特性)	Testing Circuitry	Figure A																																																			
Output	—																																																					
1. Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 85V (solid line with open triangles)</li> <li>Input Volt. 100V (dashed line with open squares)</li> <li>Input Volt. 132V (dash-dot line with open circles)</li> </ul> <p>The graph shows that as input voltage increases, the input current required for a given load power decreases. A slanted line indicates the range of the rated load power.</p>																																																					
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Power [W]</th> <th colspan="3">Input Current [A]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>0.169</td><td>0.136</td><td>0.123</td></tr> <tr><td>45.00</td><td>0.831</td><td>0.727</td><td>0.563</td></tr> <tr><td>90.00</td><td>1.442</td><td>1.207</td><td>0.930</td></tr> <tr><td>135.00</td><td>2.029</td><td>1.734</td><td>1.316</td></tr> <tr><td>180.00</td><td>2.656</td><td>2.224</td><td>1.686</td></tr> <tr><td>225.00</td><td>3.284</td><td>2.792</td><td>2.099</td></tr> <tr><td>247.50</td><td>3.610</td><td>3.048</td><td>2.289</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 Power [W]	Input Current [A]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.00	0.169	0.136	0.123	45.00	0.831	0.727	0.563	90.00	1.442	1.207	0.930	135.00	2.029	1.734	1.316	180.00	2.656	2.224	1.686	225.00	3.284	2.792	2.099	247.50	3.610	3.048	2.289	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Input Current [A]																																																					
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																			
0.00	0.169	0.136	0.123																																																			
45.00	0.831	0.727	0.563																																																			
90.00	1.442	1.207	0.930																																																			
135.00	2.029	1.734	1.316																																																			
180.00	2.656	2.224	1.686																																																			
225.00	3.284	2.792	2.099																																																			
247.50	3.610	3.048	2.289																																																			
—	—	—	—																																																			
—	—	—	—																																																			
—	—	—	—																																																			
—	—	—	—																																																			

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

(注)斜線は定格出力電力範囲を示す。

**COSEL**

Model	LEB225F-0524	Temperature	25°C																																																							
Item	Input Power (by Load Power) 入力電力 (負荷特性)	Testing Circuitry	Figure A																																																							
Output																																																										
1. Graph	<p>—△— Input Volt. 85V        —□— Input Volt. 100V        —○— Input Volt. 132V</p> <table border="1"> <caption>Data points from Figure A graph</caption> <thead> <tr> <th>Load Power [W]</th> <th>Input Volt. 85V [W]</th> <th>Input Volt. 100V [W]</th> <th>Input Volt. 132V [W]</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>~65</td> <td>~75</td> <td>~85</td> </tr> <tr> <td>100</td> <td>~125</td> <td>~135</td> <td>~145</td> </tr> <tr> <td>150</td> <td>~175</td> <td>~185</td> <td>~195</td> </tr> <tr> <td>200</td> <td>~225</td> <td>~235</td> <td>~245</td> </tr> <tr> <td>250</td> <td>~275</td> <td>~285</td> <td>~295</td> </tr> </tbody> </table>			Load Power [W]	Input Volt. 85V [W]	Input Volt. 100V [W]	Input Volt. 132V [W]	50	~65	~75	~85	100	~125	~135	~145	150	~175	~185	~195	200	~225	~235	~245	250	~275	~285	~295																															
Load Power [W]	Input Volt. 85V [W]	Input Volt. 100V [W]	Input Volt. 132V [W]																																																							
50	~65	~75	~85																																																							
100	~125	~135	~145																																																							
150	~175	~185	~195																																																							
200	~225	~235	~245																																																							
250	~275	~285	~295																																																							
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Power [W]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>11.43</td><td>10.44</td><td>11.13</td></tr> <tr><td>45.00</td><td>66.60</td><td>67.80</td><td>67.10</td></tr> <tr><td>90.00</td><td>119.30</td><td>116.30</td><td>116.20</td></tr> <tr><td>135.00</td><td>169.80</td><td>169.80</td><td>167.20</td></tr> <tr><td>180.00</td><td>223.50</td><td>219.30</td><td>217.50</td></tr> <tr><td>225.00</td><td>277.40</td><td>276.60</td><td>272.40</td></tr> <tr><td>247.50</td><td>306.00</td><td>302.40</td><td>297.60</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> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>			Load Power [W]	Input Power [W]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.00	11.43	10.44	11.13	45.00	66.60	67.80	67.10	90.00	119.30	116.30	116.20	135.00	169.80	169.80	167.20	180.00	223.50	219.30	217.50	225.00	277.40	276.60	272.40	247.50	306.00	302.40	297.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Input Power [W]																																																									
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																							
0.00	11.43	10.44	11.13																																																							
45.00	66.60	67.80	67.10																																																							
90.00	119.30	116.30	116.20																																																							
135.00	169.80	169.80	167.20																																																							
180.00	223.50	219.30	217.50																																																							
225.00	277.40	276.60	272.40																																																							
247.50	306.00	302.40	297.60																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							

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

(注)斜線は定格出力電力範囲を示す。

**COSEL**

Model	LEB225F-0524		Temperature Testing Circuitry	25°C Figure A																																
Item	Efficiency (by Input Voltage) 効率(入力電圧特性)																																			
Object																																				
1. Graph																																				
	<p>Efficiency [%]</p> <p>Input Voltage [V]</p> <p>Legend: Load 50% (dotted line with squares), Load 100% (solid line with triangles)</p>																																			
2. Values																																				
	<table border="1"> <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>75</td><td>77.0</td><td>79.7</td></tr> <tr><td>80</td><td>78.0</td><td>80.6</td></tr> <tr><td>85</td><td>78.1</td><td>81.5</td></tr> <tr><td>90</td><td>78.1</td><td>81.7</td></tr> <tr><td>100</td><td>78.2</td><td>81.8</td></tr> <tr><td>110</td><td>78.6</td><td>82.6</td></tr> <tr><td>120</td><td>79.0</td><td>82.9</td></tr> <tr><td>132</td><td>79.2</td><td>83.1</td></tr> <tr><td>140</td><td>79.5</td><td>83.3</td></tr> </tbody> </table>				Input Voltage [V]	Efficiency [%]		Load 50%	Load 100%	75	77.0	79.7	80	78.0	80.6	85	78.1	81.5	90	78.1	81.7	100	78.2	81.8	110	78.6	82.6	120	79.0	82.9	132	79.2	83.1	140	79.5	83.3
Input Voltage [V]	Efficiency [%]																																			
	Load 50%	Load 100%																																		
75	77.0	79.7																																		
80	78.0	80.6																																		
85	78.1	81.5																																		
90	78.1	81.7																																		
100	78.2	81.8																																		
110	78.6	82.6																																		
120	79.0	82.9																																		
132	79.2	83.1																																		
140	79.5	83.3																																		
	<p>Note: Slanted line shows the range of the rated input voltage.</p> <p>(注)斜線は定格入力電圧範囲を示す。</p>																																			

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																																																				
Item	Efficiency (by Load Power) 効率(負荷特性)																																																						
Output	—	2. Values																																																					
1. Graph	<p>—△— Input Volt. 85V        -□--- Input Volt. 100V        -○--- Input Volt. 132V</p> <table border="1"> <caption>Data points estimated from Figure A graph</caption> <thead> <tr> <th>Load Power [W]</th> <th>Efficiency 85V [%]</th> <th>Efficiency 100V [%]</th> <th>Efficiency 132V [%]</th> </tr> </thead> <tbody> <tr><td>50</td><td>68</td><td>67</td><td>68</td></tr> <tr><td>100</td><td>75</td><td>78</td><td>78</td></tr> <tr><td>150</td><td>80</td><td>80</td><td>81</td></tr> <tr><td>200</td><td>82</td><td>82</td><td>83</td></tr> <tr><td>250</td><td>83</td><td>83</td><td>83</td></tr> </tbody> </table>	Load Power [W]		Efficiency 85V [%]	Efficiency 100V [%]	Efficiency 132V [%]	50	68	67	68	100	75	78	78	150	80	80	81	200	82	82	83	250	83	83	83																													
Load Power [W]	Efficiency 85V [%]	Efficiency 100V [%]	Efficiency 132V [%]																																																				
50	68	67	68																																																				
100	75	78	78																																																				
150	80	80	81																																																				
200	82	82	83																																																				
250	83	83	83																																																				
		<table border="1"> <thead> <tr> <th rowspan="2">Load Power [W]</th> <th colspan="3">Efficiency [%]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>45.00</td><td>68.1</td><td>67.0</td><td>67.7</td></tr> <tr><td>90.00</td><td>75.7</td><td>77.7</td><td>77.8</td></tr> <tr><td>135.00</td><td>79.4</td><td>79.5</td><td>80.8</td></tr> <tr><td>180.00</td><td>80.5</td><td>82.0</td><td>82.7</td></tr> <tr><td>225.00</td><td>81.5</td><td>81.8</td><td>83.1</td></tr> <tr><td>247.50</td><td>81.0</td><td>81.9</td><td>83.3</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> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>			Load Power [W]	Efficiency [%]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	45.00	68.1	67.0	67.7	90.00	75.7	77.7	77.8	135.00	79.4	79.5	80.8	180.00	80.5	82.0	82.7	225.00	81.5	81.8	83.1	247.50	81.0	81.9	83.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Efficiency [%]																																																						
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																				
45.00	68.1	67.0	67.7																																																				
90.00	75.7	77.7	77.8																																																				
135.00	79.4	79.5	80.8																																																				
180.00	80.5	82.0	82.7																																																				
225.00	81.5	81.8	83.1																																																				
247.50	81.0	81.9	83.3																																																				
—	—	—	—																																																				
—	—	—	—																																																				
—	—	—	—																																																				
—	—	—	—																																																				
—	—	—	—																																																				

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

(注)斜線は定格出力電力範囲を示す。

**COSEL**

Model	LEB225F-0524	Temperature	25°C																																
Item	Power Factor (by Input Voltage) 力率(入力電圧特性)	Testing Circuitry	Figure A																																
Object																																			
1. Graph	<p style="text-align: center;">-----□----- Load 50%</p> <p style="text-align: center;">——△—— Load 100%</p> <table border="1"> <caption>Data points estimated from the graph</caption> <thead> <tr> <th>Input Voltage [V]</th> <th>Power Factor (Load 50%)</th> <th>Power Factor (Load 100%)</th> </tr> </thead> <tbody> <tr><td>75</td><td>0.98</td><td>0.99</td></tr> <tr><td>80</td><td>0.98</td><td>0.99</td></tr> <tr><td>85</td><td>0.98</td><td>0.99</td></tr> <tr><td>90</td><td>0.98</td><td>0.99</td></tr> <tr><td>100</td><td>0.98</td><td>0.99</td></tr> <tr><td>110</td><td>0.98</td><td>0.99</td></tr> <tr><td>120</td><td>0.98</td><td>0.99</td></tr> <tr><td>130</td><td>0.98</td><td>0.99</td></tr> <tr><td>140</td><td>0.98</td><td>0.99</td></tr> </tbody> </table>			Input Voltage [V]	Power Factor (Load 50%)	Power Factor (Load 100%)	75	0.98	0.99	80	0.98	0.99	85	0.98	0.99	90	0.98	0.99	100	0.98	0.99	110	0.98	0.99	120	0.98	0.99	130	0.98	0.99	140	0.98	0.99		
Input Voltage [V]	Power Factor (Load 50%)	Power Factor (Load 100%)																																	
75	0.98	0.99																																	
80	0.98	0.99																																	
85	0.98	0.99																																	
90	0.98	0.99																																	
100	0.98	0.99																																	
110	0.98	0.99																																	
120	0.98	0.99																																	
130	0.98	0.99																																	
140	0.98	0.99																																	
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>75</td><td>0.98</td><td>0.99</td></tr> <tr><td>80</td><td>0.98</td><td>0.99</td></tr> <tr><td>85</td><td>0.98</td><td>0.99</td></tr> <tr><td>90</td><td>0.98</td><td>0.99</td></tr> <tr><td>100</td><td>0.97</td><td>0.99</td></tr> <tr><td>110</td><td>0.97</td><td>0.99</td></tr> <tr><td>120</td><td>0.96</td><td>0.99</td></tr> <tr><td>132</td><td>0.96</td><td>0.98</td></tr> <tr><td>140</td><td>0.95</td><td>0.98</td></tr> </tbody> </table>			Input Voltage [V]	Power Factor		Load 50%	Load 100%	75	0.98	0.99	80	0.98	0.99	85	0.98	0.99	90	0.98	0.99	100	0.97	0.99	110	0.97	0.99	120	0.96	0.99	132	0.96	0.98	140	0.95	0.98
Input Voltage [V]	Power Factor																																		
	Load 50%	Load 100%																																	
75	0.98	0.99																																	
80	0.98	0.99																																	
85	0.98	0.99																																	
90	0.98	0.99																																	
100	0.97	0.99																																	
110	0.97	0.99																																	
120	0.96	0.99																																	
132	0.96	0.98																																	
140	0.95	0.98																																	

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

(注)斜線は定格入力電圧範囲を示す。

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																																																							
Item	Power Factor (by Load Power) 力率 (負荷特性)																																																									
Output																																																										
1. Graph	<p style="text-align: center;"> <span style="margin-right: 10px;">—△— Input Volt. 85V</span>  <span style="margin-right: 10px;">---□--- Input Volt. 100V</span>  <span>-----○----- Input Volt. 132V</span> </p> <table border="1"> <caption>Data points estimated from Figure A graph</caption> <thead> <tr> <th>Load Power [W]</th> <th>Power Factor (85V)</th> <th>Power Factor (100V)</th> <th>Power Factor (132V)</th> </tr> </thead> <tbody> <tr><td>50</td><td>0.92</td><td>0.90</td><td>0.88</td></tr> <tr><td>100</td><td>0.95</td><td>0.94</td><td>0.93</td></tr> <tr><td>150</td><td>0.97</td><td>0.96</td><td>0.95</td></tr> <tr><td>200</td><td>0.98</td><td>0.98</td><td>0.96</td></tr> <tr><td>250</td><td>0.99</td><td>0.99</td><td>0.97</td></tr> </tbody> </table>			Load Power [W]	Power Factor (85V)	Power Factor (100V)	Power Factor (132V)	50	0.92	0.90	0.88	100	0.95	0.94	0.93	150	0.97	0.96	0.95	200	0.98	0.98	0.96	250	0.99	0.99	0.97																															
Load Power [W]	Power Factor (85V)	Power Factor (100V)	Power Factor (132V)																																																							
50	0.92	0.90	0.88																																																							
100	0.95	0.94	0.93																																																							
150	0.97	0.96	0.95																																																							
200	0.98	0.98	0.96																																																							
250	0.99	0.99	0.97																																																							
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Power [W]</th> <th colspan="3">Power Factor</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>0.79</td><td>0.77</td><td>0.69</td></tr> <tr><td>45.00</td><td>0.94</td><td>0.93</td><td>0.90</td></tr> <tr><td>90.00</td><td>0.97</td><td>0.96</td><td>0.95</td></tr> <tr><td>135.00</td><td>0.98</td><td>0.98</td><td>0.96</td></tr> <tr><td>180.00</td><td>0.99</td><td>0.99</td><td>0.98</td></tr> <tr><td>225.00</td><td>0.99</td><td>0.99</td><td>0.98</td></tr> <tr><td>247.50</td><td>0.99</td><td>0.99</td><td>0.99</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> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>			Load Power [W]	Power Factor			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.00	0.79	0.77	0.69	45.00	0.94	0.93	0.90	90.00	0.97	0.96	0.95	135.00	0.98	0.98	0.96	180.00	0.99	0.99	0.98	225.00	0.99	0.99	0.98	247.50	0.99	0.99	0.99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Power Factor																																																									
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																							
0.00	0.79	0.77	0.69																																																							
45.00	0.94	0.93	0.90																																																							
90.00	0.97	0.96	0.95																																																							
135.00	0.98	0.98	0.96																																																							
180.00	0.99	0.99	0.98																																																							
225.00	0.99	0.99	0.98																																																							
247.50	0.99	0.99	0.99																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							

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

(注)斜線は定格出力電力範囲を示す。

# COSEL

Model	LEB225F-0524	Temperature Testing Circuitry 25°C Figure A																																
Item	Hold-Up Time 出力保持時間																																	
Object	V1: +5.0V5A																																	
1. Graph	<p>Graph showing Hold-Up Time [mS] vs Input Voltage [V]. The Y-axis is logarithmic, ranging from 1 to 1000 mS. The X-axis ranges from 70 to 150 V. Two data series are plotted: Load 50% (squares) and Load 100% (triangles). Both series show a sharp increase in hold-up time as input voltage drops below approximately 85V. A slanted line indicates the rated input voltage range.</p>	2. Values																																
		<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Hold-Up Time [mS]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>75</td><td>—</td><td>—</td></tr> <tr><td>80</td><td>245</td><td>59</td></tr> <tr><td>85</td><td>249</td><td>62</td></tr> <tr><td>90</td><td>252</td><td>65</td></tr> <tr><td>100</td><td>256</td><td>68</td></tr> <tr><td>110</td><td>259</td><td>71</td></tr> <tr><td>120</td><td>261</td><td>72</td></tr> <tr><td>132</td><td>263</td><td>74</td></tr> <tr><td>140</td><td>264</td><td>75</td></tr> </tbody> </table>	Input Voltage [V]	Hold-Up Time [mS]		Load 50%	Load 100%	75	—	—	80	245	59	85	249	62	90	252	65	100	256	68	110	259	71	120	261	72	132	263	74	140	264	75
Input Voltage [V]	Hold-Up Time [mS]																																	
	Load 50%	Load 100%																																
75	—	—																																
80	245	59																																
85	249	62																																
90	252	65																																
100	256	68																																
110	259	71																																
120	261	72																																
132	263	74																																
140	264	75																																
<p>This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.</p> <p>Note: Slanted line shows the range of the rated input voltage.</p> <p>出力保持時間とは、入力電圧断から出力電圧が、定電圧精度の規格範囲を保持しているところまでの時間。</p> <p>(注)斜線は定格入力電圧範囲を示す。</p>																																		

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																																
Item	Hold-Up Time 出力保持時間																																		
Object	V2: +24.0V 9A																																		
1. Graph	<p style="text-align: center;">-----□----- Load 50%  -----△----- Load 100%</p>		2. Values																																
			<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Hold-Up Time [mS]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr> <td>75</td><td>—</td><td>—</td></tr> <tr> <td>80</td><td>66</td><td>29</td></tr> <tr> <td>85</td><td>69</td><td>32</td></tr> <tr> <td>90</td><td>71</td><td>34</td></tr> <tr> <td>100</td><td>74</td><td>37</td></tr> <tr> <td>110</td><td>77</td><td>39</td></tr> <tr> <td>120</td><td>79</td><td>41</td></tr> <tr> <td>132</td><td>81</td><td>43</td></tr> <tr> <td>140</td><td>82</td><td>44</td></tr> </tbody> </table>	Input Voltage [V]	Hold-Up Time [mS]		Load 50%	Load 100%	75	—	—	80	66	29	85	69	32	90	71	34	100	74	37	110	77	39	120	79	41	132	81	43	140	82	44
Input Voltage [V]	Hold-Up Time [mS]																																		
	Load 50%	Load 100%																																	
75	—	—																																	
80	66	29																																	
85	69	32																																	
90	71	34																																	
100	74	37																																	
110	77	39																																	
120	79	41																																	
132	81	43																																	
140	82	44																																	

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.

出力保持時間とは、入力電圧断から出力電圧が、定電圧精度の規格範囲を保持しているところまでの時間。

(注)斜線は定格入力電圧範囲を示す。

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry 25°C Figure A																																																			
Item	Instantaneous Interruption Compensation 瞬時停電保障																																																				
Object	V1:+5.0V5A																																																				
1. Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 85 V</li> <li>Input Volt. 100 V</li> <li>Input Volt. 132 V</li> </ul> <p>Y-axis: Instantaneous Compensation Time [mS]</p> <p>X-axis: Load Current [A]</p>	2. Values																																																			
		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Time [mS]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0.8</td> <td>731</td> <td>745</td> <td>747</td> </tr> <tr> <td>1.6</td> <td>396</td> <td>403</td> <td>411</td> </tr> <tr> <td>2.4</td> <td>262</td> <td>269</td> <td>273</td> </tr> <tr> <td>3.2</td> <td>156</td> <td>189</td> <td>196</td> </tr> <tr> <td>4.0</td> <td>115</td> <td>129</td> <td>138</td> </tr> <tr> <td>4.8</td> <td>61</td> <td>71</td> <td>80</td> </tr> <tr> <td>5.0</td> <td>46</td> <td>54</td> <td>64</td> </tr> <tr> <td>5.5</td> <td>30</td> <td>36</td> <td>42</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]	Time [mS]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	—	—	—	0.8	731	745	747	1.6	396	403	411	2.4	262	269	273	3.2	156	189	196	4.0	115	129	138	4.8	61	71	80	5.0	46	54	64	5.5	30	36	42	—	—	—	—	—	—	—	—
Load Current [A]	Time [mS]																																																				
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																		
0.0	—	—	—																																																		
0.8	731	745	747																																																		
1.6	396	403	411																																																		
2.4	262	269	273																																																		
3.2	156	189	196																																																		
4.0	115	129	138																																																		
4.8	61	71	80																																																		
5.0	46	54	64																																																		
5.5	30	36	42																																																		
—	—	—	—																																																		
—	—	—	—																																																		
<p>This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.</p> <p>Note: Slanted line shows the range of the rated load current.</p>																																																					
<p>瞬時停電保障時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。</p> <p>(注)斜線は定格負荷電流範囲を示す。</p>																																																					

COSEL

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																																																			
Item	Instantaneous Interruption Compensation 瞬時停電保障																																																					
Object	V2: +24.0V 9A	2. Values																																																				
1. Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 85 V</li> <li>Input Volt. 100 V</li> <li>Input Volt. 132 V</li> </ul>																																																					
	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Time [mS]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>1.5</td><td>144</td><td>154</td><td>168</td></tr> <tr><td>3.0</td><td>86</td><td>96</td><td>105</td></tr> <tr><td>4.5</td><td>56</td><td>62</td><td>72</td></tr> <tr><td>6.0</td><td>39</td><td>46</td><td>55</td></tr> <tr><td>7.5</td><td>32</td><td>38</td><td>47</td></tr> <tr><td>9.0</td><td>30</td><td>36</td><td>42</td></tr> <tr><td>9.9</td><td>26</td><td>30</td><td>38</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]	Time [mS]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	—	—	—	1.5	144	154	168	3.0	86	96	105	4.5	56	62	72	6.0	39	46	55	7.5	32	38	47	9.0	30	36	42	9.9	26	30	38	—	—	—	—	—	—	—	—	—	—	—	—
Load Current [A]	Time [mS]																																																					
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																			
0.0	—	—	—																																																			
1.5	144	154	168																																																			
3.0	86	96	105																																																			
4.5	56	62	72																																																			
6.0	39	46	55																																																			
7.5	32	38	47																																																			
9.0	30	36	42																																																			
9.9	26	30	38																																																			
—	—	—	—																																																			
—	—	—	—																																																			
—	—	—	—																																																			
	<p>This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.</p> <p>Note: Slanted line shows the range of the rated load current.</p> <p>瞬時停電保障時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。</p> <p>(注)斜線は定格負荷電流範囲を示す。</p>																																																					

**COSEL**

Model	LEB225F-0524	Temperature 25°C Testing Circuitry Figure A																																																	
Item	Load Regulation 靜的負荷變動																																																		
Object	V1:+5.0V5A																																																		
1. Graph																																																			
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. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.052</td><td>5.052</td><td>5.052</td></tr> <tr><td>0.8</td><td>5.051</td><td>5.051</td><td>5.051</td></tr> <tr><td>1.6</td><td>5.049</td><td>5.049</td><td>5.049</td></tr> <tr><td>2.4</td><td>5.048</td><td>5.048</td><td>5.048</td></tr> <tr><td>3.2</td><td>5.046</td><td>5.046</td><td>5.046</td></tr> <tr><td>4.0</td><td>5.043</td><td>5.044</td><td>5.044</td></tr> <tr><td>4.8</td><td>5.041</td><td>5.041</td><td>5.041</td></tr> <tr><td>5.0</td><td>5.040</td><td>5.040</td><td>5.041</td></tr> <tr><td>5.5</td><td>5.039</td><td>5.039</td><td>5.039</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>				Load Current [A]	Output Voltage [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	5.052	5.052	5.052	0.8	5.051	5.051	5.051	1.6	5.049	5.049	5.049	2.4	5.048	5.048	5.048	3.2	5.046	5.046	5.046	4.0	5.043	5.044	5.044	4.8	5.041	5.041	5.041	5.0	5.040	5.040	5.041	5.5	5.039	5.039	5.039	—	—	—	—
Load Current [A]	Output Voltage [V]																																																		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																
0.0	5.052	5.052	5.052																																																
0.8	5.051	5.051	5.051																																																
1.6	5.049	5.049	5.049																																																
2.4	5.048	5.048	5.048																																																
3.2	5.046	5.046	5.046																																																
4.0	5.043	5.044	5.044																																																
4.8	5.041	5.041	5.041																																																
5.0	5.040	5.040	5.041																																																
5.5	5.039	5.039	5.039																																																
—	—	—	—																																																
Object	V2:+24.0V9A																																																		
1. Graph																																																			
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. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>24.182</td><td>24.182</td><td>24.183</td></tr> <tr><td>1.5</td><td>24.178</td><td>24.178</td><td>24.179</td></tr> <tr><td>3.0</td><td>24.176</td><td>24.176</td><td>24.177</td></tr> <tr><td>4.5</td><td>24.174</td><td>24.174</td><td>24.175</td></tr> <tr><td>6.0</td><td>24.172</td><td>24.172</td><td>24.173</td></tr> <tr><td>7.5</td><td>24.169</td><td>24.170</td><td>24.171</td></tr> <tr><td>9.0</td><td>24.166</td><td>24.167</td><td>24.168</td></tr> <tr><td>9.9</td><td>24.165</td><td>24.166</td><td>24.166</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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	24.182	24.182	24.183	1.5	24.178	24.178	24.179	3.0	24.176	24.176	24.177	4.5	24.174	24.174	24.175	6.0	24.172	24.172	24.173	7.5	24.169	24.170	24.171	9.0	24.166	24.167	24.168	9.9	24.165	24.166	24.166	—	—	—	—	—	—	—	—
Load Current [A]	Output Voltage [V]																																																		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																
0.0	24.182	24.182	24.183																																																
1.5	24.178	24.178	24.179																																																
3.0	24.176	24.176	24.177																																																
4.5	24.174	24.174	24.175																																																
6.0	24.172	24.172	24.173																																																
7.5	24.169	24.170	24.171																																																
9.0	24.166	24.167	24.168																																																
9.9	24.165	24.166	24.166																																																
—	—	—	—																																																
—	—	—	—																																																
<p>Note: Slanted line shows the range of the rated load current.</p> <p>(注)斜線は定格負荷電流範囲を示す。</p>																																																			



Model	LEB225F-0524																																							
Item	Ripple Voltage (by Load Current) リップル電圧(負荷特性)																																							
Object	V1: +5.0V 5A																																							
1. Graph		Temperature Testing Circuitry 25°C Figure A																																						
<p style="text-align: center;">—△— Input Volt. 85V [mV]      —○— Input Volt. 132V</p>		2. Values																																						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple Output Voltage [mV]</th> </tr> <tr> <th>Input Volt. 85 [V]</th> <th>Input Volt. 132 [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>15</td><td>15</td></tr> <tr><td>0.8</td><td>15</td><td>15</td></tr> <tr><td>1.6</td><td>15</td><td>15</td></tr> <tr><td>2.4</td><td>20</td><td>20</td></tr> <tr><td>3.2</td><td>20</td><td>20</td></tr> <tr><td>4.0</td><td>20</td><td>20</td></tr> <tr><td>4.8</td><td>20</td><td>20</td></tr> <tr><td>5.0</td><td>20</td><td>20</td></tr> <tr><td>5.5</td><td>20</td><td>20</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Load Current [A]	Ripple Output Voltage [mV]		Input Volt. 85 [V]	Input Volt. 132 [V]	0.0	15	15	0.8	15	15	1.6	15	15	2.4	20	20	3.2	20	20	4.0	20	20	4.8	20	20	5.0	20	20	5.5	20	20	—	—	—	—	—	—
Load Current [A]	Ripple Output Voltage [mV]																																							
	Input Volt. 85 [V]	Input Volt. 132 [V]																																						
0.0	15	15																																						
0.8	15	15																																						
1.6	15	15																																						
2.4	20	20																																						
3.2	20	20																																						
4.0	20	20																																						
4.8	20	20																																						
5.0	20	20																																						
5.5	20	20																																						
—	—	—																																						
—	—	—																																						
<p>Ripple Voltage is shown as p-p in the figure below.</p> <p>Note: Slanted line shows the range of the rated load current.</p> <p>リップル電圧は、下図 p – p 値で示される。 (注)斜線は定格負荷電流範囲を示す。</p> <p>T1: Due to AC Input Line T2: Due to Switching</p> <p>Fig. Complex Ripple Wave Form</p> <p>図 リップル波形詳細図</p>																																								

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																																						
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)																																								
Object	V2:+24.0V9A	2. Values																																							
1. Graph	<p style="text-align: center;">—△— Input Volt. 85V [mV]      —○— Input Volt. 132V</p> <table border="1"> <caption>Data extracted from Graph 1</caption> <thead> <tr> <th>Load Current [A]</th> <th>Ripple Voltage 85V [mV]</th> <th>Ripple Voltage 132V [mV]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>15</td><td>15</td></tr> <tr><td>1.5</td><td>20</td><td>20</td></tr> <tr><td>3.0</td><td>25</td><td>25</td></tr> <tr><td>4.5</td><td>25</td><td>25</td></tr> <tr><td>6.0</td><td>25</td><td>25</td></tr> <tr><td>7.5</td><td>30</td><td>30</td></tr> <tr><td>9.0</td><td>35</td><td>35</td></tr> <tr><td>9.9</td><td>35</td><td>35</td></tr> </tbody> </table>	Load Current [A]	Ripple Voltage 85V [mV]	Ripple Voltage 132V [mV]	0.0	15	15	1.5	20	20	3.0	25	25	4.5	25	25	6.0	25	25	7.5	30	30	9.0	35	35	9.9	35	35													
Load Current [A]	Ripple Voltage 85V [mV]	Ripple Voltage 132V [mV]																																							
0.0	15	15																																							
1.5	20	20																																							
3.0	25	25																																							
4.5	25	25																																							
6.0	25	25																																							
7.5	30	30																																							
9.0	35	35																																							
9.9	35	35																																							
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple Output Voltage [mV]</th> </tr> <tr> <th>Input Volt. 85 [V]</th> <th>Input Volt. 132 [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>15</td><td>15</td></tr> <tr><td>1.5</td><td>20</td><td>20</td></tr> <tr><td>3.0</td><td>25</td><td>25</td></tr> <tr><td>4.5</td><td>25</td><td>25</td></tr> <tr><td>6.0</td><td>25</td><td>25</td></tr> <tr><td>7.5</td><td>30</td><td>30</td></tr> <tr><td>9.0</td><td>35</td><td>35</td></tr> <tr><td>9.9</td><td>35</td><td>35</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> </tbody> </table>			Load Current [A]	Ripple Output Voltage [mV]		Input Volt. 85 [V]	Input Volt. 132 [V]	0.0	15	15	1.5	20	20	3.0	25	25	4.5	25	25	6.0	25	25	7.5	30	30	9.0	35	35	9.9	35	35	—	—	—	—	—	—	—	—	—
Load Current [A]	Ripple Output Voltage [mV]																																								
	Input Volt. 85 [V]	Input Volt. 132 [V]																																							
0.0	15	15																																							
1.5	20	20																																							
3.0	25	25																																							
4.5	25	25																																							
6.0	25	25																																							
7.5	30	30																																							
9.0	35	35																																							
9.9	35	35																																							
—	—	—																																							
—	—	—																																							
—	—	—																																							
Ripple Voltage is shown as p-p in the figure below.																																									
Note: Slanted line shows the range of the rated load current.																																									
リップル電圧は、下図 p-p 値で示される。 (注)斜線は定格負荷電流範囲を示す。																																									
T1: Due to AC Input Line 入力商用周期																																									
T2: Due to Switching スイッチング周期																																									
<p style="text-align: center;">T2</p> <p style="text-align: center;">T1</p>																																									
Ripple [mVp-p]																																									
Fig. Complex Ripple Wave Form																																									
図 リップル波形詳細図																																									

COSEL

Model	LEB225F-0524	Temperature Testing Circuitry 25°C Figure A																																						
Item	Ripple-Noise リップルノイズ																																							
Object	V1: +5.0V5A																																							
1. Graph	<p>—△— Input Volt. 85V [mV]</p> <table border="1"> <caption>Data points estimated from Graph 1</caption> <thead> <tr> <th>Load Current [A]</th> <th>Ripple-Noise 85V [mV]</th> <th>Ripple-Noise 132V [mV]</th> </tr> </thead> <tbody> <tr><td>0.8</td><td>60</td><td>60</td></tr> <tr><td>1.6</td><td>60</td><td>60</td></tr> <tr><td>2.4</td><td>60</td><td>60</td></tr> <tr><td>3.2</td><td>60</td><td>60</td></tr> <tr><td>4.0</td><td>60</td><td>60</td></tr> <tr><td>4.8</td><td>65</td><td>65</td></tr> <tr><td>5.5</td><td>65</td><td>65</td></tr> </tbody> </table>	Load Current [A]	Ripple-Noise 85V [mV]	Ripple-Noise 132V [mV]	0.8	60	60	1.6	60	60	2.4	60	60	3.2	60	60	4.0	60	60	4.8	65	65	5.5	65	65															
Load Current [A]	Ripple-Noise 85V [mV]	Ripple-Noise 132V [mV]																																						
0.8	60	60																																						
1.6	60	60																																						
2.4	60	60																																						
3.2	60	60																																						
4.0	60	60																																						
4.8	65	65																																						
5.5	65	65																																						
2. Values																																								
		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple-Noise [mV]</th> </tr> <tr> <th>Input Volt. 85 [V]</th> <th>Input Volt. 132 [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>60</td><td>60</td></tr> <tr><td>0.8</td><td>60</td><td>60</td></tr> <tr><td>1.6</td><td>60</td><td>60</td></tr> <tr><td>2.4</td><td>60</td><td>60</td></tr> <tr><td>3.2</td><td>60</td><td>60</td></tr> <tr><td>4.0</td><td>60</td><td>60</td></tr> <tr><td>4.8</td><td>65</td><td>65</td></tr> <tr><td>5.0</td><td>65</td><td>65</td></tr> <tr><td>5.5</td><td>65</td><td>65</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Load Current [A]	Ripple-Noise [mV]		Input Volt. 85 [V]	Input Volt. 132 [V]	0.0	60	60	0.8	60	60	1.6	60	60	2.4	60	60	3.2	60	60	4.0	60	60	4.8	65	65	5.0	65	65	5.5	65	65	—	—	—	—	—	—
Load Current [A]	Ripple-Noise [mV]																																							
	Input Volt. 85 [V]	Input Volt. 132 [V]																																						
0.0	60	60																																						
0.8	60	60																																						
1.6	60	60																																						
2.4	60	60																																						
3.2	60	60																																						
4.0	60	60																																						
4.8	65	65																																						
5.0	65	65																																						
5.5	65	65																																						
—	—	—																																						
—	—	—																																						

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

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

リップルノイズは、下図 p - p 値で示される。

(注)斜線は定格負荷電流範囲を示す。

T1: Due to AC Input Line  
入力商用周期  
T2: Due to Switching  
スイッチング周期

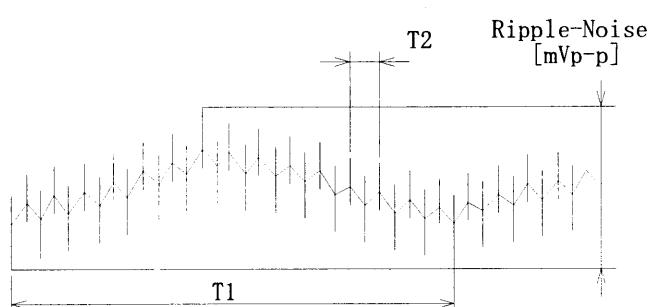


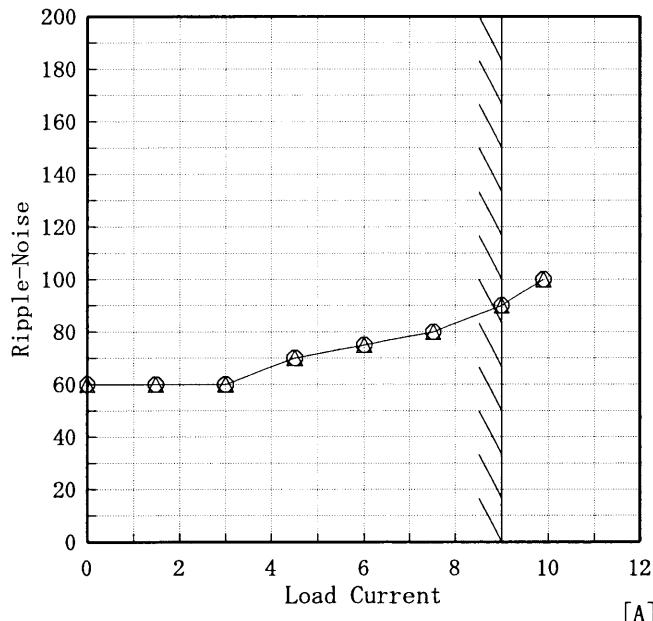
Fig. Complex Ripple Wave Form  
図 リップル波形詳細図

**COSEL**

Model	LEB225F-0524	Temperature	25°C
Item	Ripple-Noise リップルノイズ	Testing Circuitry	Figure A

Object V2:+24.0V9A

1. Graph Input Volt. 85V  
[mV] Input Volt. 132V



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

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

リップルノイズは、下図  $p - p$  値で示される。

(注) 斜線は定格負荷電流範囲を示す。

T1: Due to AC Input Line  
   入力商用周期

T2: Due to Switching  
   スイッチング周期

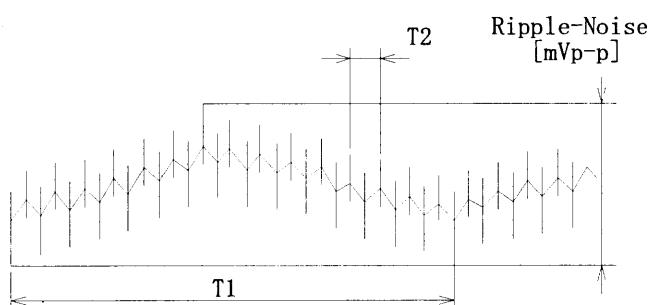
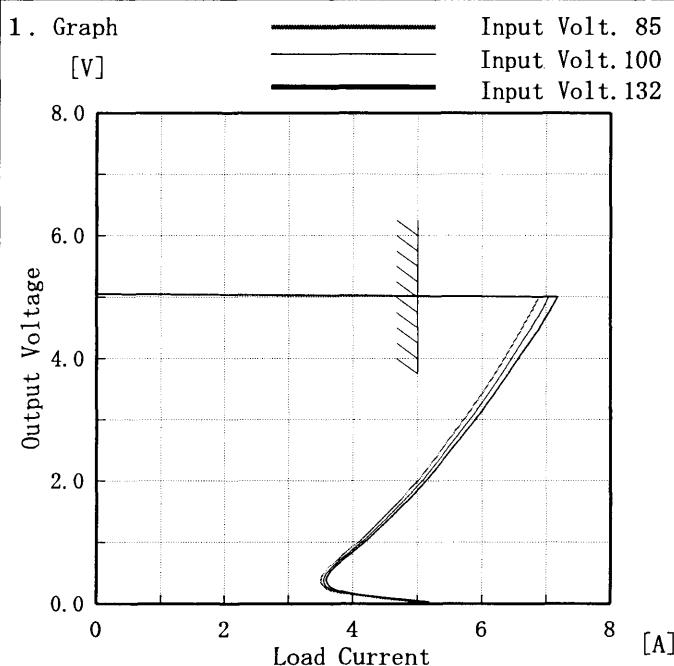


Fig. Complex Ripple Wave Form  
図 リップル波形詳細図

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	60	60
1.5	60	60
3.0	60	60
4.5	70	70
6.0	75	75
7.5	80	80
9.0	90	90
9.9	100	100
—	—	—
—	—	—
—	—	—

**COSEL**

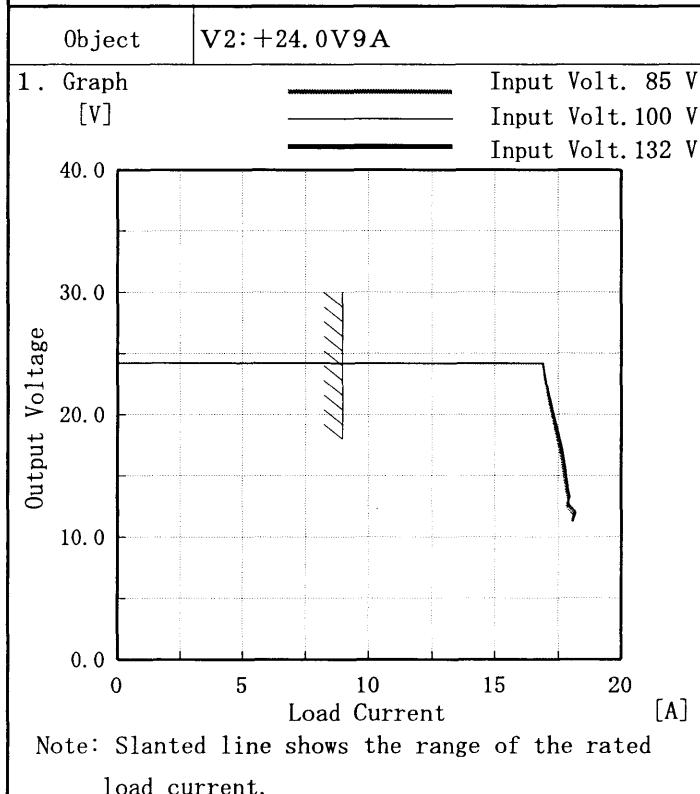
Model	LEB225F-0524
Item	Overcurrent Protection 過電流保護
Object	V1: +5.0V5A

Temperature 25°C  
Testing Circuitry Figure A

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

## 2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
5.00	6.89	7.04	7.18
4.75	6.77	6.91	7.04
4.50	6.66	6.80	6.92
4.00	6.37	6.49	6.59
3.50	6.08	6.19	6.28
3.00	5.73	5.82	5.90
2.50	5.40	5.48	5.56
2.00	5.01	5.08	5.14
1.50	4.59	4.65	4.71
1.00	4.08	4.13	4.18
0.50	3.58	3.63	3.68
0.00	5.00	5.09	5.19



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

Intermittent operation occurs when the output voltage is from 11.1V to 0V.

## 2. Values

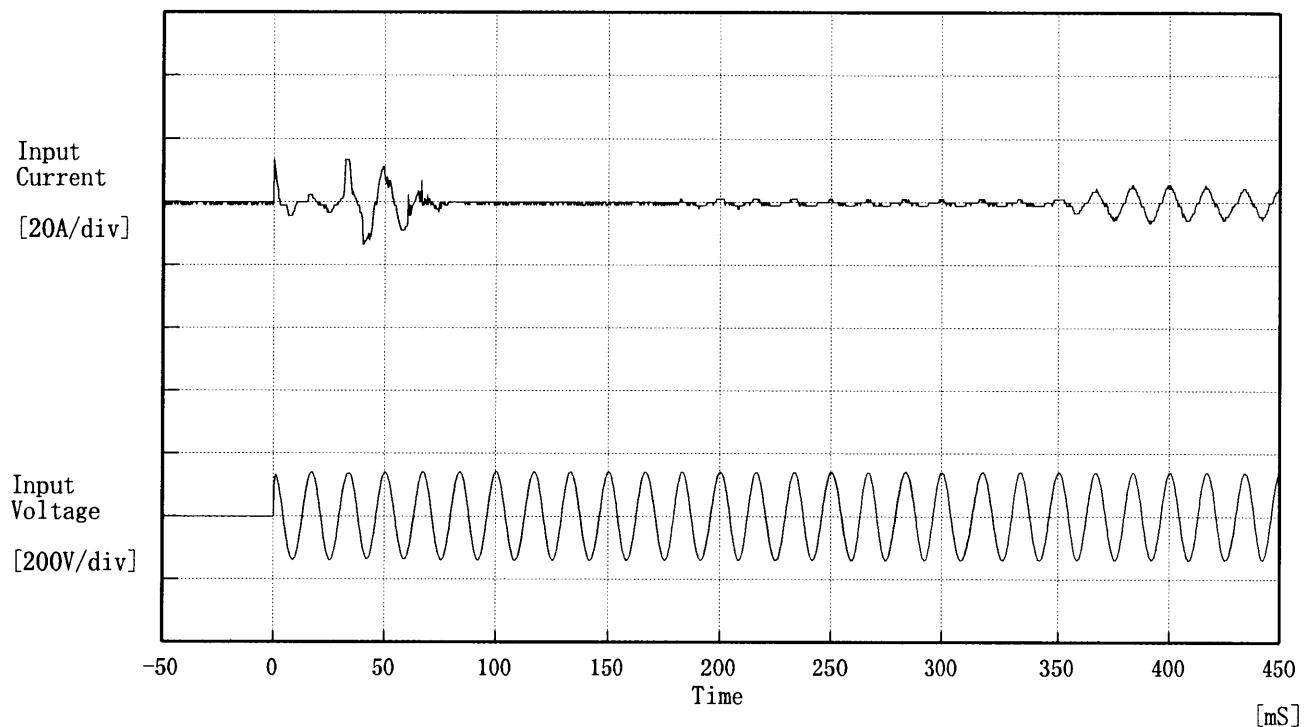
Output Voltage [V]	Load Current [A]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
24.00	16.95	16.93	16.95
22.80	17.02	17.01	17.05
21.60	17.09	17.10	17.14
19.20	17.31	17.35	17.40
16.80	17.57	17.62	17.68
14.40	17.76	17.81	17.86
12.00	17.97	18.06	18.17
9.60	—	—	—
7.20	—	—	—
4.80	—	—	—
2.40	—	—	—
0.00	—	—	—

**COSEL**

Model	LEB225F-0524																																																				
Item	Overvoltage Protection 過電圧保護																																																				
Object	V2: +24.0V 9A																																																				
1. Graph																																																					
		2. Values																																																			
<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="3">Operating Point [V]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr> <td>-20</td><td>29.7</td><td>29.7</td><td>29.7</td></tr> <tr> <td>-10</td><td>29.9</td><td>29.9</td><td>29.9</td></tr> <tr> <td>0</td><td>30.1</td><td>30.1</td><td>30.1</td></tr> <tr> <td>10</td><td>30.3</td><td>30.3</td><td>30.3</td></tr> <tr> <td>20</td><td>30.5</td><td>30.5</td><td>30.5</td></tr> <tr> <td>25</td><td>30.6</td><td>30.6</td><td>30.6</td></tr> <tr> <td>30</td><td>30.7</td><td>30.7</td><td>30.7</td></tr> <tr> <td>40</td><td>31.0</td><td>31.0</td><td>31.0</td></tr> <tr> <td>50</td><td>31.1</td><td>31.1</td><td>31.1</td></tr> <tr> <td>70</td><td>31.5</td><td>31.5</td><td>31.5</td></tr> <tr> <td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Ambient Temperature [°C]	Operating Point [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	-20	29.7	29.7	29.7	-10	29.9	29.9	29.9	0	30.1	30.1	30.1	10	30.3	30.3	30.3	20	30.5	30.5	30.5	25	30.6	30.6	30.6	30	30.7	30.7	30.7	40	31.0	31.0	31.0	50	31.1	31.1	31.1	70	31.5	31.5	31.5	—	—	—	—		
Ambient Temperature [°C]		Operating Point [V]																																																			
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																		
-20	29.7	29.7	29.7																																																		
-10	29.9	29.9	29.9																																																		
0	30.1	30.1	30.1																																																		
10	30.3	30.3	30.3																																																		
20	30.5	30.5	30.5																																																		
25	30.6	30.6	30.6																																																		
30	30.7	30.7	30.7																																																		
40	31.0	31.0	31.0																																																		
50	31.1	31.1	31.1																																																		
70	31.5	31.5	31.5																																																		
—	—	—	—																																																		
<p>Note: Slanted line shows the range of the rated ambient temperature.</p> <p>(注) 斜線は定格周囲温度範囲を示す。</p>																																																					

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry Figure A	25°C
Item	Inrush Current 突入電流		
Object	_____		



Input Voltage 100 V

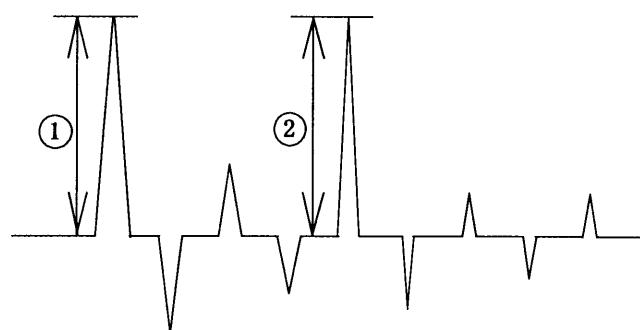
Frequency 60 Hz

Load 100 %

Inrush Current

① 13.47 [A]

② 8.96 [A]



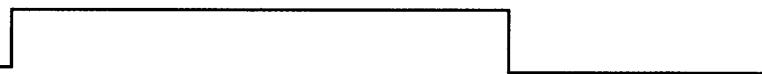
**COSSEL**

Model	LEB225F-0524	Temperature Testing Circuitry 25°C Figure A
Item	Dynamic Load Response 動的負荷變動	
Object	V1: +5V 5A	

Input Volt. 100 V

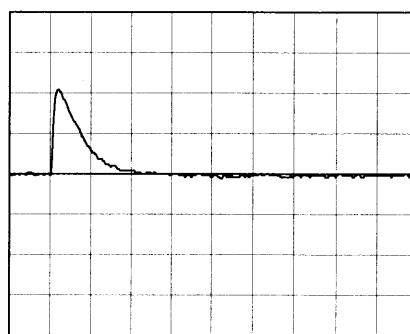
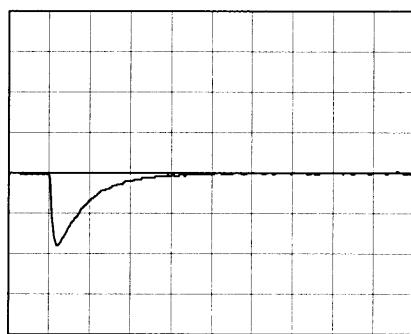
Cycle 1000 mS

Load Current



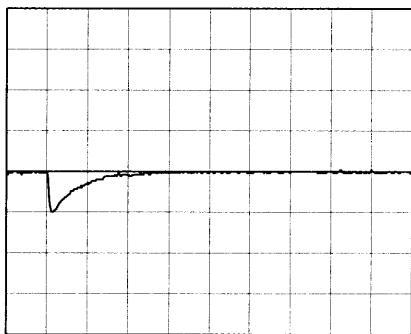
Min. Load ↔

Load 100 %

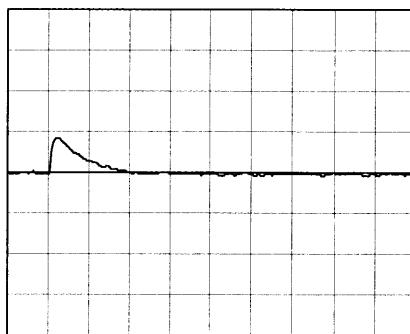


Min. Load ↔

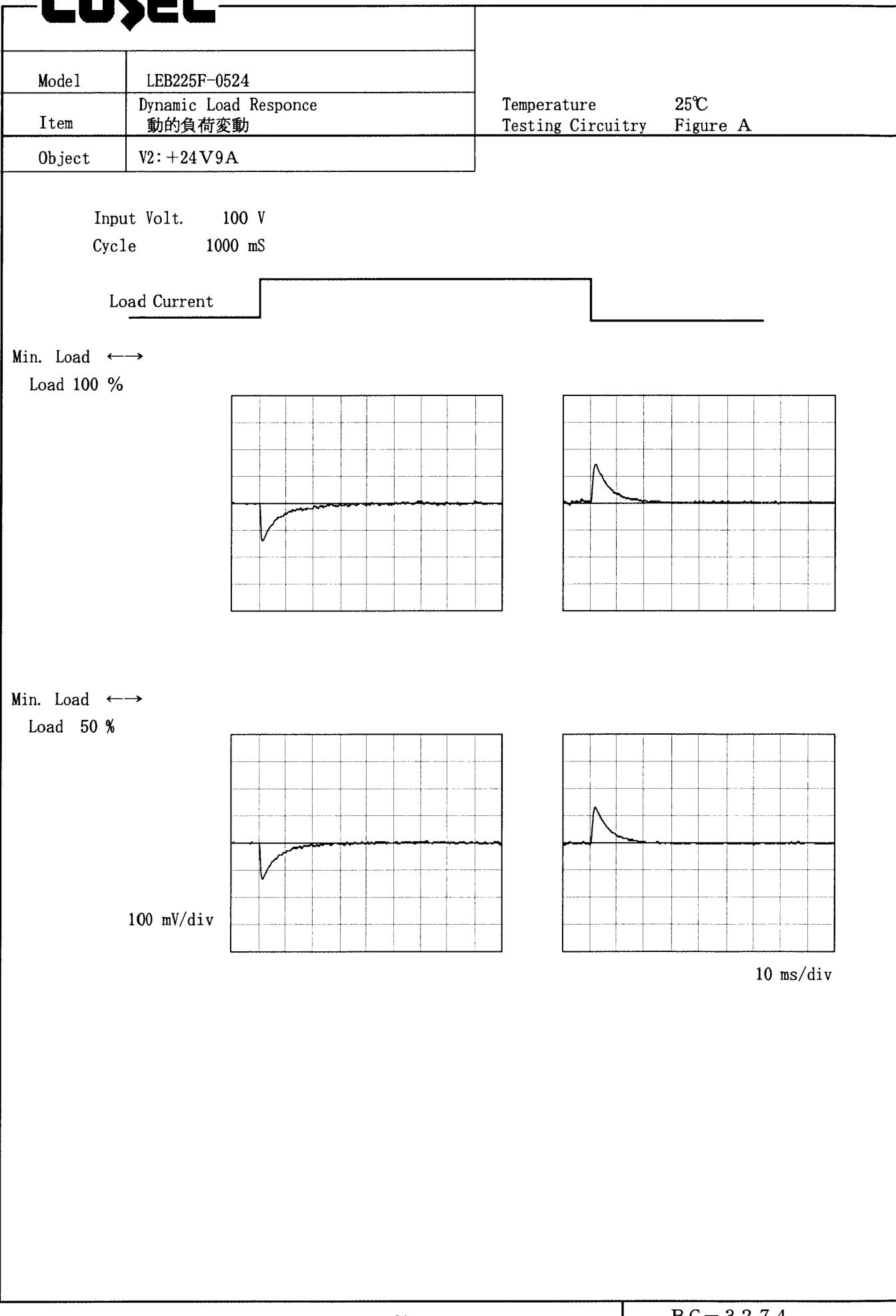
Load 50 %



100 mV/div



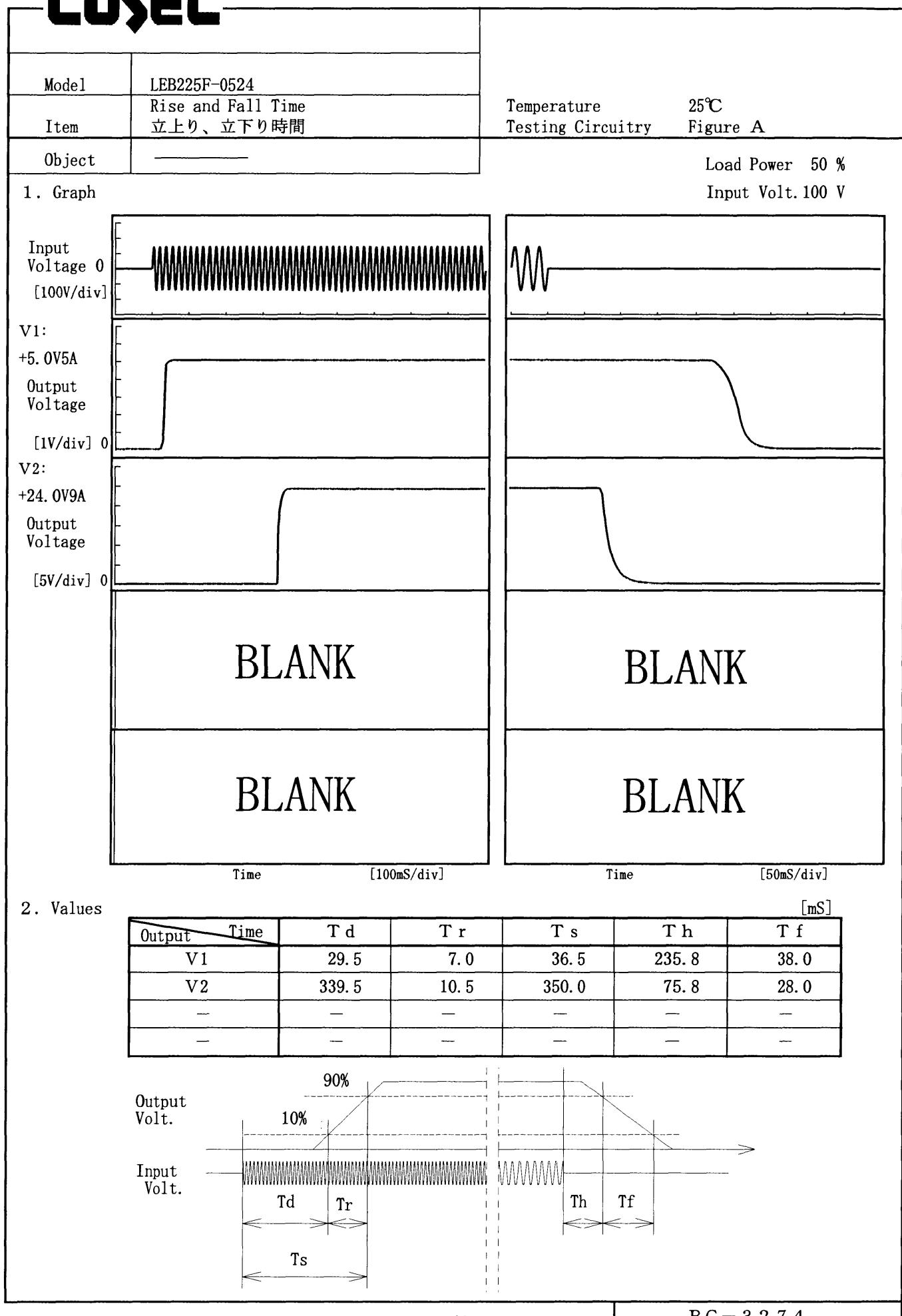
10 ms/div

**COSEL**

**COSEL**

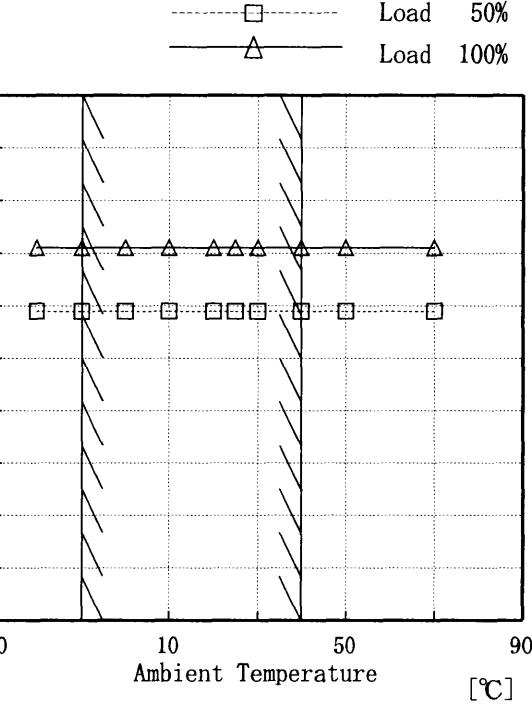
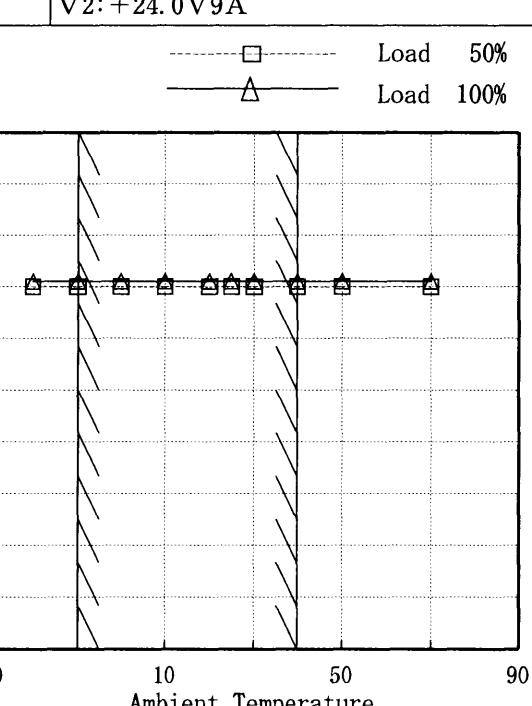
Model	LEB225F-0524																																												
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry      25°C Figure A																																											
Object	—	Load Power 100 % Input Volt. 100 V																																											
1. Graph																																													
2. Values																																													
<table border="1"> <thead> <tr> <th>Output</th> <th>Time</th> <th>T d</th> <th>T r</th> <th>T s</th> <th>T h</th> <th>T f</th> <th>[mS]</th> </tr> </thead> <tbody> <tr> <td>V1</td> <td></td> <td>29.5</td> <td>11.0</td> <td>40.5</td> <td>85.8</td> <td>117.8</td> <td></td> </tr> <tr> <td>V2</td> <td></td> <td>339.5</td> <td>11.0</td> <td>350.5</td> <td>39.5</td> <td>14.5</td> <td></td> </tr> <tr> <td>—</td> <td></td> <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> <td>—</td> <td></td> </tr> </tbody> </table>						Output	Time	T d	T r	T s	T h	T f	[mS]	V1		29.5	11.0	40.5	85.8	117.8		V2		339.5	11.0	350.5	39.5	14.5		—		—	—	—	—	—		—		—	—	—	—	—	
Output	Time	T d	T r	T s	T h	T f	[mS]																																						
V1		29.5	11.0	40.5	85.8	117.8																																							
V2		339.5	11.0	350.5	39.5	14.5																																							
—		—	—	—	—	—																																							
—		—	—	—	—	—																																							

COSEL



**COSEL**

Model	LEB225F-0524	Testing Circuitry      Figure A																																																					
Item	Ambient Temperature Drift 周囲温度変動																																																						
Object	V1: +5.0V 5A																																																						
1. Graph	<p>[V]                          Input Volt. 85V                                   Input Volt. 100V                                   Input Volt. 132V</p> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p>																																																						
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>-20</td><td>5.025</td><td>5.025</td><td>5.025</td></tr> <tr><td>-10</td><td>5.028</td><td>5.028</td><td>5.028</td></tr> <tr><td>0</td><td>5.030</td><td>5.030</td><td>5.031</td></tr> <tr><td>10</td><td>5.032</td><td>5.033</td><td>5.033</td></tr> <tr><td>20</td><td>5.035</td><td>5.036</td><td>5.036</td></tr> <tr><td>25</td><td>5.036</td><td>5.037</td><td>5.037</td></tr> <tr><td>30</td><td>5.038</td><td>5.037</td><td>5.038</td></tr> <tr><td>40</td><td>5.038</td><td>5.038</td><td>5.038</td></tr> <tr><td>50</td><td>5.037</td><td>5.037</td><td>5.038</td></tr> <tr><td>70</td><td>5.033</td><td>5.033</td><td>5.034</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>				Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	-20	5.025	5.025	5.025	-10	5.028	5.028	5.028	0	5.030	5.030	5.031	10	5.032	5.033	5.033	20	5.035	5.036	5.036	25	5.036	5.037	5.037	30	5.038	5.037	5.038	40	5.038	5.038	5.038	50	5.037	5.037	5.038	70	5.033	5.033	5.034	—	—	—	—
Ambient Temperature [°C]	Output Voltage [V]																																																						
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																				
-20	5.025	5.025	5.025																																																				
-10	5.028	5.028	5.028																																																				
0	5.030	5.030	5.031																																																				
10	5.032	5.033	5.033																																																				
20	5.035	5.036	5.036																																																				
25	5.036	5.037	5.037																																																				
30	5.038	5.037	5.038																																																				
40	5.038	5.038	5.038																																																				
50	5.037	5.037	5.038																																																				
70	5.033	5.033	5.034																																																				
—	—	—	—																																																				
Object	V2: +24.0V 9A																																																						
1. Graph	<p>[V]                          Input Volt. 85V                                   Input Volt. 100V                                   Input Volt. 132V</p> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p>																																																						
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>-20</td><td>24.088</td><td>24.089</td><td>24.090</td></tr> <tr><td>-10</td><td>24.103</td><td>24.104</td><td>24.105</td></tr> <tr><td>0</td><td>24.121</td><td>24.122</td><td>24.122</td></tr> <tr><td>10</td><td>24.138</td><td>24.139</td><td>24.140</td></tr> <tr><td>20</td><td>24.154</td><td>24.155</td><td>24.155</td></tr> <tr><td>25</td><td>24.159</td><td>24.160</td><td>24.161</td></tr> <tr><td>30</td><td>24.165</td><td>24.166</td><td>24.166</td></tr> <tr><td>40</td><td>24.170</td><td>24.171</td><td>24.172</td></tr> <tr><td>50</td><td>24.172</td><td>24.172</td><td>24.173</td></tr> <tr><td>70</td><td>24.166</td><td>24.167</td><td>24.167</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>				Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	-20	24.088	24.089	24.090	-10	24.103	24.104	24.105	0	24.121	24.122	24.122	10	24.138	24.139	24.140	20	24.154	24.155	24.155	25	24.159	24.160	24.161	30	24.165	24.166	24.166	40	24.170	24.171	24.172	50	24.172	24.172	24.173	70	24.166	24.167	24.167	—	—	—	—
Ambient Temperature [°C]	Output Voltage [V]																																																						
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																				
-20	24.088	24.089	24.090																																																				
-10	24.103	24.104	24.105																																																				
0	24.121	24.122	24.122																																																				
10	24.138	24.139	24.140																																																				
20	24.154	24.155	24.155																																																				
25	24.159	24.160	24.161																																																				
30	24.165	24.166	24.166																																																				
40	24.170	24.171	24.172																																																				
50	24.172	24.172	24.173																																																				
70	24.166	24.167	24.167																																																				
—	—	—	—																																																				
<p>Note: Slanted line shows the range of the rated ambient temperature.</p> <p>(注)斜線は定格周囲温度範囲を示す。</p>																																																							

Model LEB225F-0524		Testing Circuitry Figure A																																							
Item Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧																																									
Object V1: +5.0V5A																																									
<b>1. Graph</b> [V] 		<b>2. Values</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Input Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-20</td><td>59</td><td>71</td></tr> <tr><td>-10</td><td>59</td><td>71</td></tr> <tr><td>0</td><td>59</td><td>71</td></tr> <tr><td>10</td><td>59</td><td>71</td></tr> <tr><td>20</td><td>59</td><td>71</td></tr> <tr><td>25</td><td>59</td><td>71</td></tr> <tr><td>30</td><td>59</td><td>71</td></tr> <tr><td>40</td><td>59</td><td>71</td></tr> <tr><td>50</td><td>59</td><td>71</td></tr> <tr><td>70</td><td>59</td><td>71</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>		Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-20	59	71	-10	59	71	0	59	71	10	59	71	20	59	71	25	59	71	30	59	71	40	59	71	50	59	71	70	59	71	—	—	—
Ambient Temperature [°C]	Input Voltage [V]																																								
	Load 50%	Load 100%																																							
-20	59	71																																							
-10	59	71																																							
0	59	71																																							
10	59	71																																							
20	59	71																																							
25	59	71																																							
30	59	71																																							
40	59	71																																							
50	59	71																																							
70	59	71																																							
—	—	—																																							
<b>Object V2: +24.0V9A</b> [V] 		<b>2. Values</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Input Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-20</td><td>70</td><td>71</td></tr> <tr><td>-10</td><td>70</td><td>71</td></tr> <tr><td>0</td><td>70</td><td>71</td></tr> <tr><td>10</td><td>70</td><td>71</td></tr> <tr><td>20</td><td>70</td><td>71</td></tr> <tr><td>25</td><td>70</td><td>71</td></tr> <tr><td>30</td><td>70</td><td>71</td></tr> <tr><td>40</td><td>70</td><td>71</td></tr> <tr><td>50</td><td>70</td><td>71</td></tr> <tr><td>70</td><td>70</td><td>71</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>		Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-20	70	71	-10	70	71	0	70	71	10	70	71	20	70	71	25	70	71	30	70	71	40	70	71	50	70	71	70	70	71	—	—	—
Ambient Temperature [°C]	Input Voltage [V]																																								
	Load 50%	Load 100%																																							
-20	70	71																																							
-10	70	71																																							
0	70	71																																							
10	70	71																																							
20	70	71																																							
25	70	71																																							
30	70	71																																							
40	70	71																																							
50	70	71																																							
70	70	71																																							
—	—	—																																							

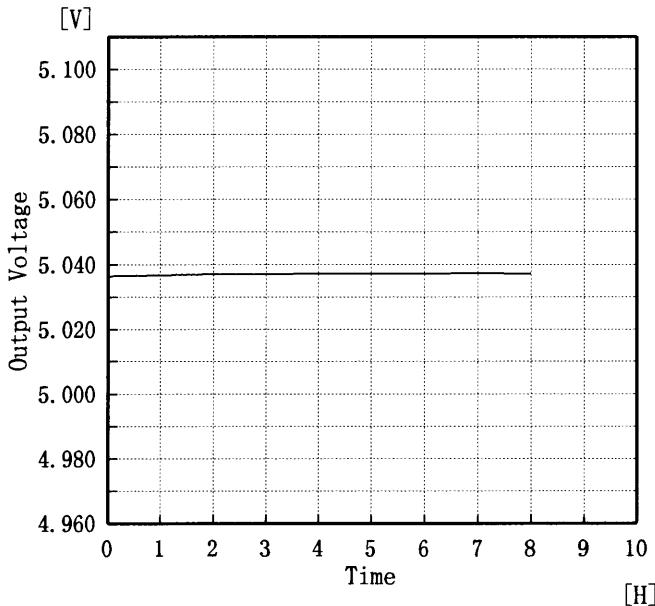
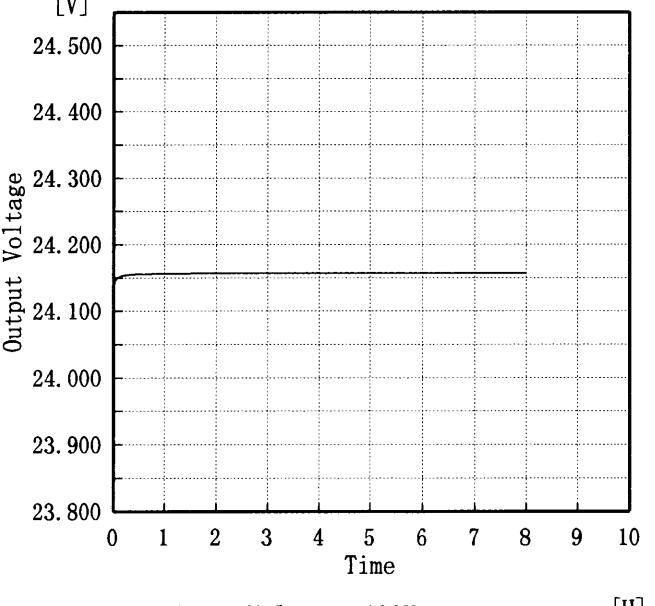
Note: Slanted line shows the range of the rated ambient temperature.

(注)斜線は定格周囲温度範囲を示す。

COSEL

Model	LEB225F-0524	Testing Circuitry Figure A																																						
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)																																							
Object	V1: +5.0V5A																																							
1. Graph	<p>[mV]</p> <p>Ambient Temperature [°C]</p> <p>Input Volt. 100 V</p>																																							
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Ripple Output Voltage [mV]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-20</td><td>25</td><td>45</td></tr> <tr><td>-10</td><td>25</td><td>35</td></tr> <tr><td>0</td><td>25</td><td>30</td></tr> <tr><td>10</td><td>20</td><td>25</td></tr> <tr><td>20</td><td>20</td><td>25</td></tr> <tr><td>25</td><td>20</td><td>20</td></tr> <tr><td>30</td><td>20</td><td>20</td></tr> <tr><td>40</td><td>20</td><td>20</td></tr> <tr><td>50</td><td>20</td><td>20</td></tr> <tr><td>60</td><td>20</td><td>20</td></tr> <tr><td>70</td><td>20</td><td>20</td></tr> </tbody> </table>		Ambient Temperature [°C]	Ripple Output Voltage [mV]		Load 50%	Load 100%	-20	25	45	-10	25	35	0	25	30	10	20	25	20	20	25	25	20	20	30	20	20	40	20	20	50	20	20	60	20	20	70	20	20
Ambient Temperature [°C]	Ripple Output Voltage [mV]																																							
	Load 50%	Load 100%																																						
-20	25	45																																						
-10	25	35																																						
0	25	30																																						
10	20	25																																						
20	20	25																																						
25	20	20																																						
30	20	20																																						
40	20	20																																						
50	20	20																																						
60	20	20																																						
70	20	20																																						
1. Graph	<p>[mV]</p> <p>Ambient Temperature [°C]</p> <p>Input Volt. 100 V</p>																																							
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Ripple Output Voltage [mV]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-20</td><td>60</td><td>80</td></tr> <tr><td>-10</td><td>35</td><td>60</td></tr> <tr><td>0</td><td>30</td><td>50</td></tr> <tr><td>10</td><td>30</td><td>45</td></tr> <tr><td>20</td><td>25</td><td>40</td></tr> <tr><td>25</td><td>25</td><td>35</td></tr> <tr><td>30</td><td>25</td><td>30</td></tr> <tr><td>40</td><td>25</td><td>30</td></tr> <tr><td>50</td><td>25</td><td>30</td></tr> <tr><td>60</td><td>25</td><td>30</td></tr> <tr><td>70</td><td>20</td><td>25</td></tr> </tbody> </table>		Ambient Temperature [°C]	Ripple Output Voltage [mV]		Load 50%	Load 100%	-20	60	80	-10	35	60	0	30	50	10	30	45	20	25	40	25	25	35	30	25	30	40	25	30	50	25	30	60	25	30	70	20	25
Ambient Temperature [°C]	Ripple Output Voltage [mV]																																							
	Load 50%	Load 100%																																						
-20	60	80																																						
-10	35	60																																						
0	30	50																																						
10	30	45																																						
20	25	40																																						
25	25	35																																						
30	25	30																																						
40	25	30																																						
50	25	30																																						
60	25	30																																						
70	20	25																																						
Note: Slanted line shows the range of the rated ambient temperature.																																								
(注)斜線は定格周囲温度範囲を示す。																																								

**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure A																						
Item	Time Lapse Drift 経時ドリフト																								
Object	V1:+5.0V5A																								
1. Graph		2. Values																							
 <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 100V</p> <p>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>5.036</td></tr> <tr><td>0.5</td><td>5.037</td></tr> <tr><td>1.0</td><td>5.037</td></tr> <tr><td>2.0</td><td>5.037</td></tr> <tr><td>3.0</td><td>5.037</td></tr> <tr><td>4.0</td><td>5.037</td></tr> <tr><td>5.0</td><td>5.037</td></tr> <tr><td>6.0</td><td>5.037</td></tr> <tr><td>7.0</td><td>5.037</td></tr> <tr><td>8.0</td><td>5.037</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	5.036	0.5	5.037	1.0	5.037	2.0	5.037	3.0	5.037	4.0	5.037	5.0	5.037	6.0	5.037	7.0	5.037	8.0	5.037
Time since start [H]	Output Voltage [V]																								
0.0	5.036																								
0.5	5.037																								
1.0	5.037																								
2.0	5.037																								
3.0	5.037																								
4.0	5.037																								
5.0	5.037																								
6.0	5.037																								
7.0	5.037																								
8.0	5.037																								
Object		2. Values																							
 <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 100V</p> <p>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>24.133</td></tr> <tr><td>0.5</td><td>24.156</td></tr> <tr><td>1.0</td><td>24.156</td></tr> <tr><td>2.0</td><td>24.157</td></tr> <tr><td>3.0</td><td>24.157</td></tr> <tr><td>4.0</td><td>24.157</td></tr> <tr><td>5.0</td><td>24.157</td></tr> <tr><td>6.0</td><td>24.157</td></tr> <tr><td>7.0</td><td>24.157</td></tr> <tr><td>8.0</td><td>24.157</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	24.133	0.5	24.156	1.0	24.156	2.0	24.157	3.0	24.157	4.0	24.157	5.0	24.157	6.0	24.157	7.0	24.157	8.0	24.157
Time since start [H]	Output Voltage [V]																								
0.0	24.133																								
0.5	24.156																								
1.0	24.156																								
2.0	24.157																								
3.0	24.157																								
4.0	24.157																								
5.0	24.157																								
6.0	24.157																								
7.0	24.157																								
8.0	24.157																								



Model	LEB225F-0524	Testing Circuitry Figure A
Item	Output Voltage Accuracy 定電圧精度	

### 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 : 85~132 V

Load Current (V1) : 0~5 A

(V2) : 0~9 A

\* Output Voltage Accuracy = ±(Maximum of Output Voltage - Minimum of Output Voltage) / 2

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

### 1. 定電圧精度

周囲温度、入力電圧、負荷電流を下記仕様内で、任意に変動させたときの出力電圧の変動をいう。

周囲温度 -10~40 °C

入力電圧 85~132 V

負荷電流 (V1) 0~5 A

(V2) 0~9 A

\* 定電圧精度(変動値) = ±(出力電圧の最高値-出力電圧の最低値) / 2

$$* \text{定電圧精度(変動率)} = \frac{\text{変動値}}{\text{定格出力電圧}} \times 100$$

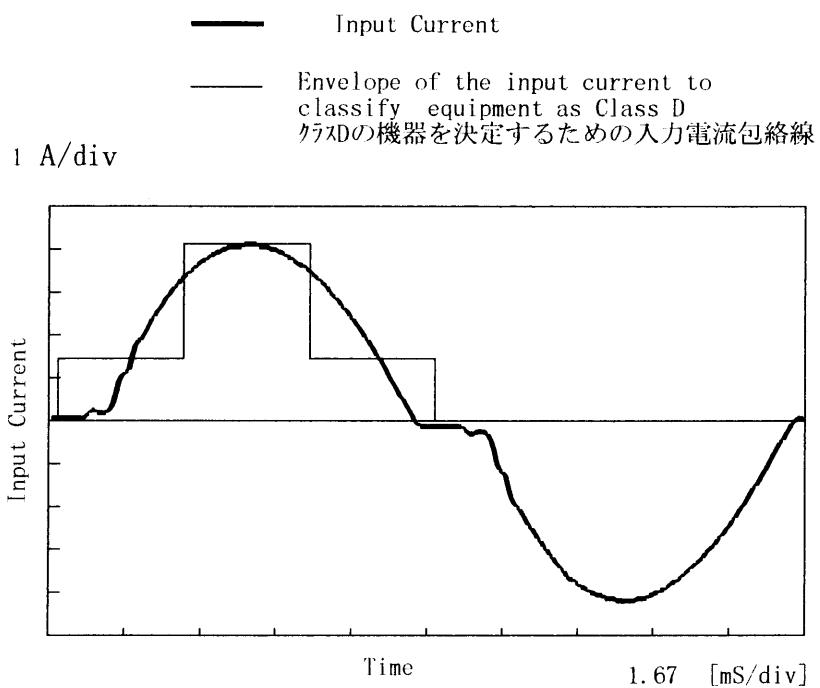
### 2. Values

Object	V1:+5.0V5A						
Item	Temperature [°C]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration) [%]	
Maximum Voltage	40	85	0	5.053	±11	±0.3	
Minimum Voltage	-10	85	5	5.032			
Object	V2:+24.0V9A						
Item	Temperature [°C]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration) [%]	
Maximum Voltage	40	132	0	24.205	±41	±0.2	
Minimum Voltage	-10	100	9	24.123			

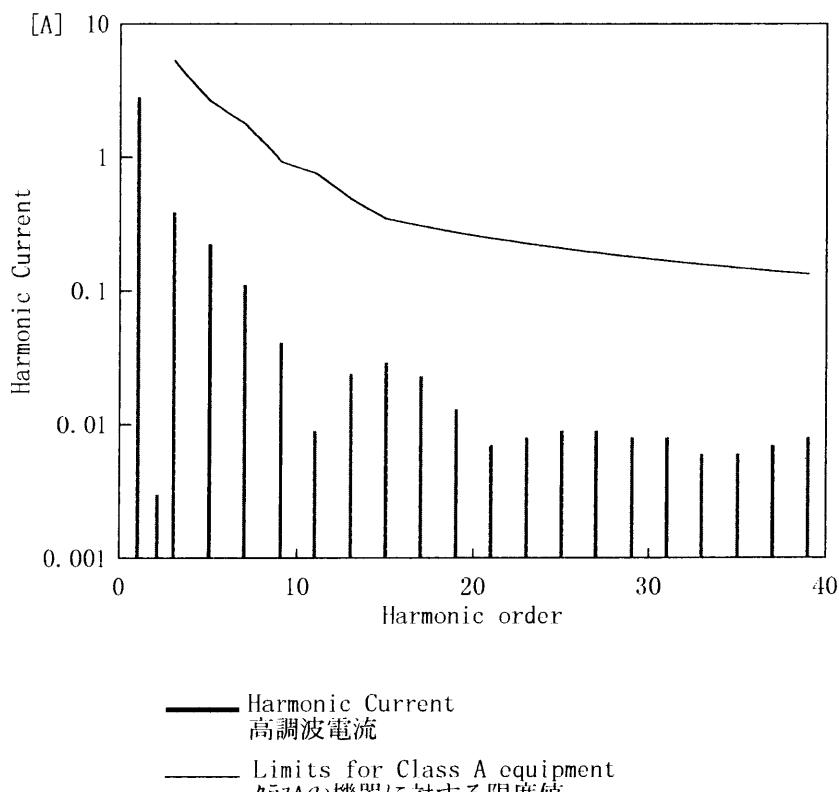
**COSEL**

Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure E
Item	Harmonic Current 高調波電流		
Object	_____		

## 1. Input Current Waveform



## 2. Harmonic Current



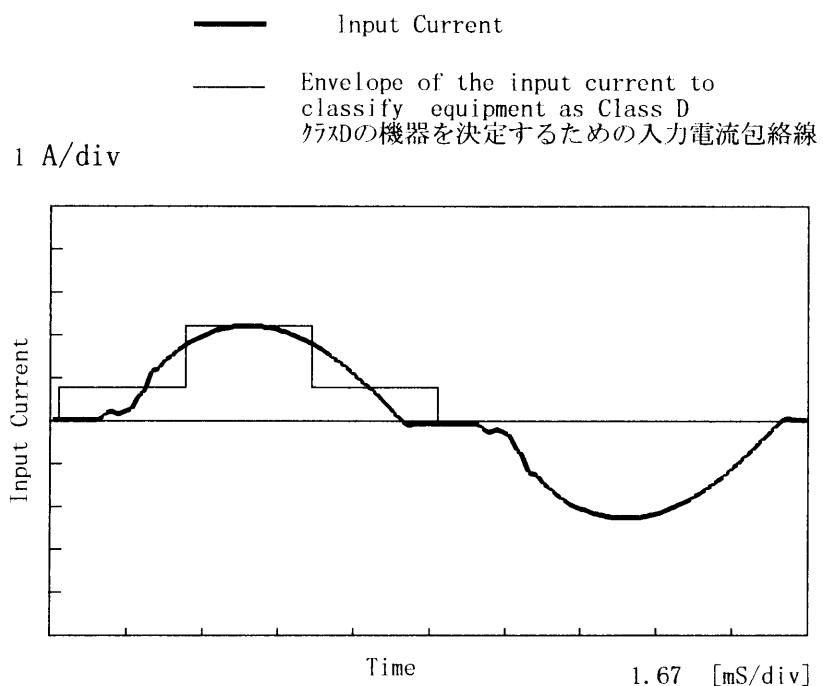
Conditions	Values
Input Voltage [V]	99.2
Input Current [A]	2.877
Active Power [W]	281.6
Apparent Power [VA]	285.5
Frequency [Hz]	60
Power Factor	0.986
Output Power [W]	225

Harmonics order 高調波次数	Limits 限度値 [A]	Values 測定値 [A]
1	—	2.83800
2	—	0.00300
3	0.39000	5.33266
4	—	0.00100
5	0.22500	2.64315
6	—	0.00100
7	0.11100	1.78528
8	—	0.00100
9	0.04100	0.92742
10	—	0.00100
11	0.00900	0.76512
12	—	0.00100
13	0.02400	0.48690
14	—	0.00100
15	0.02900	0.34778
16	0.00000	—
17	0.02300	0.30687
18	0.00100	—
19	0.01300	0.27456
20	0.00100	—
21	0.00700	0.24842
22	0.00100	—
23	0.00800	0.22681
24	0.00100	—
25	0.00900	0.20867
26	0.00100	—
27	0.00900	0.19321
28	0.00000	—
29	0.00800	0.17989
30	0.00100	—
31	0.00800	0.16828
32	0.00000	—
33	0.00600	0.15808
34	0.00000	—
35	0.00600	0.14905
36	0.00100	—
37	0.00700	0.14099
38	0.00000	—
39	0.00800	0.13376
40	0.00000	—

**COSEL**

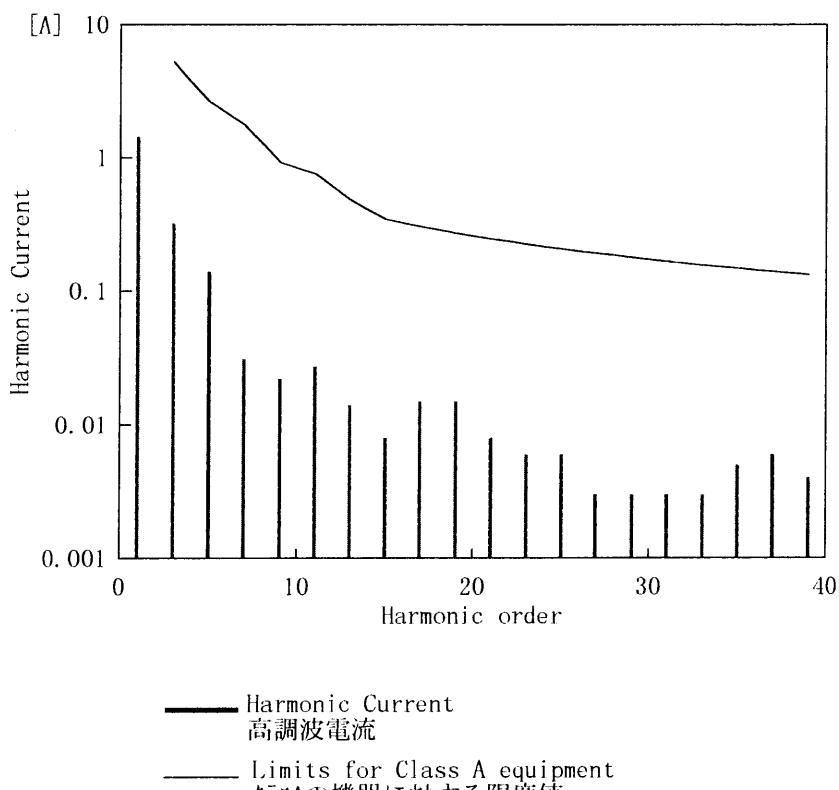
Model	LEB225F-0524	Temperature	25°C
Item	Harmonic Current 高調波電流	Testing Circuitry	Figure E
Object	_____		

## 1. Input Current Waveform



Conditions	Values
Input Voltage [V]	99.9
Input Current [A]	1.493
Active Power [W]	144.7
Apparent Power [VA]	149.1
Frequency [Hz]	60
Power Factor	0.970
Output Power [W]	112.5

## 2. Harmonic Current



Harmonics order 高調波次数	Limits 限度値 [A] 測定値 [A]	Values 測定値 [A]
1	—	1.44900
2	—	0.00100
3	5.29530	0.32300
4	—	0.00000
5	2.62462	0.14000
6	—	0.00000
7	1.77277	0.03100
8	—	0.00000
9	0.92092	0.02200
10	—	0.00000
11	0.75976	0.02700
12	—	0.00000
13	0.48348	0.01400
14	—	0.00000
15	0.34535	0.00800
16	—	0.00000
17	0.30472	0.01500
18	—	0.00000
19	0.27264	0.01500
20	—	0.00000
21	0.24668	0.00800
22	—	0.00000
23	0.22523	0.00600
24	—	0.00000
25	0.20721	0.00600
26	—	0.00000
27	0.19186	0.00300
28	—	0.00000
29	0.17863	0.00300
30	—	0.00000
31	0.16710	0.00300
32	—	0.00000
33	0.15698	0.00300
34	—	0.00000
35	0.14801	0.00500
36	—	0.00000
37	0.14000	0.00600
38	—	0.00000
39	0.13283	0.00400
40	—	0.00000

**COSEL**

Model	LEB225F-0524	Temperature	25°C																																																			
Item	Oscillator Frequency 発振周波数	Testing Circuitry	Figure A																																																			
Object	V1: +5.0V 5A																																																					
1. Graph	<p>Legend:</p> <ul style="list-style-type: none"> <li>Input Volt. 85 V</li> <li>Input Volt. 100 V</li> <li>Input Volt. 132 V</li> </ul>																																																					
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Oscillator Frequency [KHz]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0.8</td><td>368</td><td>370</td><td>371</td></tr> <tr><td>1.6</td><td>263</td><td>264</td><td>265</td></tr> <tr><td>2.4</td><td>202</td><td>204</td><td>204</td></tr> <tr><td>3.2</td><td>161</td><td>164</td><td>165</td></tr> <tr><td>4.0</td><td>134</td><td>138</td><td>139</td></tr> <tr><td>4.8</td><td>116</td><td>118</td><td>118</td></tr> <tr><td>5.0</td><td>113</td><td>115</td><td>116</td></tr> <tr><td>5.5</td><td>104</td><td>106</td><td>107</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]	Oscillator Frequency [KHz]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.8	368	370	371	1.6	263	264	265	2.4	202	204	204	3.2	161	164	165	4.0	134	138	139	4.8	116	118	118	5.0	113	115	116	5.5	104	106	107	—	—	—	—	—	—	—	—	—	—	—	—
Load Current [A]	Oscillator Frequency [KHz]																																																					
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																			
0.8	368	370	371																																																			
1.6	263	264	265																																																			
2.4	202	204	204																																																			
3.2	161	164	165																																																			
4.0	134	138	139																																																			
4.8	116	118	118																																																			
5.0	113	115	116																																																			
5.5	104	106	107																																																			
—	—	—	—																																																			
—	—	—	—																																																			
—	—	—	—																																																			

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

(注) 斜線は定格負荷電流範囲を示す。



Model	LEB225F-0524	Testing Circuitry Figure A
Item	Condensation 結露特性	

### 1. Condensation test

Testing procedure is as follows.

- ① Keeping and cooling the unit in a tank at -10°C for an hour with the input off.
- ② Taking it out of the tank and dewing itself in a room where the temperature is 25°C and the humidity is 40%RH.
- ③ Testing electrical characteristics of the unit to confirm there be no fault.

### 1. 結露特性試験

入力を切った状態で、恒温槽で-10°Cに冷却しておき、約1時間後に恒温槽から取り出し、室温25°C、湿度40%RHの状態におき結露させ、その電気的特性の測定を行い、異常のないことを確認する。

### 2. Values

Object	V1:+5.0V5A
--------	------------

Item	Data	Testing Conditions
Output Voltage [V]	5.041	Input Volt.: 100V, Load Current:5A
Line Regulation [mV]	1	Input Volt.: 85~132V, Load Current:5A
Load Regulation [mV]	12	Input Volt.: 100V, Load Current:0~5A

Object	V2:+24.0V9A
--------	-------------

Item	Data	Testing Conditions
Output Voltage [V]	24.173	Input Volt.: 100V, Load Current:9A
Line Regulation [mV]	1	Input Volt.: 85~132V, Load Current:9A
Load Regulation [mV]	15	Input Volt.: 100V, Load Current:0~9A



Model	LEB225F-0524	Temperature	25°C
Item	Leakage Current 漏洩電流	Testing Circuitry	Figure B
Object	_____		

### 1. Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A) DENTORI	0.15	0.18	0.24
(B) IEC60950	0.15	0.18	0.24

### 2. Condition

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

交流入力の両相について測定し、その大きい方を漏洩電流測定値とする。

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 230 [V]	Input Volt. 264 [V]
(B) IEC60950	—	—	—



Model	LEB225F-0524	Temperature Testing Circuitry	25°C Figure C
Item	Line Noise Tolerance 入力雑音耐量		
Object	V1:+5.0V5A		

### 1. Results

#### Conditions

Input Voltage : 100 V      Pulse Input Duration: 1 min. or more  
 Pulse Voltage : 2000 V      Load : 100 %  
 Pulse Cycle : 10 mS

Pulse Width [ nS ]	MODE	No protection failure should occur 保護回路の誤動作がない		DC-like Regulation of Output Voltage 出力電圧の直流的変動
		POLARITY		
50	COMMON	+	OK	no fluctuation
		-	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		-	OK	no fluctuation
1000	COMMON	+	OK	no fluctuation
		-	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		-	OK	no fluctuation

Object	V2:+24.0V9A
--------	-------------

### 1. Results

#### Conditions

Input Voltage : 100 V      Pulse Input Duration: 1 min. or more  
 Pulse Voltage : 2000 V      Load : 100 %  
 Pulse Cycle : 10 mS

Pulse Width [ nS ]	MODE	No protection failure should occur 保護回路の誤動作がない		DC-like Regulation of Output Voltage 出力電圧の直流的変動
		POLARITY		
50	COMMON	+	OK	no fluctuation
		-	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		-	OK	no fluctuation
1000	COMMON	+	OK	no fluctuation
		-	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		-	OK	no fluctuation

**COSEL**

Model LEB225F-0524

Item Conducted Emission  
雜音端子電圧

Object \_\_\_\_\_

Temperature 25°C  
Testing Circuitry Figure D

## 1. Graph

## Remarks

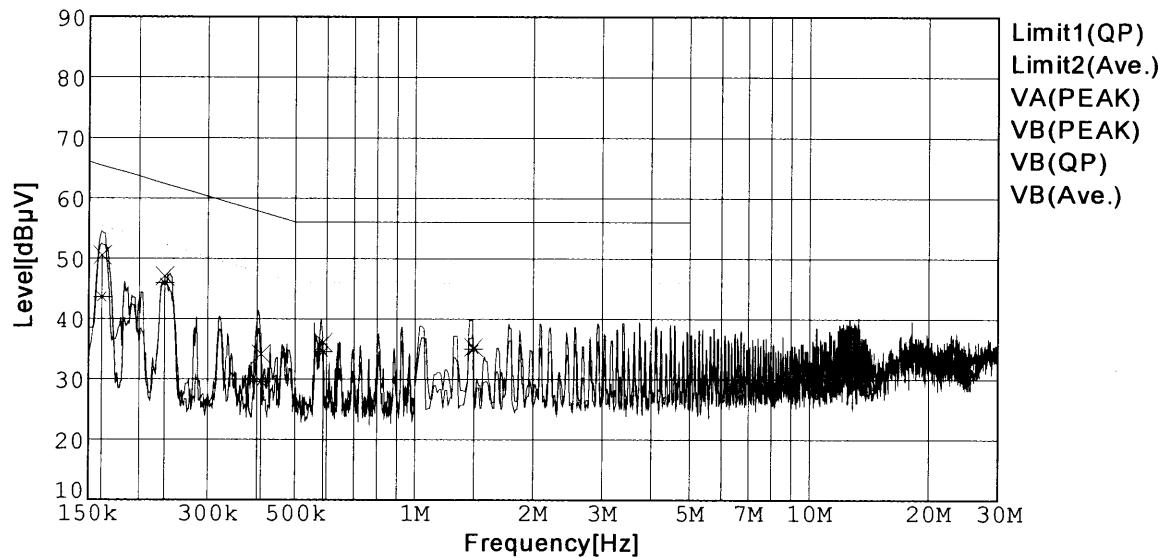
Input Volt. 100 V (VCCI Class B)

120 V (FCC Class B)

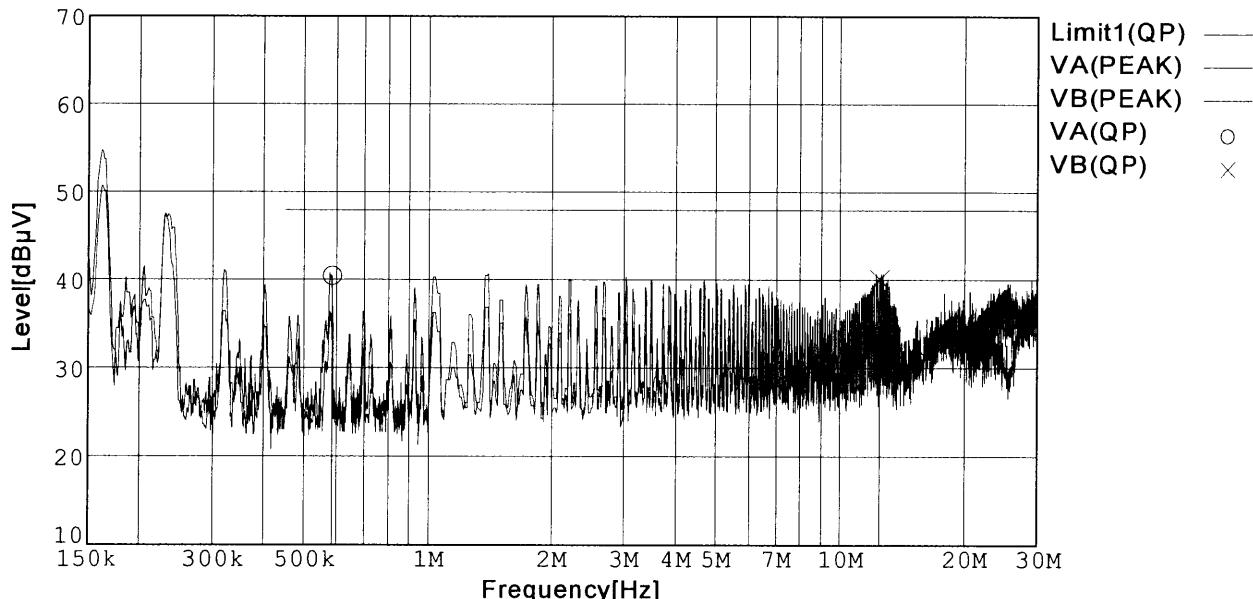
Load 100 %

Limit1: [VCCI] Class B(QP)

Limit2: [VCCI] Class B(Ave.)



Limit1: [FCC Part15] Class B



COSEL

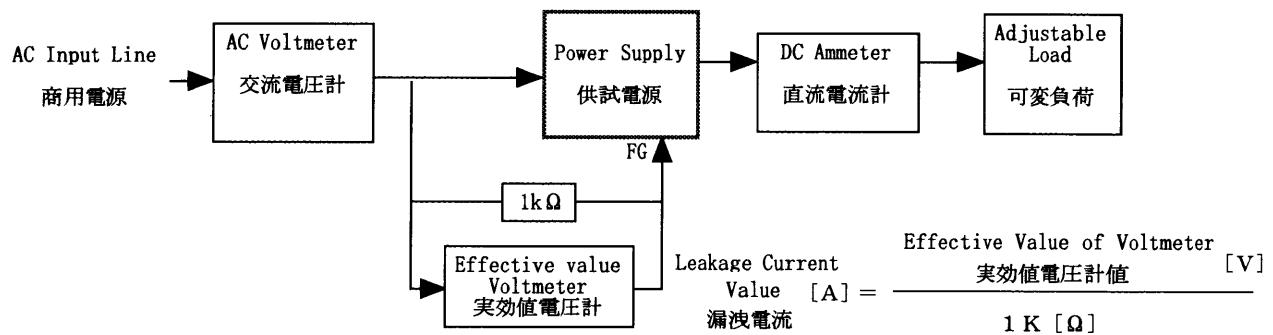
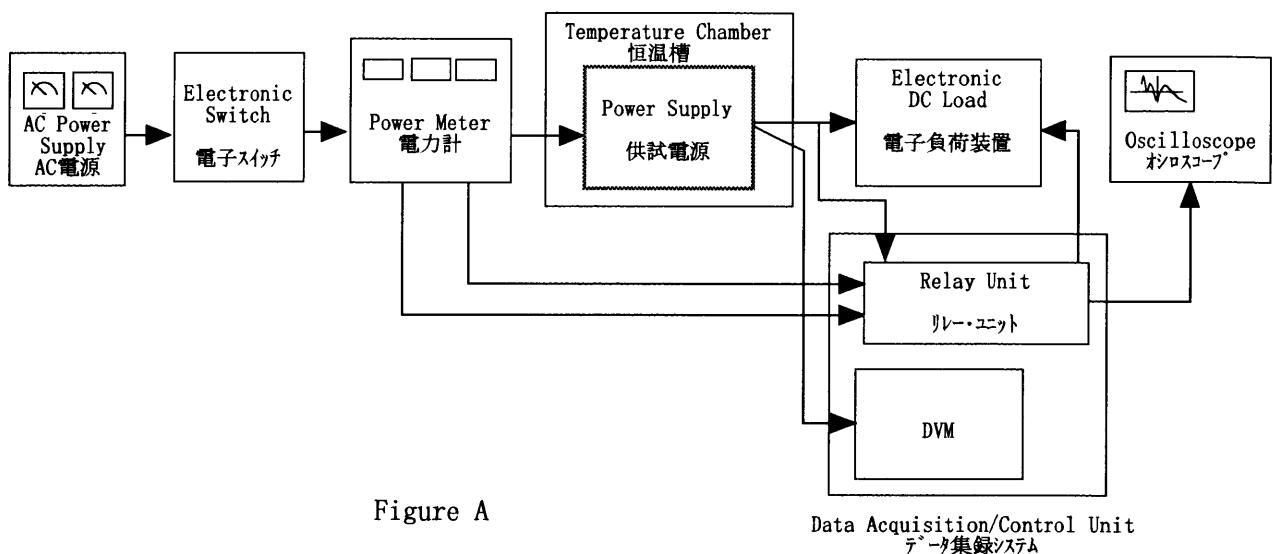


Figure B (DENTORI)

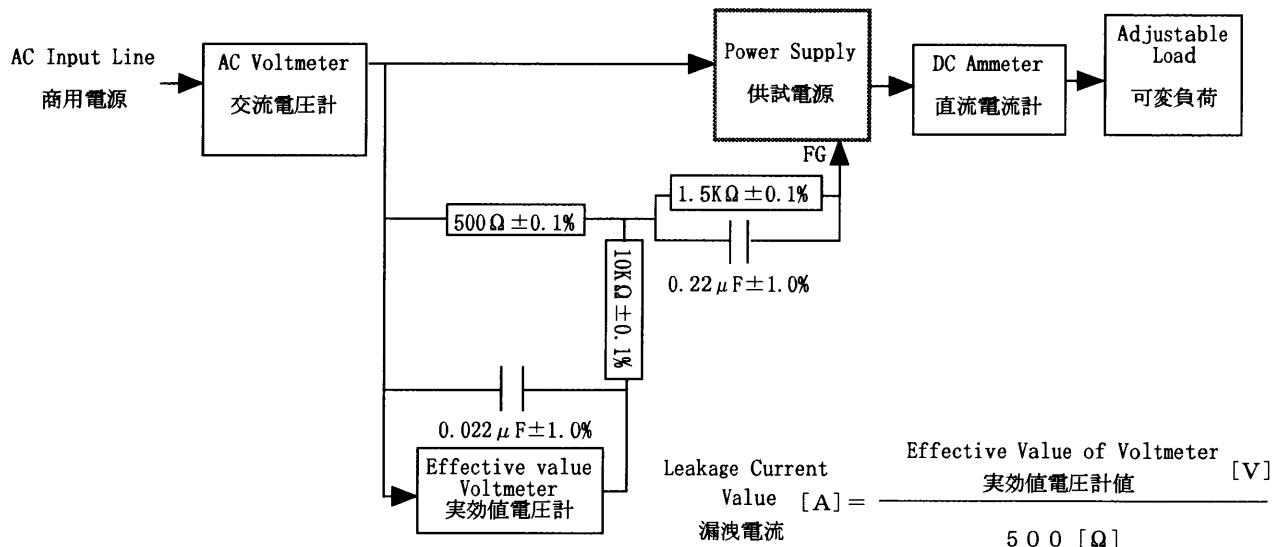


Figure B (IEC 60950)

COSEL

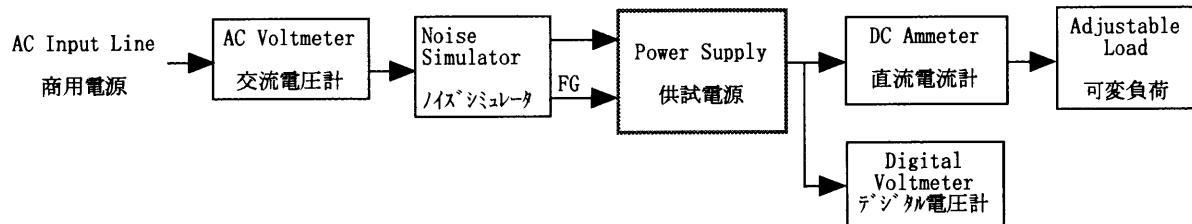


Figure C

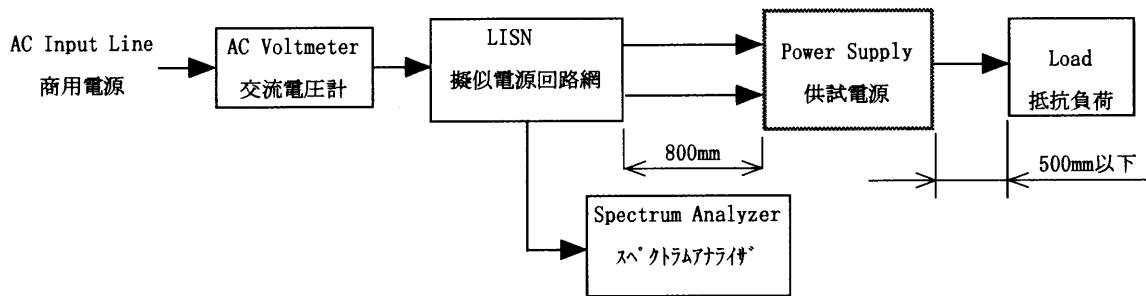


Figure D

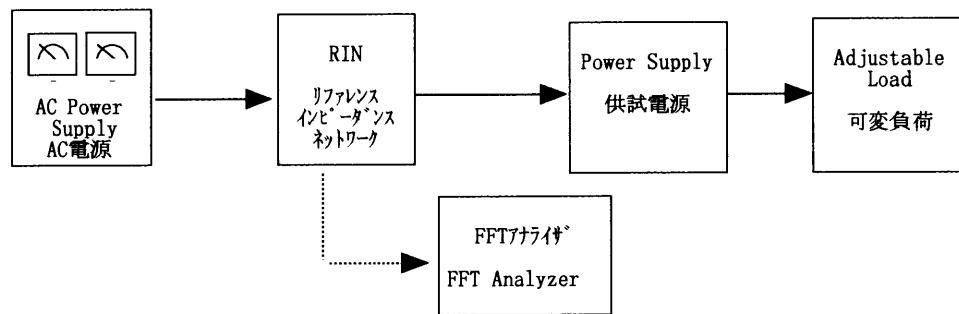


Figure E