


Test Data

Model Number: mUZPT-120-12-J0L

Model Name: DC POWER SUPPLY

INPUT: 85V – 264V AC, 50 / 60 Hz

OUTPUT: 12V 8.4A (16.7 A_{peak})Minimum load : 0W
Rated load : 100.8W
Peak output power: 200.4W

Approved by :  (QA manager)

Designed by : Kazuhiko Gomada (R&D engineer)

Tested by : Hiroyuki Watanabe (Evaluation test engineer)

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Model	mUZPT-120-12-J0L	Temperature: 25°C																																		
Item	Input Current (by Load Power)																																			
<p>Legend:</p> <ul style="list-style-type: none"> 85V AC (Blue diamonds) 100V AC (Magenta squares) 240V AC (Red triangles) 264V AC (Green crosses) 		<table border="1"> <thead> <tr> <th rowspan="2">Load Power [W]</th> <th colspan="4">Input Current [A rms]</th> </tr> <tr> <th>Input Voltage 85V AC</th> <th>Input Voltage 100V AC</th> <th>Input Voltage 240V AC</th> <th>Input Voltage 264V AC</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>0.07</td> <td>0.07</td> <td>0.08</td> <td>0.09</td> </tr> <tr> <td>25.2</td> <td>0.39</td> <td>0.34</td> <td>0.24</td> <td>0.20</td> </tr> <tr> <td>50.4</td> <td>0.71</td> <td>0.61</td> <td>0.37</td> <td>0.32</td> </tr> <tr> <td>75.6</td> <td>1.05</td> <td>0.89</td> <td>0.50</td> <td>0.43</td> </tr> <tr> <td>100.8</td> <td>1.40</td> <td>1.16</td> <td>0.62</td> <td>0.54</td> </tr> </tbody> </table>	Load Power [W]	Input Current [A rms]				Input Voltage 85V AC	Input Voltage 100V AC	Input Voltage 240V AC	Input Voltage 264V AC	0.0	0.07	0.07	0.08	0.09	25.2	0.39	0.34	0.24	0.20	50.4	0.71	0.61	0.37	0.32	75.6	1.05	0.89	0.50	0.43	100.8	1.40	1.16	0.62	0.54
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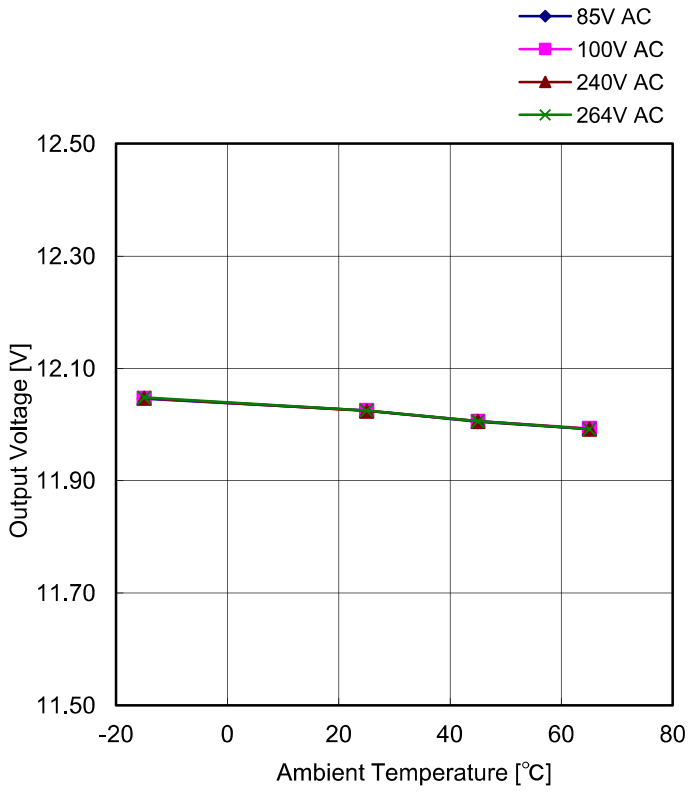
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Model mUZPT-120-12-J0L

Item Ambient Temperature Drift



Ambient Temp. (°C)	Output Voltage [V]			
	Input Voltage 85V AC	Input Voltage 100V AC	Input Voltage 240V AC	Input Voltage 264V AC
-15	12.046	12.047	12.047	12.048
25	12.025	12.025	12.024	12.025
45	12.005	12.006	12.006	12.006
65	11.992	11.993	11.992	11.992

Load Condition

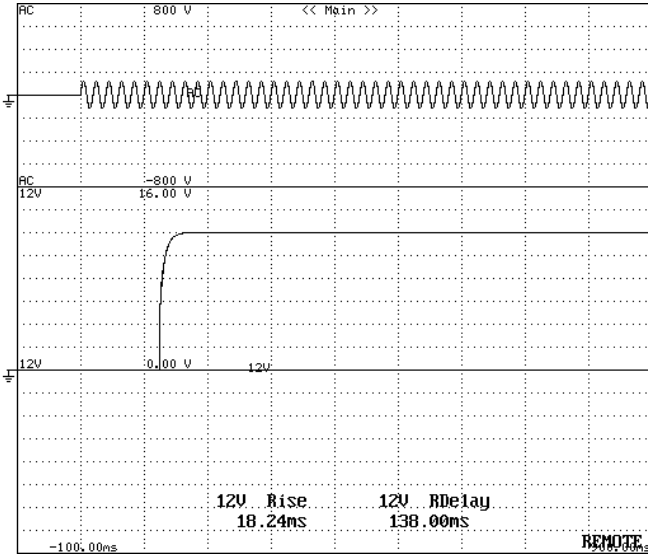
Ambient Temp. (°C)	Load Current [A]
	12V
-15	8.40
25	8.40
45	8.40
65	5.83

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Output Rise Characteristics (at AC Power ON)	

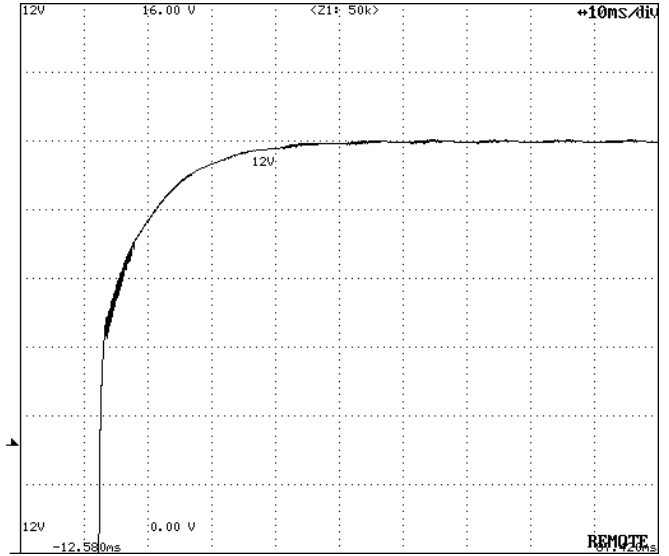
Input: 100V AC
Load: Rated Load

Timebase Range: 100ms/div

Vertical Sensitivity: 2V/div
Timebase Range: 10ms/div



All Output Start-up Sequence

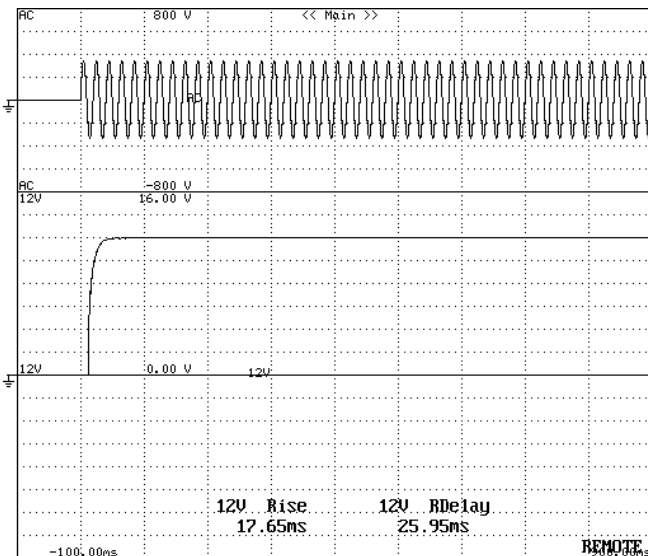


12V DC Output Rise Characteristics

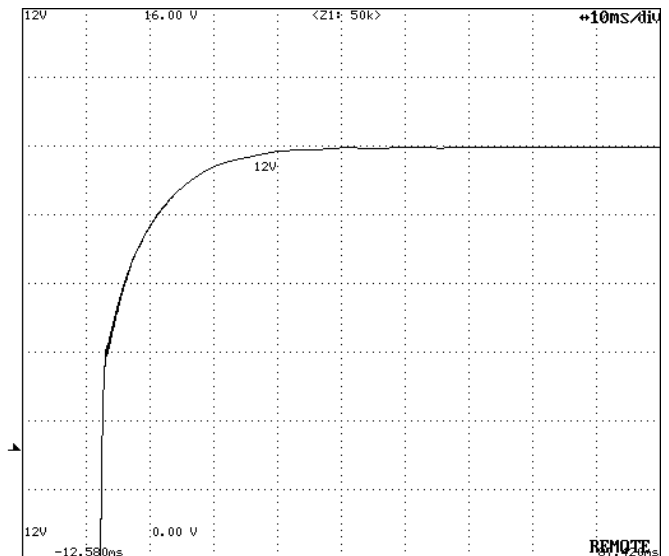
Input: 240V AC
Load: Rated Load

Timebase Range: 100ms/div

Vertical Sensitivity: 2V/div
Timebase Range: 10ms/div



All Output Start-up Sequence

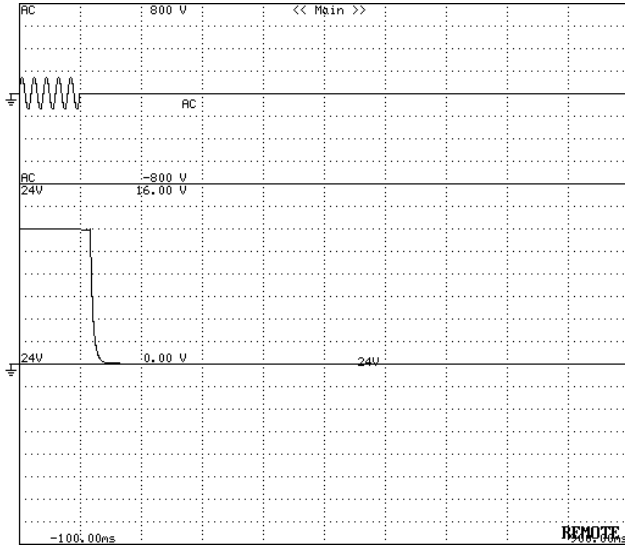


12V DC Output Rise Characteristics

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Output Fall Characteristics (at AC Power OFF)	

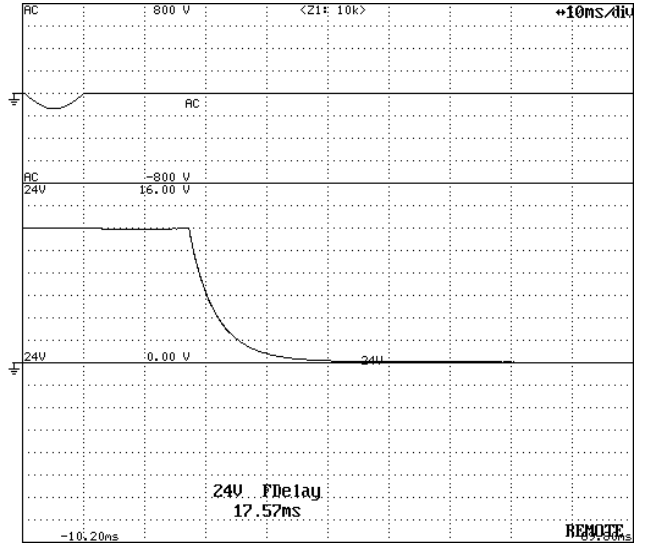
Input: 100V AC
Load: Rated Load

Timebase Range: 100ms/div



Output Fall Characteristics

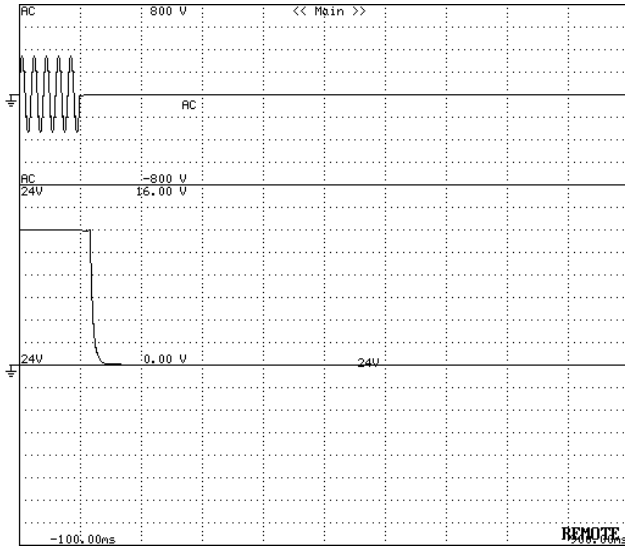
Timebase Range: 10ms/div



Output Fall Characteristics (magnification)

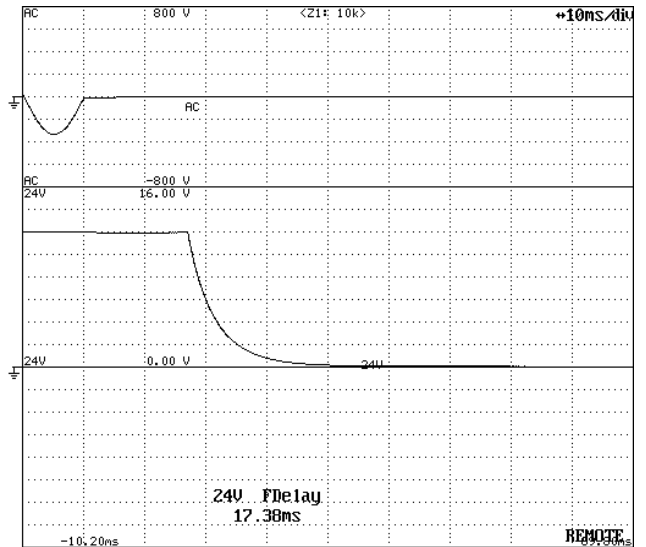
Input: 240V AC
Load: Rated Load

Timebase Range: 100ms/div



Output Fall Characteristics

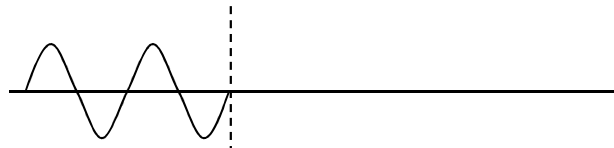
Timebase Range: 10ms/div



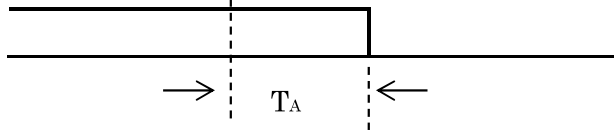
Output Fall Characteristics (magnification)

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Instantaneous Interruption Compensation (by Load Power)	

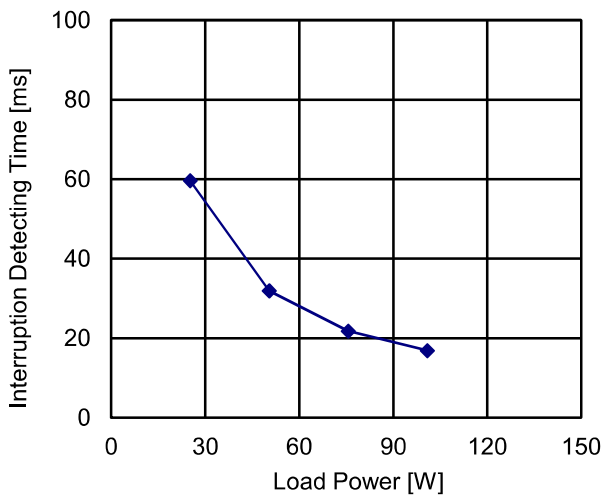
Input Voltage



Output Voltage

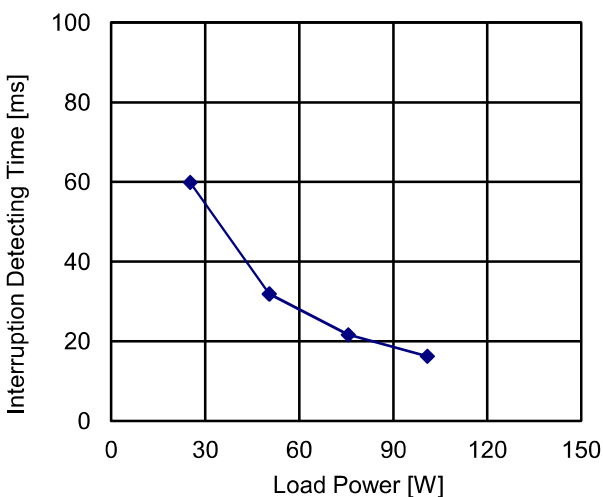


Input Voltage:100V AC



Load Power [W]	Interruption Detecting Time [ms]
	Output Voltage
	T _A
25.2	59.6
50.4	31.9
75.6	21.8
100.8	16.9

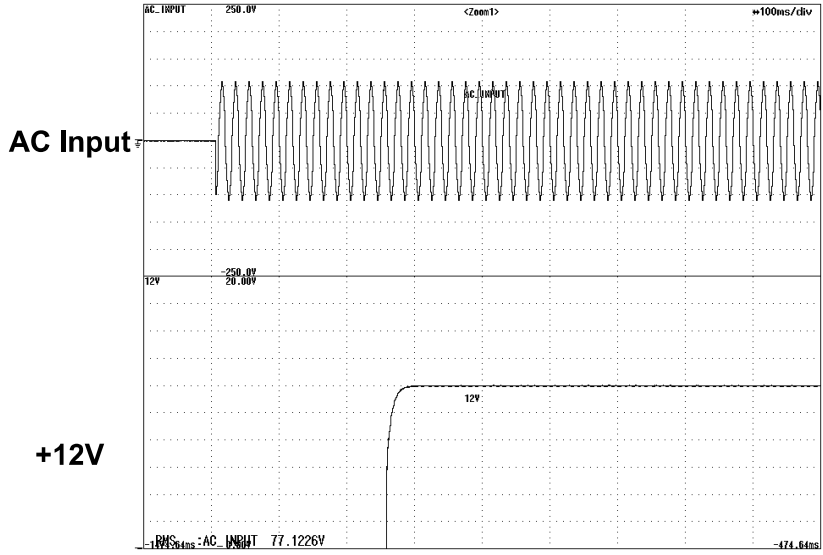
Input Voltage:240V AC



Load Power [W]	Interruption Detecting Time [ms]
	Output Voltage
	T _A
25.2	59.9
50.4	31.9
75.6	21.7
100.8	16.3

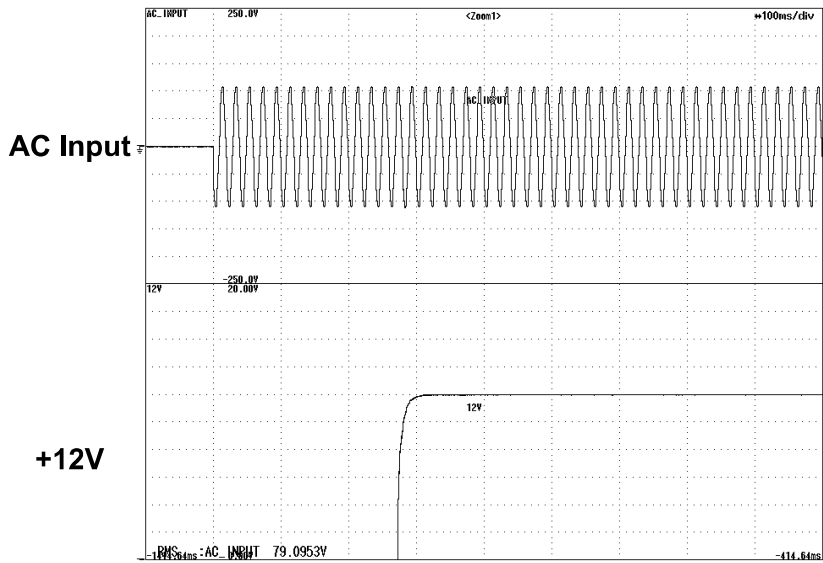
Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Start-Up Voltage	

**Timebase Range: 100ms/div
Load: Rated Load**



Start-up Voltage: 77.1V AC

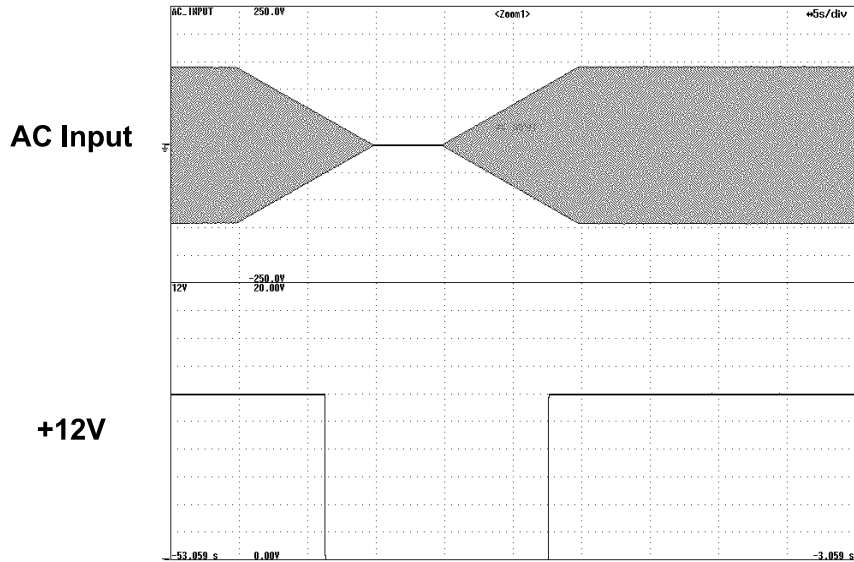
**Timebase Range: 100ms/div
Load: Minimum Load**



Start-up Voltage: 79.1V AC

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Input Voltage Sweep Up/Down	

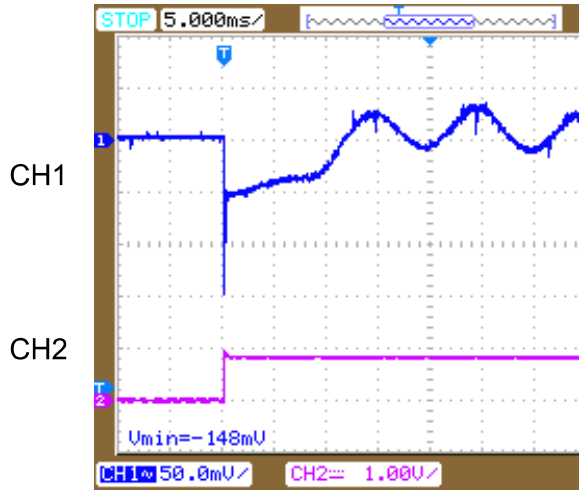
Timebase Range: 5s/div
Load: Rated Load



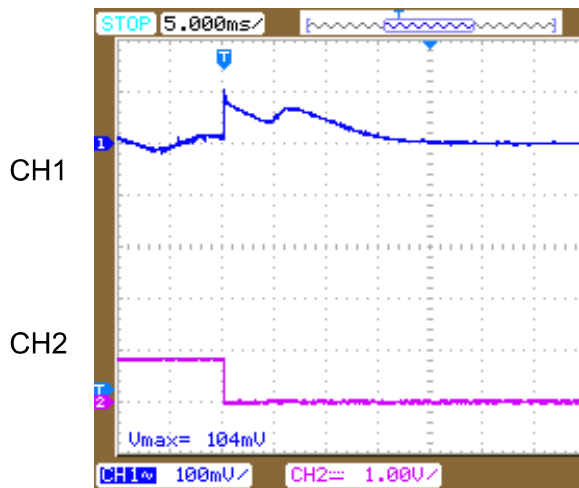
Sweep Rate: 10Vave/sec

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Dynamic Load Response	

+12V DC Output Transient Response Waveforms

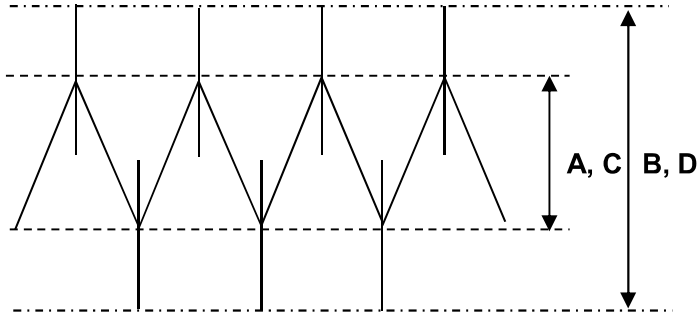


Waveform 1	
CH1	Measuring Point: DC Output Voltage
	Vertical Sensitivity: 50mV/div
CH2	Measuring Point: DC Output Current
	Vertical Sensitivity: 10A/div
Timebase Range	5ms/div
Condition	Input: 100V AC
Note: Minimum load(0A) → Rated Load(8.4A)	



Waveform 2	
CH1	Measuring Point: DC Output Voltage
	Vertical Sensitivity: 100mV/div
CH2	Measuring Point: DC Output Current
	Vertical Sensitivity: 10A/div
Timebase Range	5ms/div
Condition	Input: 100V AC
Note: Rated Load(8.4A) → Minimum load(0A)	

Model	mUZPT-120-12-J0L	Load: Rated Load
Item	Ripple / Noise Voltage	

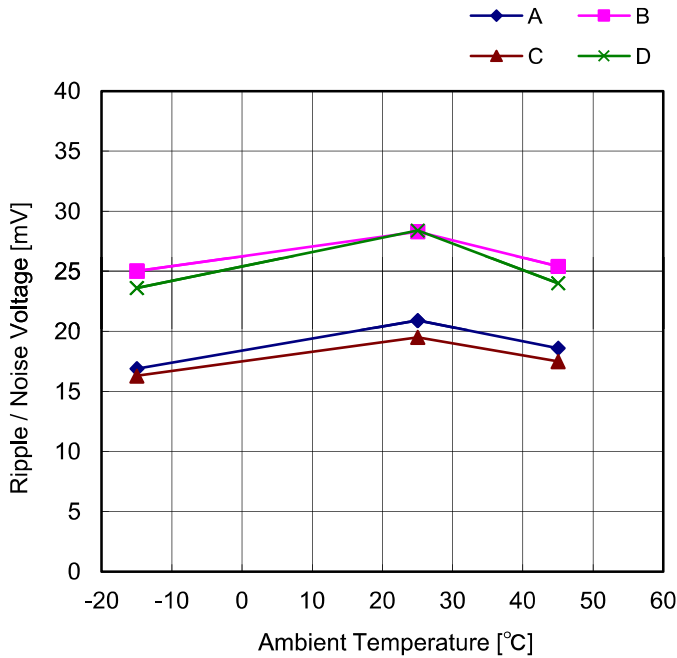


at 100V AC

A: Ripple Voltage (mV_{P-P})
 B: Noise Voltage (mV_{P-P})

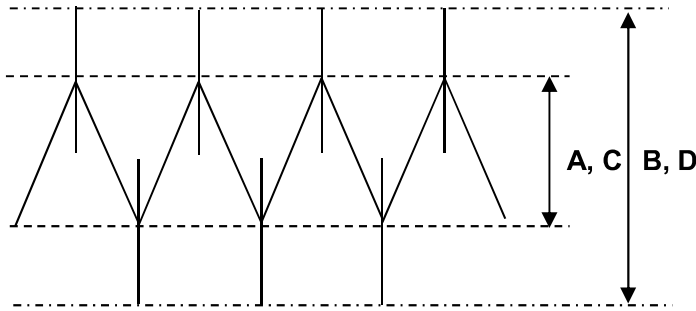
at 240V AC

C: Ripple Voltage (mV_{P-P})
 D: Noise Voltage (mV_{P-P})



Ambient Temp. [°C]	Ripple / Noise Voltage [mV]			
	A	B	C	D
-15	16.9	25.0	16.3	23.6
25	20.9	28.3	19.5	28.4
45	18.6	25.4	17.5	24.0

Model	mUZPT-120-12-J0L	Temperature : 25°C
Item	Ripple / Noise Voltage	



at 100V AC

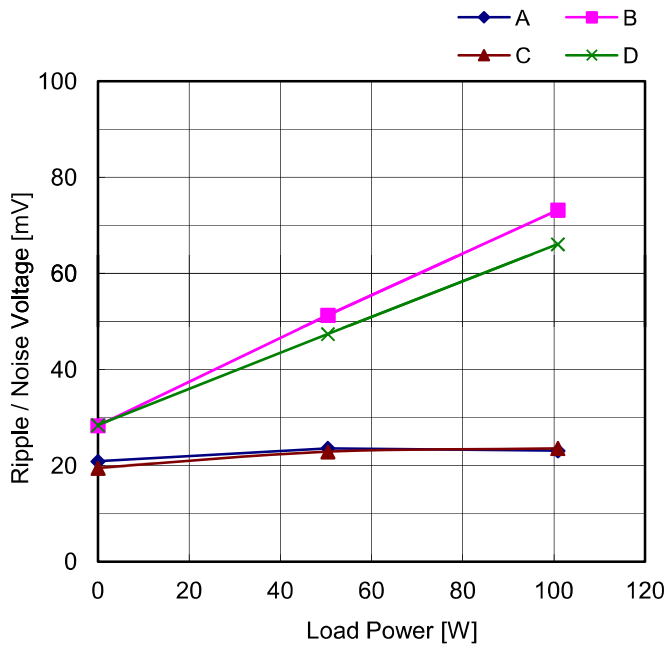
A: Ripple Voltage (mVP-P)

B: Noise Voltage (mVP-P)

at 240V AC

C: Ripple Voltage (mVP-P)

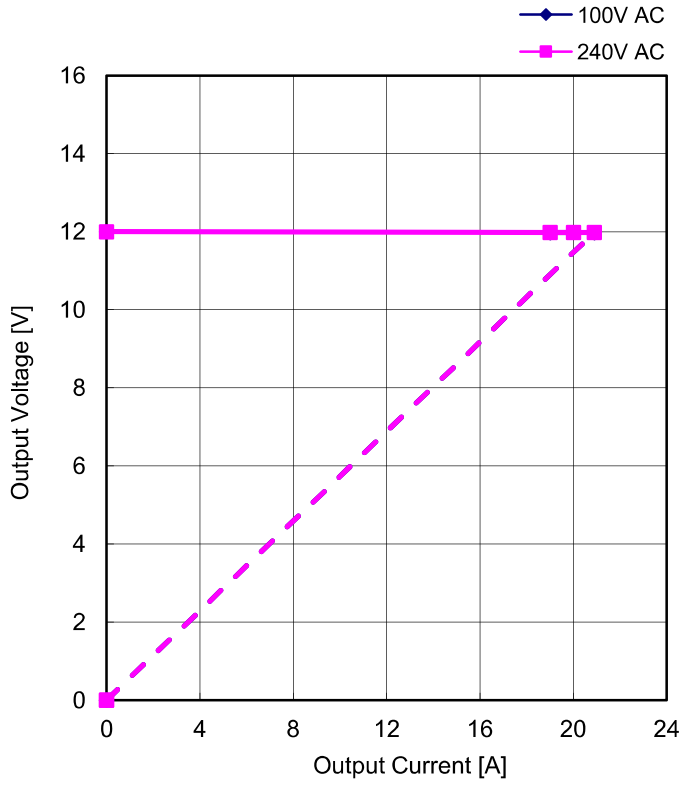
D: Noise Voltage (mVP-P)



Load Power [W]	Ripple / Noise Voltage [mV]			
	A	B	C	D
0	20.9	28.3	19.5	28.4
50.4	23.6	51.3	22.9	47.4
100.8	23.1	73.2	23.6	66.1

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Over-Current Protection	

V-I Characteristics of 12V O.C.P



Input Voltage: 100V AC		Input Voltage: 240V AC	
Output Current [A]	Output Voltage [V]	Output Current [A]	Output Voltage [V]
0.00	12.00	0.00	12.00
19.00	11.98	19.00	11.98
20.00	11.98	20.00	11.98
20.89	11.98	20.89	11.98

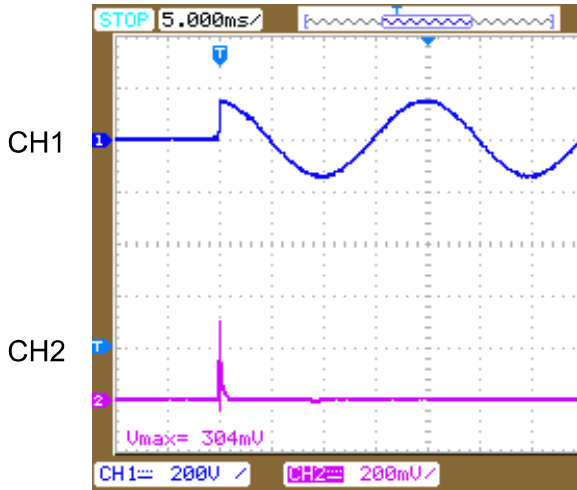
Model	mUZPT-120-12-J0L	Load: Minimum Load
Item	Over-Voltage Protection	

The graph plots Output Voltage [V] on the y-axis (ranging from 10.0 to 20.0) against Ambient Temperature [°C] on the x-axis (ranging from -20 to 80). Two data series are shown: 100V AC (blue line with diamond markers) and 240V AC (magenta line with square markers). Only the 240V AC series is clearly visible, with data points at approximately (-15, 15.06), (25, 15.13), (45, 15.10), and (65, 15.24).

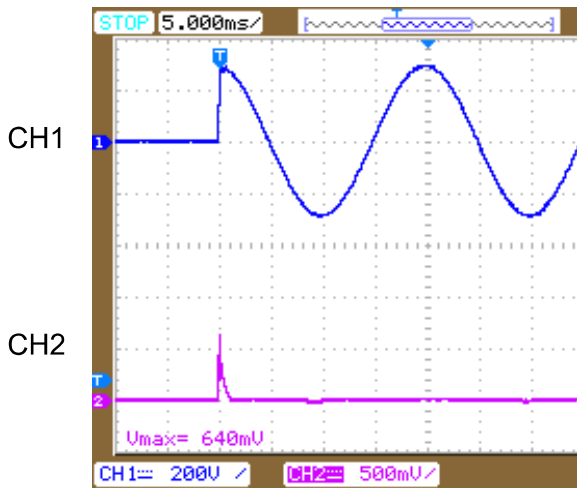
Ambient Temp. [°C]	Output Voltage [V]	
	100V AC	240V AC
-15	15.06	15.06
25	15.13	15.13
45	15.10	15.10
65	15.22	15.24

Model	mUZPT-120-12-J0L	Temperature: 25°C
Item	Inrush Current	Load: Rated Load

Inrush Current Waveforms



Waveform 1	
CH1	Measuring Point: AC Input Voltage
	Range: 200V/div
CH2	Measuring Point: AC Input Current
	Range: 10A/div
Timebase Range	5ms/div
Condition	Input: 100V AC Load: Rated Load
Note: Inrush Current: 15.2A	



Waveform 2	
CH1	Measuring Point: AC Input Voltage
	Range: 200V/div
CH2	Measuring Point: AC Input Current
	Range: 25A/div
Timebase Range	5ms/div
Condition	Input: 200V AC Load: Rated Load
Note: Inrush Current: 32.0A	

Model	mUZPT-120-12-J0L	Load: Rated Load																		
Item	Leakage Current																			
<p>The graph plots Leakage Current [mA] on the y-axis (0 to 1) against AC Input Voltage [V] on the x-axis (50 to 300). The data points show a slight upward trend in leakage current as the input voltage increases.</p>		<table border="1"> <thead> <tr> <th>AC Input Voltage [V]</th> <th>Leakage Current [mA]</th> </tr> </thead> <tbody> <tr> <td>85</td> <td>0.03</td> </tr> <tr> <td>100</td> <td>0.03</td> </tr> <tr> <td>132</td> <td>0.04</td> </tr> <tr> <td>176</td> <td>0.06</td> </tr> <tr> <td>200</td> <td>0.07</td> </tr> <tr> <td>220</td> <td>0.07</td> </tr> <tr> <td>240</td> <td>0.08</td> </tr> <tr> <td>264</td> <td>0.09</td> </tr> </tbody> </table>	AC Input Voltage [V]	Leakage Current [mA]	85	0.03	100	0.03	132	0.04	176	0.06	200	0.07	220	0.07	240	0.08	264	0.09
AC Input Voltage [V]	Leakage Current [mA]																			
85	0.03																			
100	0.03																			
132	0.04																			
176	0.06																			
200	0.07																			
220	0.07																			
240	0.08																			
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