

# **Characteristics Data**

## **PCR6000WE2R**

**March 31, 2021**

**KIKUSUI ELECTRONICS CORP.**

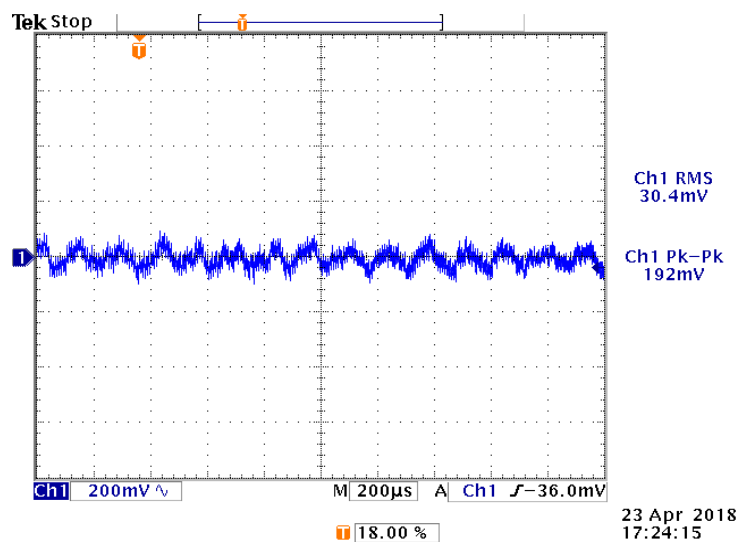
**Ver.1.00**

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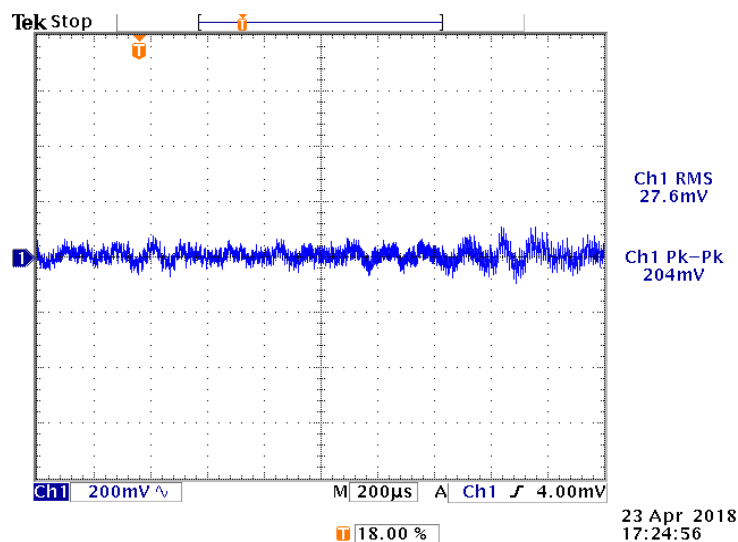
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2. Output Voltage Rise/Fall Waveform
3. Transient Response Waveform
4. Power Consumption, Heat and Efficiency during Power Supplying
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6. Protective Conductor Current (Leakage Current)
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8. Noise
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18. Output On/Off Waveform
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20. Current Limit Response
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|           |                                                                                                                                                                                                                                                     |                 |             |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                                                                                                                         | Temperature     | 25.0°C      |
| Item      | Output Ripple Voltage<br>Waveform                                                                                                                                                                                                                   | Testing Circuit | Figure<br>A |
| Condition | RESPONSE: MEDIUM, PHASE: 3Φ<br>RANGE: L, Output voltage: 100 Vdc, Output current: 20 A, Measured<br>under the resistive load condition.<br>RANGE: H, Output voltage: 200 Vdc, Output current: 10 A, Measured<br>under the resistive load condition. |                 |             |

RANGE: L

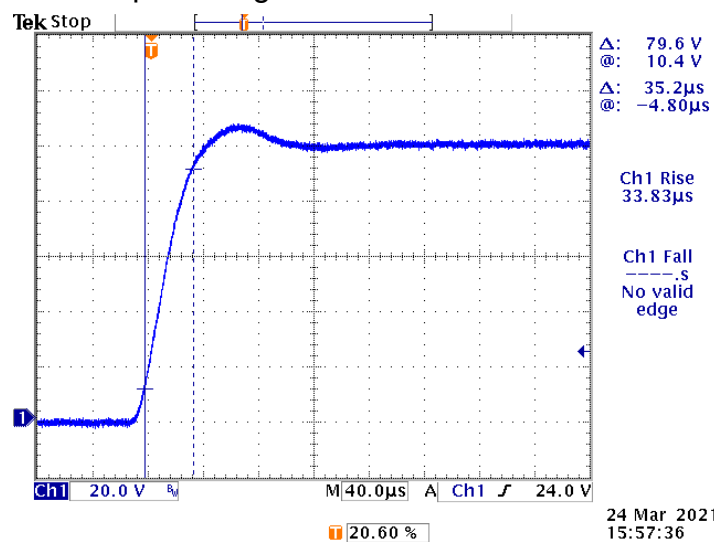


RANGE: H

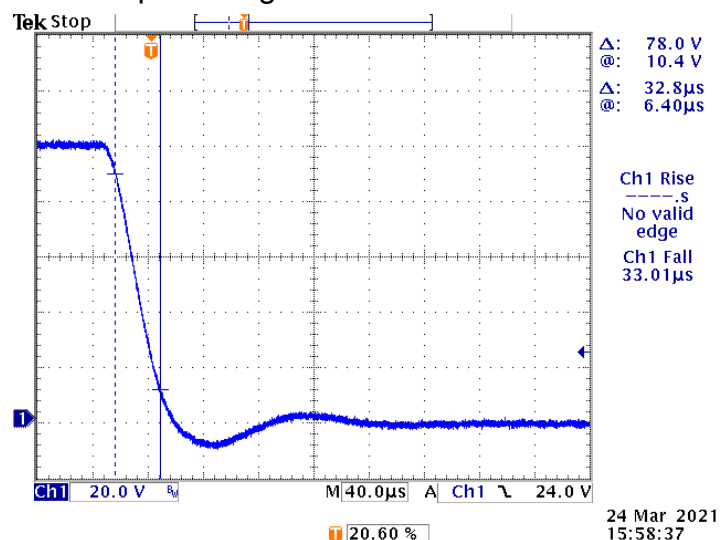


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|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                      | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |          |

Output voltage rise waveform: 0 > 100 V

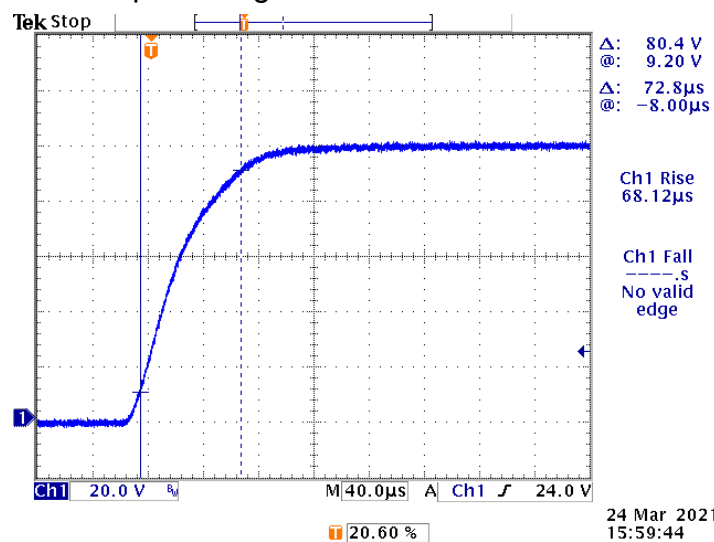


Output voltage fall waveform: 100 > 0 V

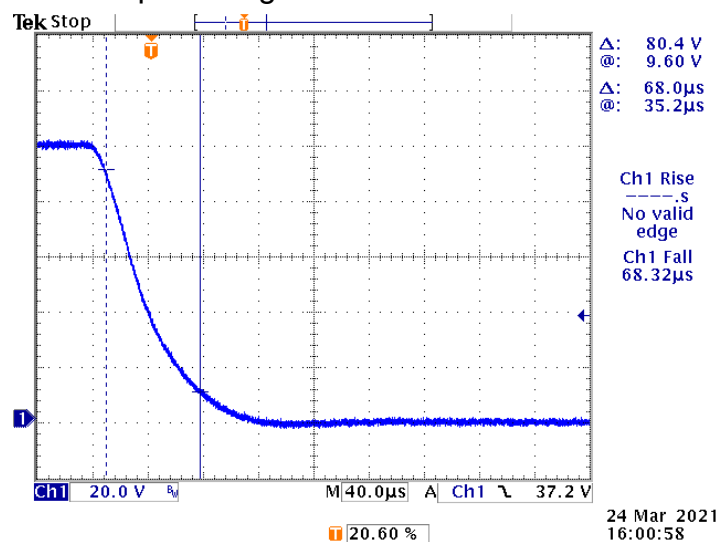


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|-----------|------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                        | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                  | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |          |

Output voltage rise waveform: 0 > 100 V

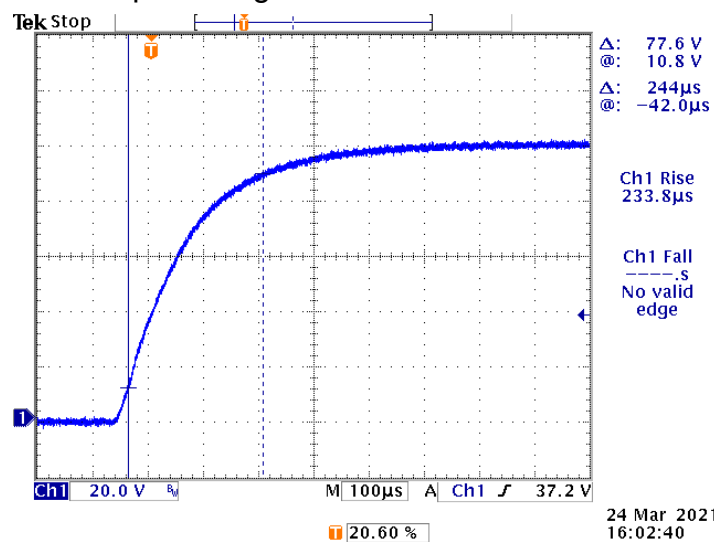


Output voltage fall waveform: 100 > 0 V

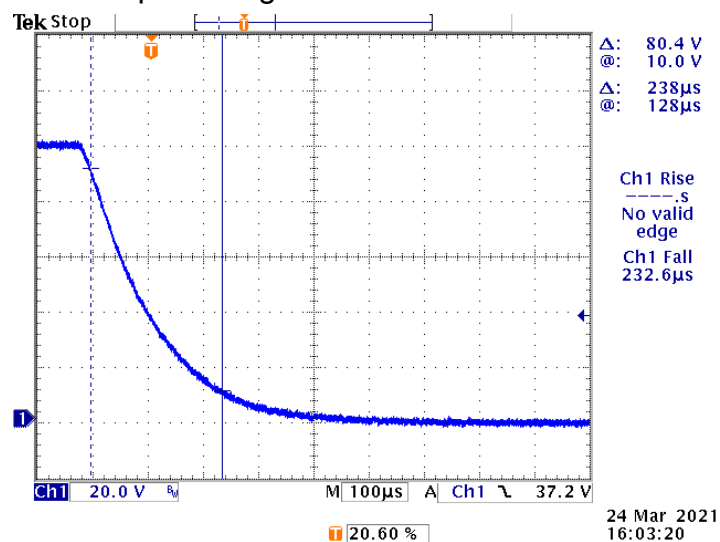


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|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                      | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |          |

Output voltage rise waveform: 0 > 100 V

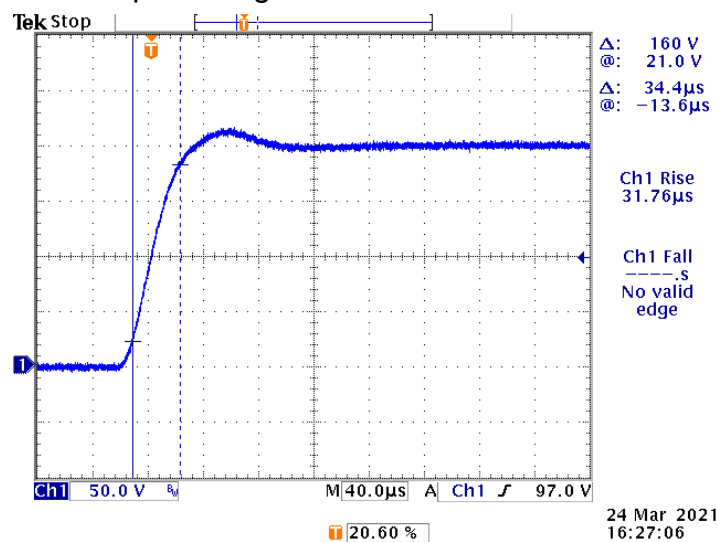


Output voltage fall waveform: 100 > 0 V

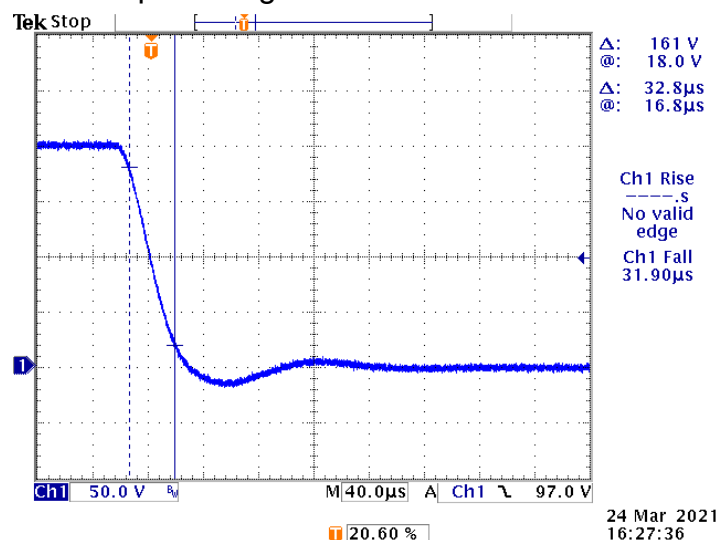


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|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                      | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |          |

Output voltage rise waveform: 0 > 200 V

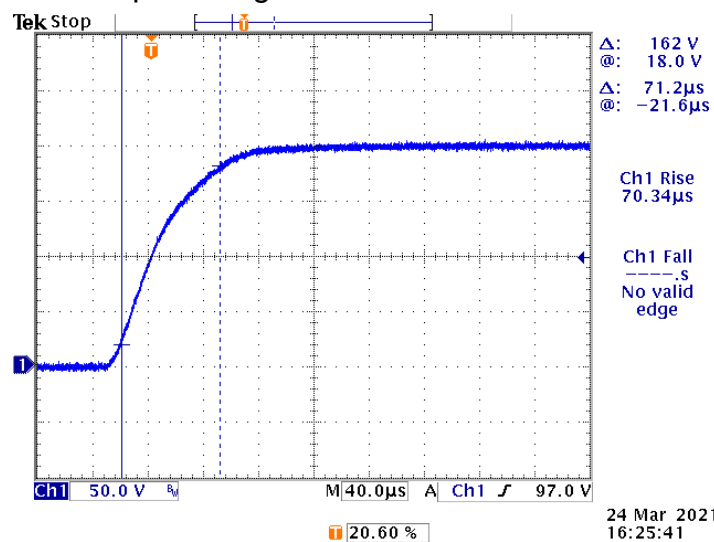


Output voltage fall waveform: 200 > 0 V

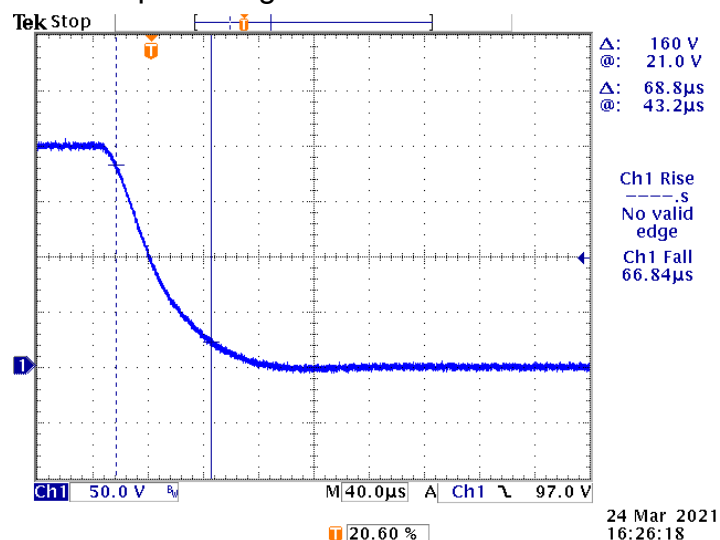


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|-----------|------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                        | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                  | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |          |

Output voltage rise waveform: 0 > 200 V

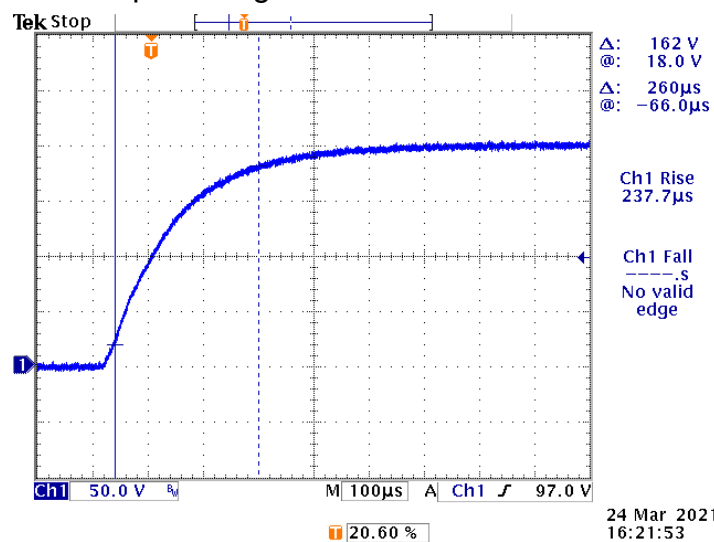


Output voltage fall waveform: 200 > 0 V

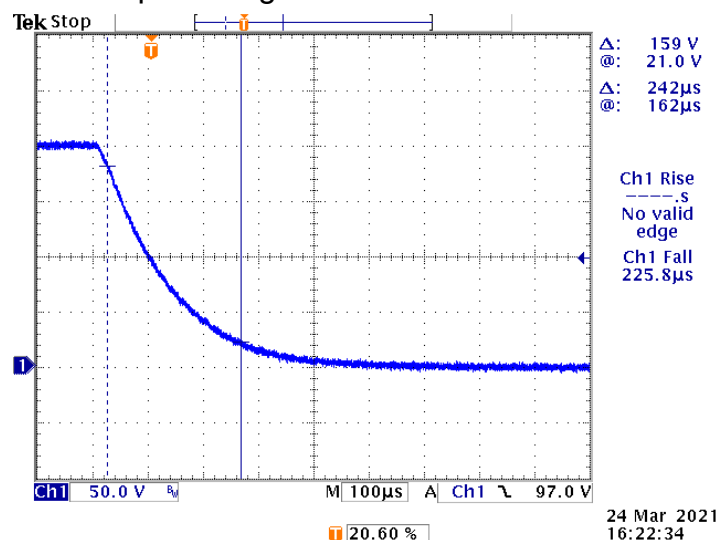


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|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                      | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                | Testing Circuit | Figure B |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |          |

Output voltage rise waveform: 0 > 200 V

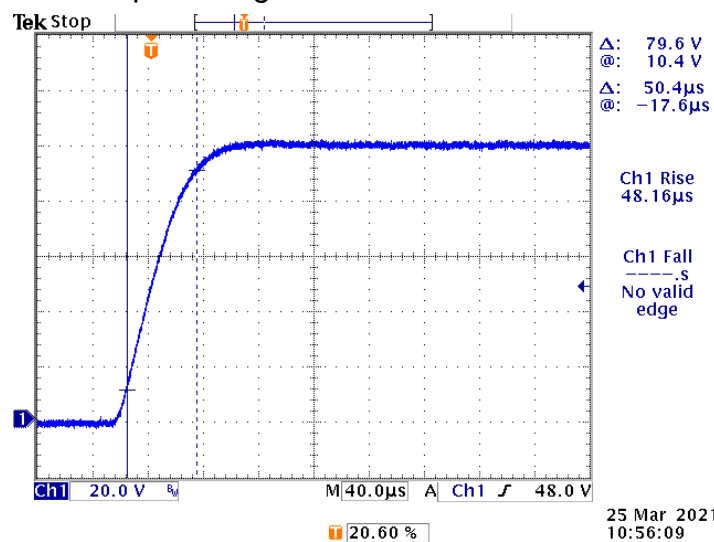


Output voltage fall waveform: 200 > 0 V

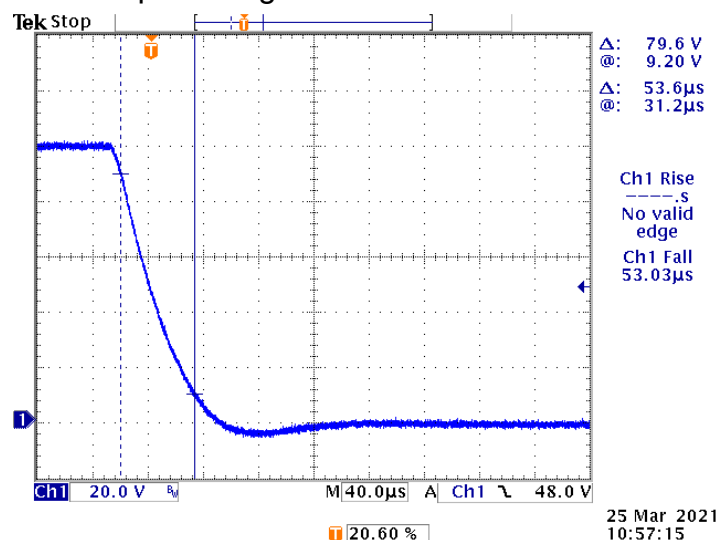


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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                             | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                    | Testing Circuit | Figure<br>B |
| Condition | Output voltage: 100 Vdc, Measured under the rated load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |             |

Output voltage rise waveform: 0 > 100 V

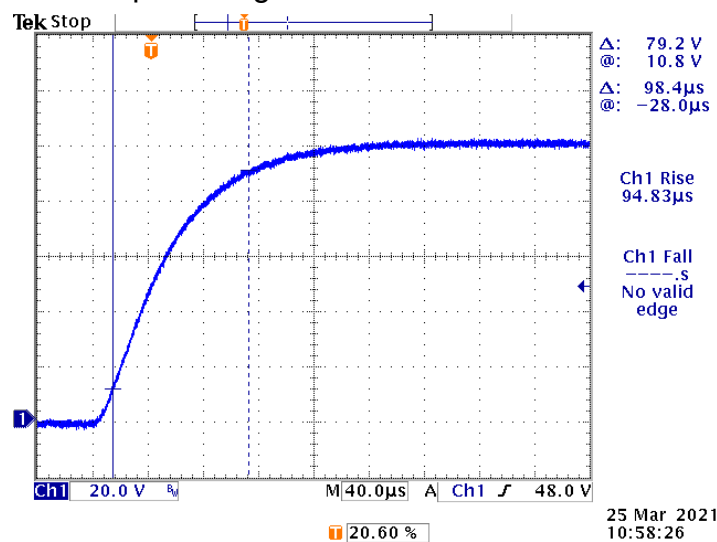


Output voltage fall waveform: 100 > 0 V

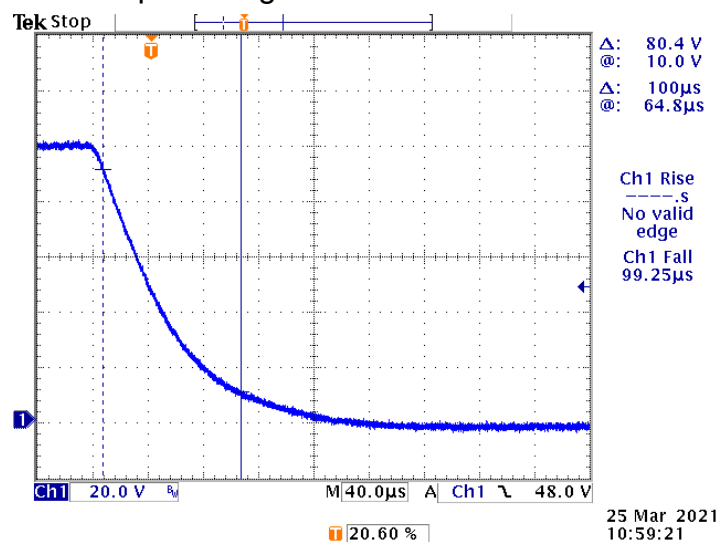


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                               | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                      | Testing Circuit | Figure<br>B |
| Condition | Output voltage: 100 Vdc, Measured under the rated load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |             |

Output voltage rise waveform: 0 > 100 V

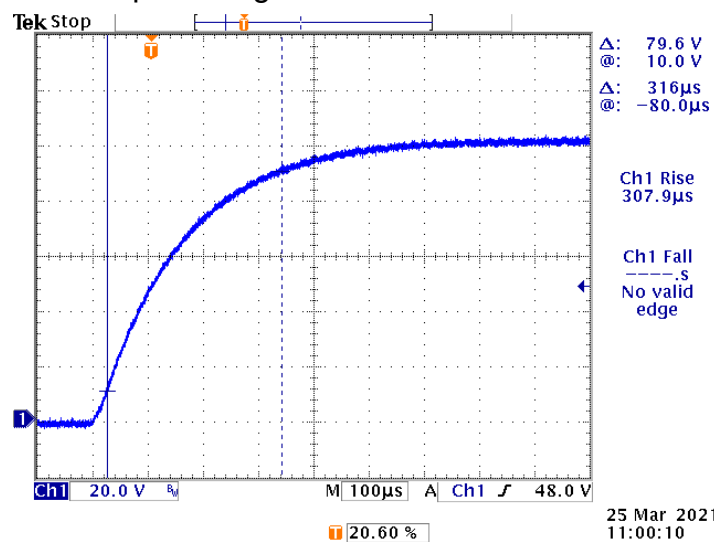


Output voltage fall waveform: 100 > 0 V

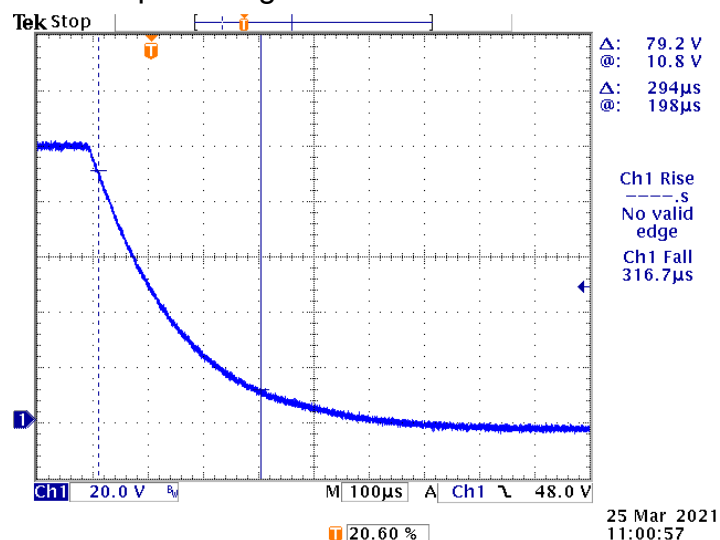


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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                             | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                    | Testing Circuit | Figure<br>B |
| Condition | Output voltage: 100 Vdc, Measured under the rated load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: L<br>V SET: 0 > 100 V, 100 > 0 V |                 |             |

Output voltage rise waveform: 0 > 100 V

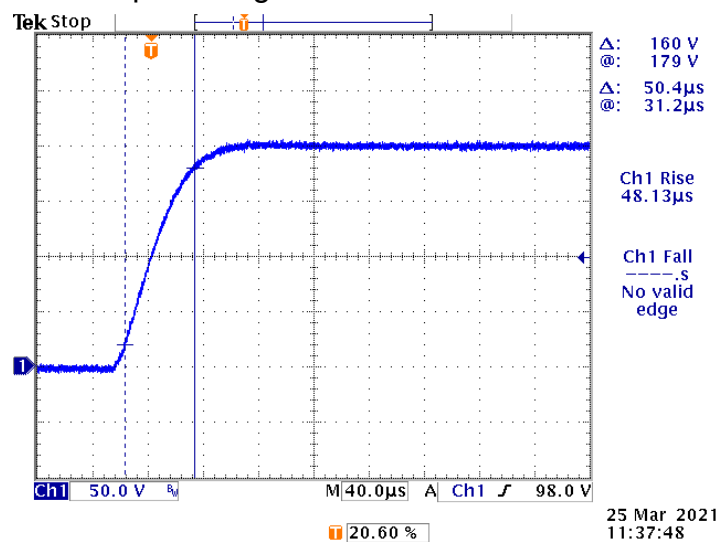


Output voltage fall waveform: 100 > 0 V

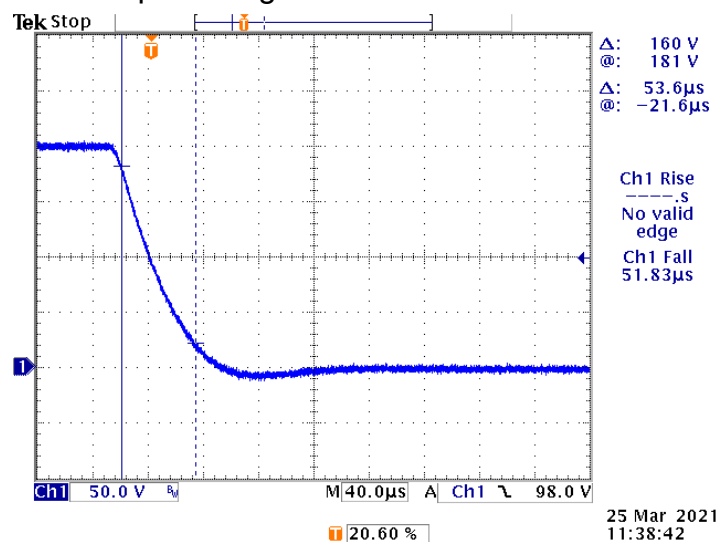


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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                             | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                       | Testing Circuit | Figure B |
| Condition | Output voltage: 200 Vdc, Measured under the rated load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |          |

Output voltage rise waveform: 0 > 200 V

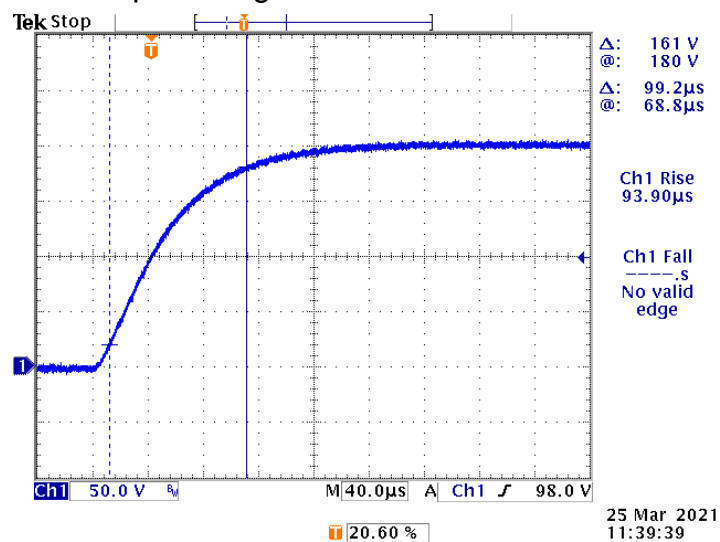


Output voltage fall waveform: 200 > 0 V

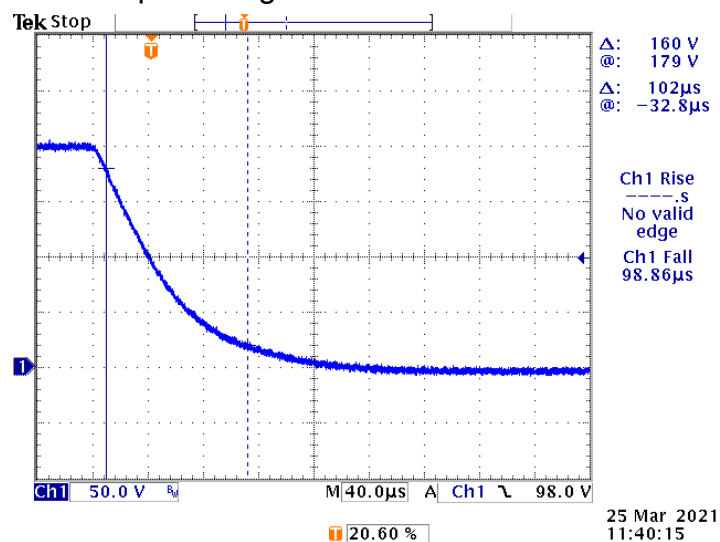


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                               | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                      | Testing Circuit | Figure<br>B |
| Condition | Output voltage: 200 Vdc, Measured under the rated load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |             |

Output voltage rise waveform: 0 > 200 V

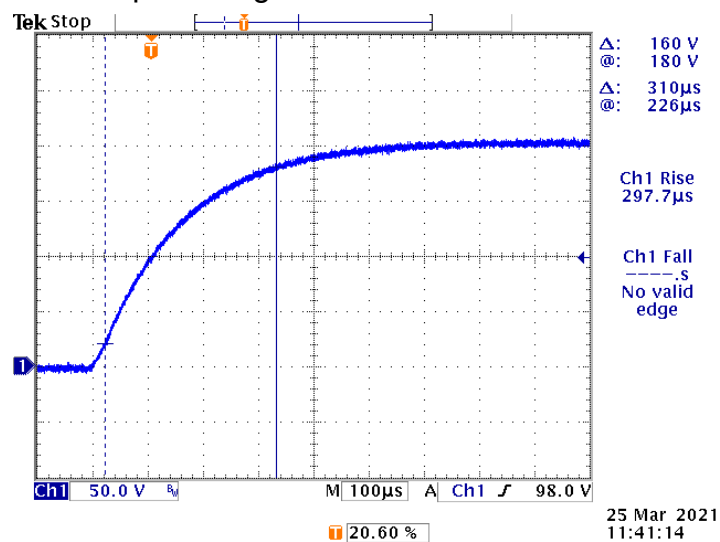


Output voltage fall waveform: 200 > 0 V

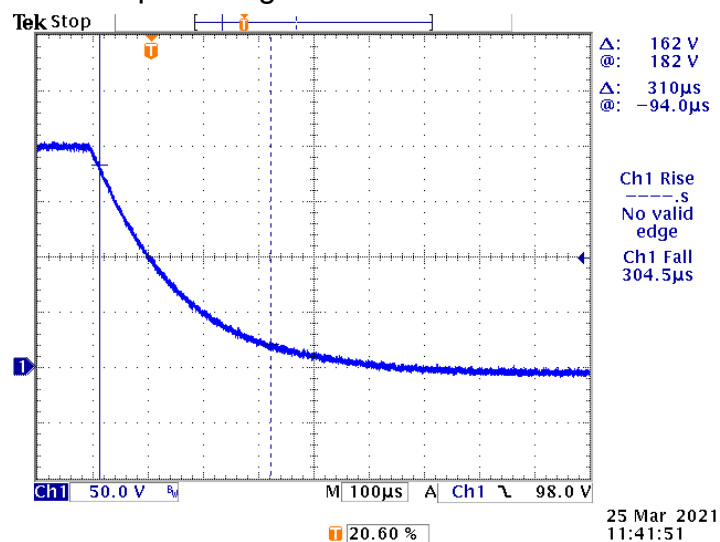


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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                             | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                    | Testing Circuit | Figure<br>B |
| Condition | Output voltage: 200 Vdc, Measured under the rated load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: H<br>V SET: 0 > 200 V, 200 > 0 V |                 |             |

Output voltage rise waveform: 0 > 200 V

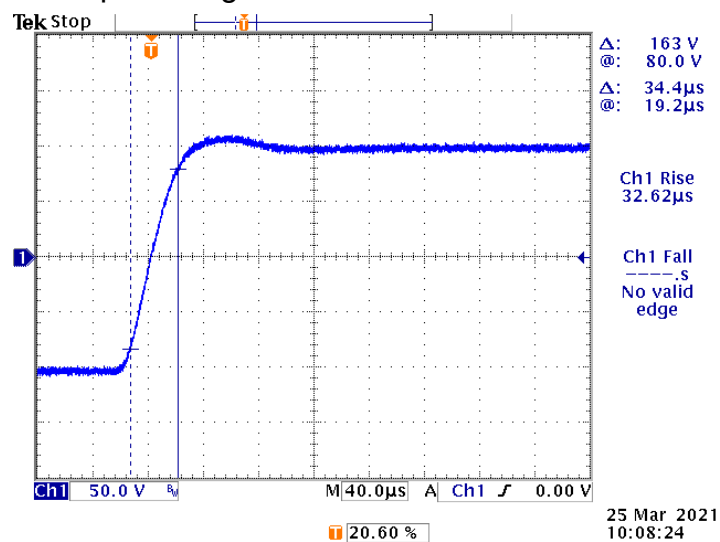


Output voltage fall waveform: 200 > 0 V

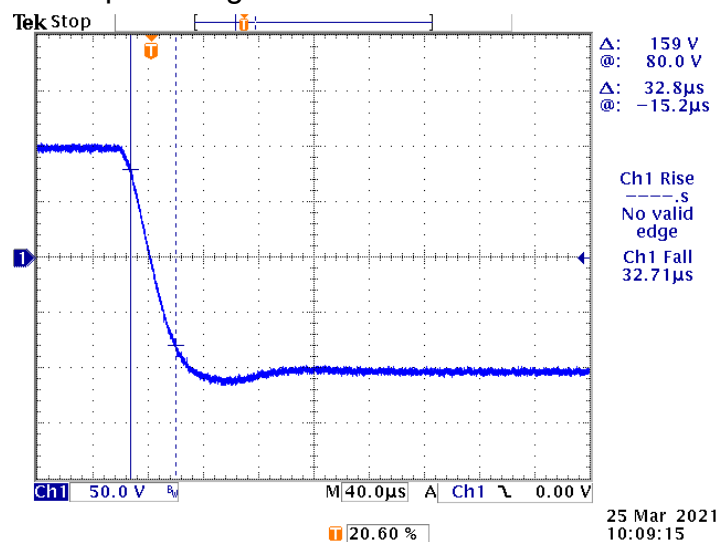


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                     | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |          |

Output voltage rise waveform: -100 > +100 V

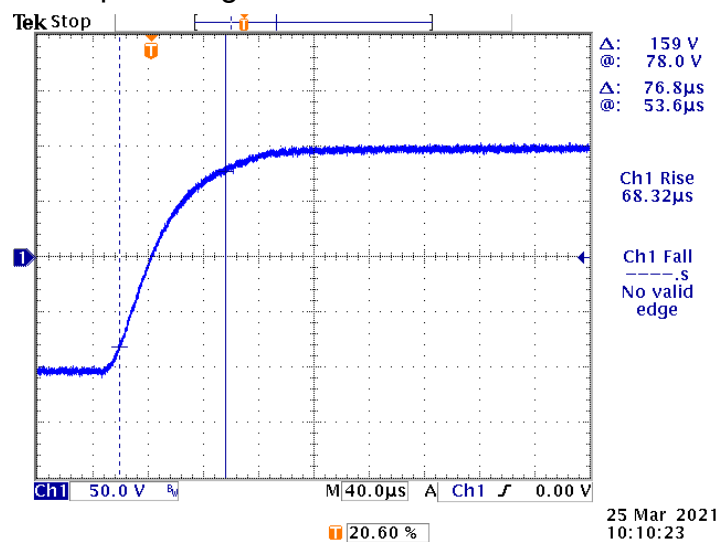


Output voltage fall waveform: +100 > -100 V

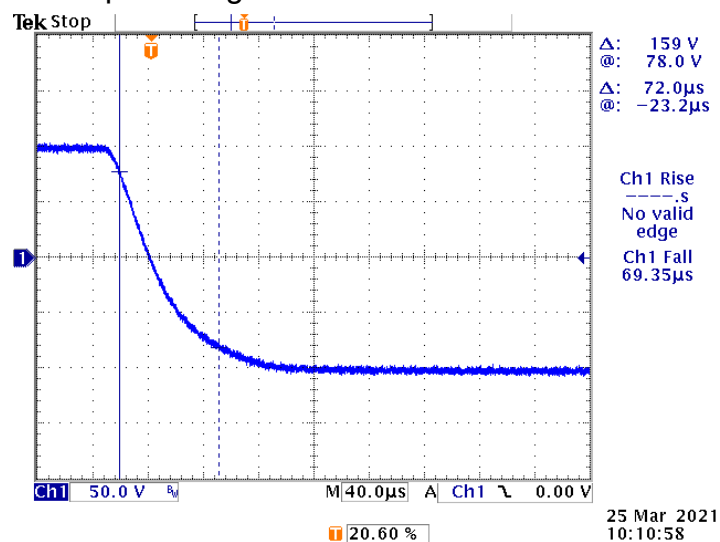


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|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                             | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                       | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |          |

Output voltage rise waveform: -100 > +100 V

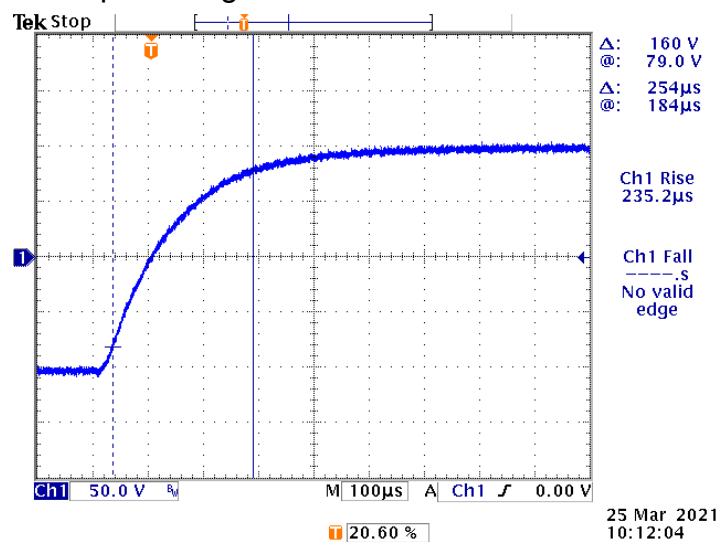


Output voltage fall waveform: +100 > -100 V

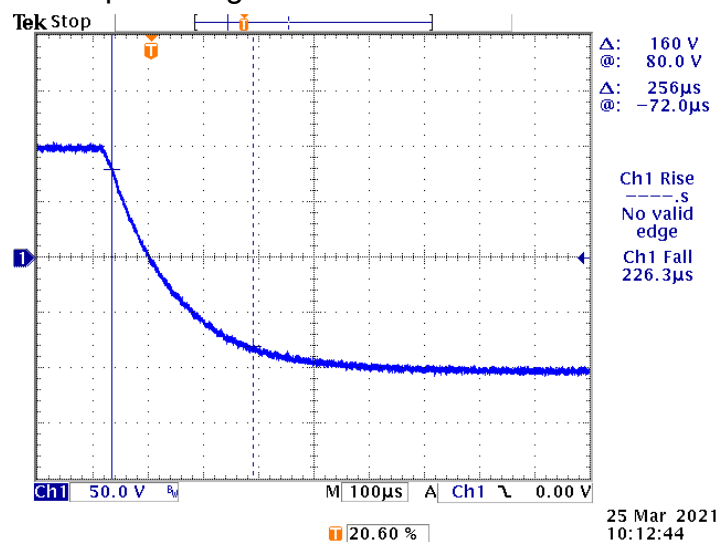


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                                  | Testing Circuit | Figure<br>B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |             |

Output voltage rise waveform: -100 > +100 V

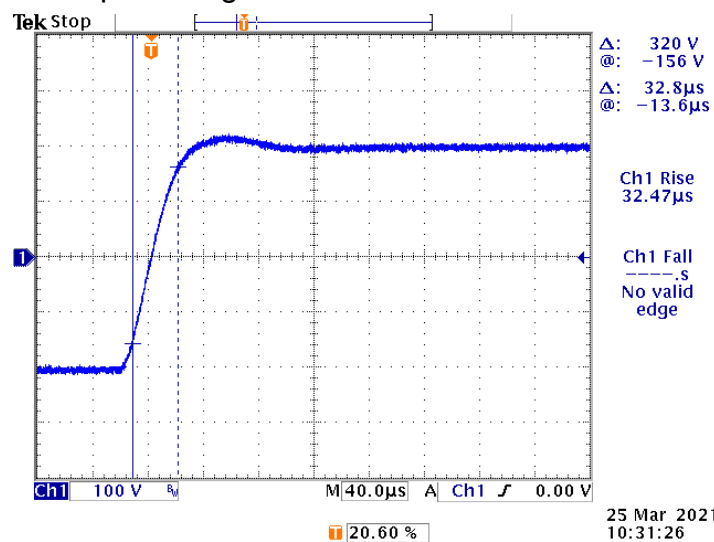


Output voltage fall waveform: +100 > -100 V

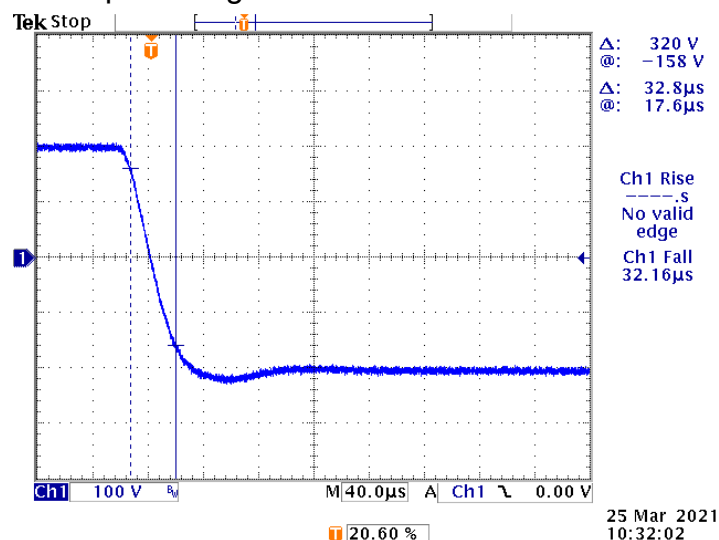


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                     | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |          |

Output voltage rise waveform: -200 > +200 V

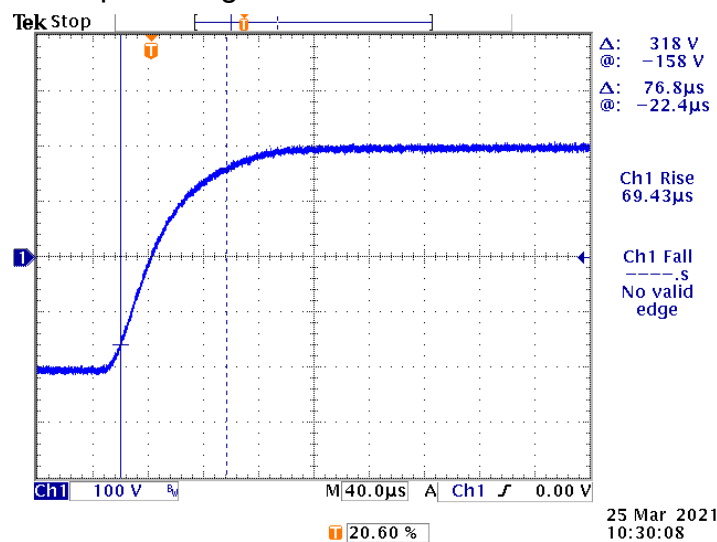


Output voltage fall waveform: +200 > -200 V

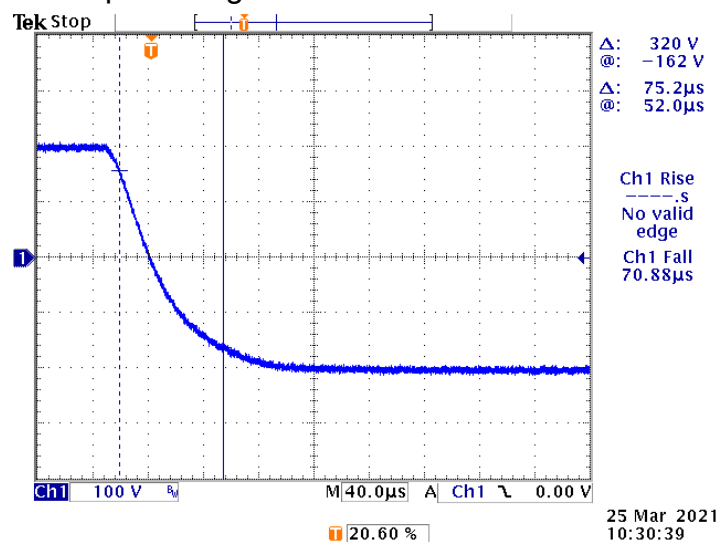


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|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                             | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                       | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |          |

Output voltage rise waveform: -200 > +200 V

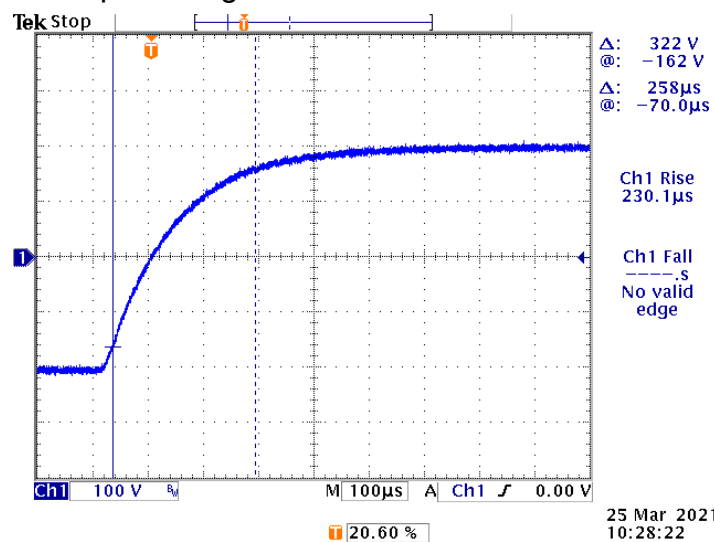


Output voltage fall waveform: +200 > -200 V

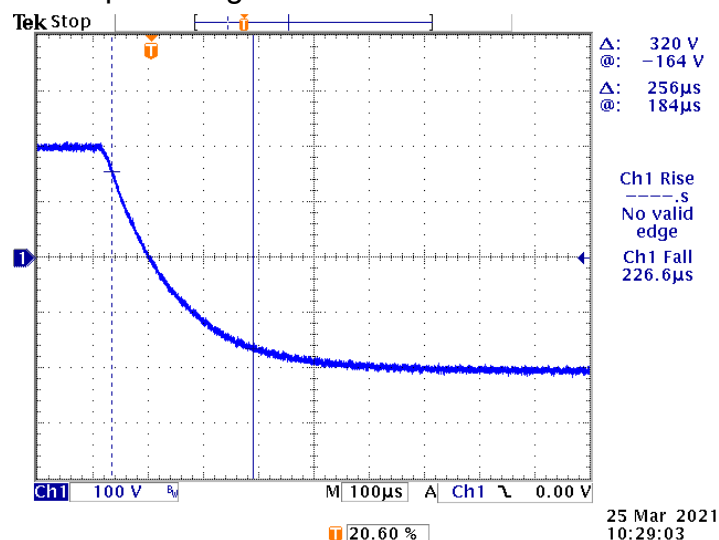


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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C      |
| Item      | Output Voltage Rise/Fall<br>Waveform                                                                                                                  | Testing Circuit | Figure<br>B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |             |

Output voltage rise waveform: -200 > +200 V

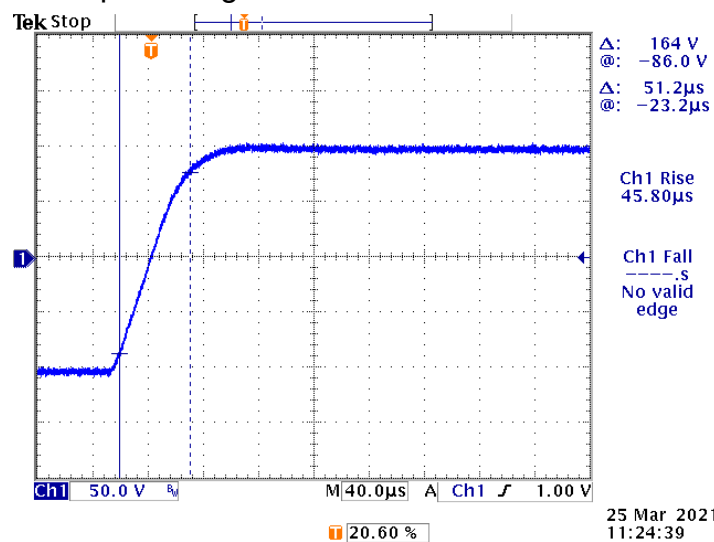


Output voltage fall waveform: +200 > -200 V

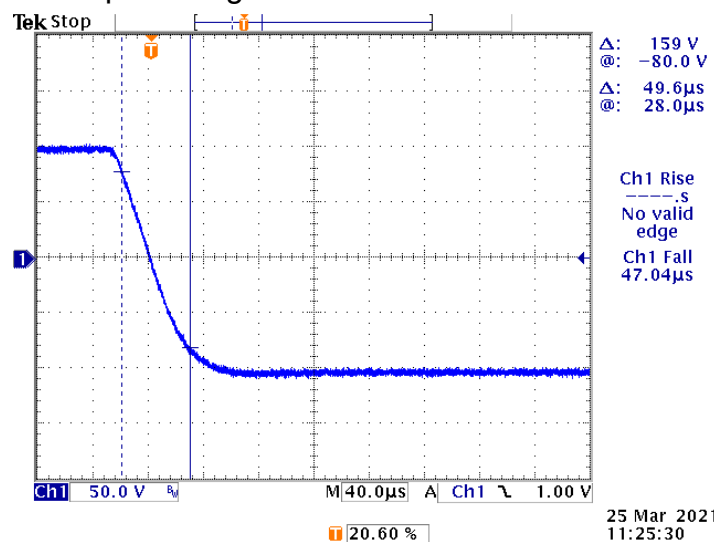


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|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                  | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                            | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under the rated load condition.<br>RESPONSE: FAST, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |          |

Output voltage rise waveform: -100 > +100 V

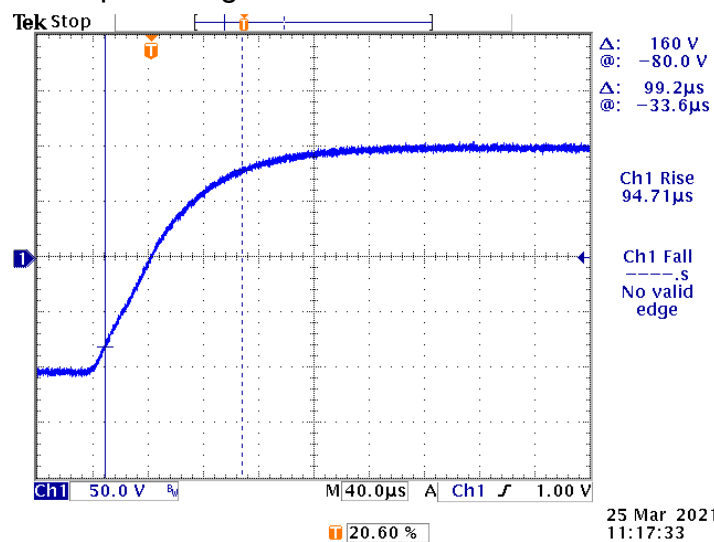


Output voltage fall waveform: +100 > -100 V

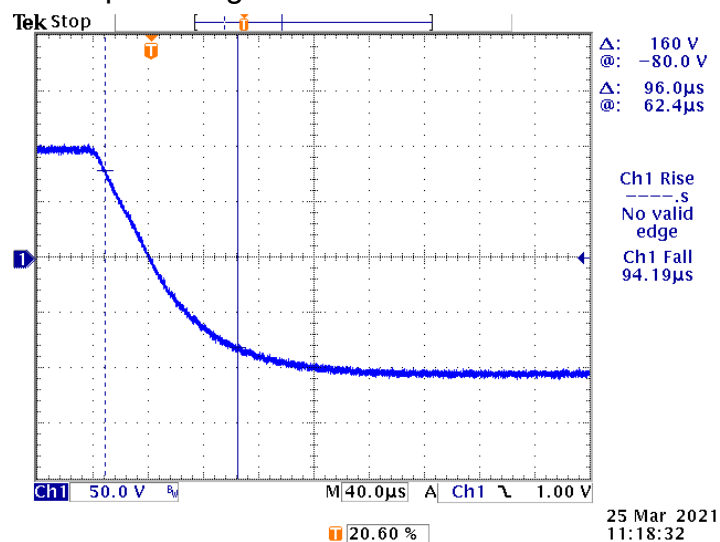


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|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                    | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                              | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under the rated load condition.<br>RESPONSE: MEDIUM, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |          |

Output voltage rise waveform: -100 > +100 V

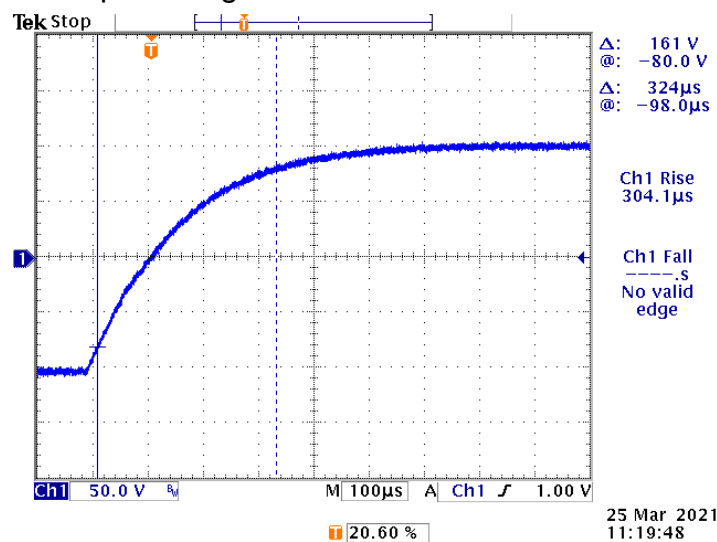


Output voltage fall waveform: +100 > -100 V

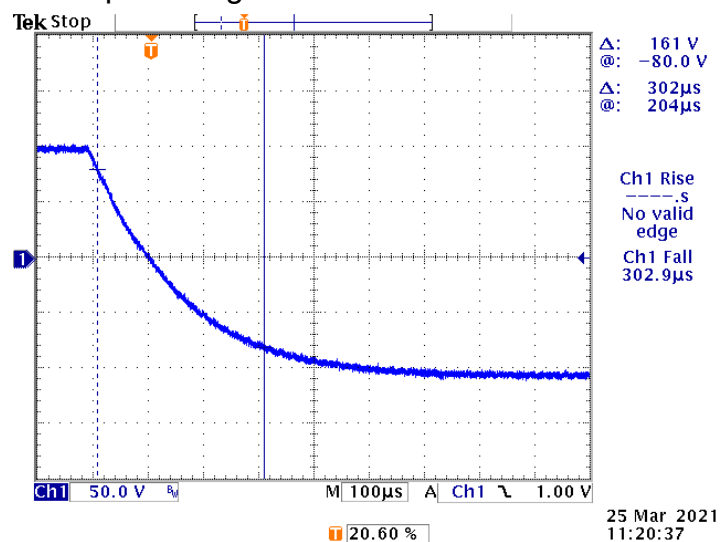


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|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                  | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                            | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 100$ Vdc, Measured under the rated load condition.<br>RESPONSE: SLOW, PHASE: 3 $\Phi$ , RANGE: L<br>V SET: -100 > +100 V, +100 > -100 V |                 |          |

Output voltage rise waveform: -100 > +100 V

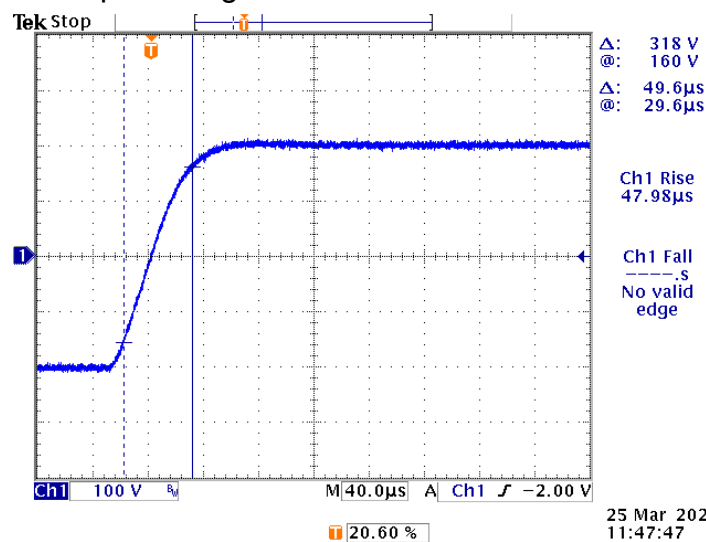


Output voltage fall waveform: +100 > -100 V

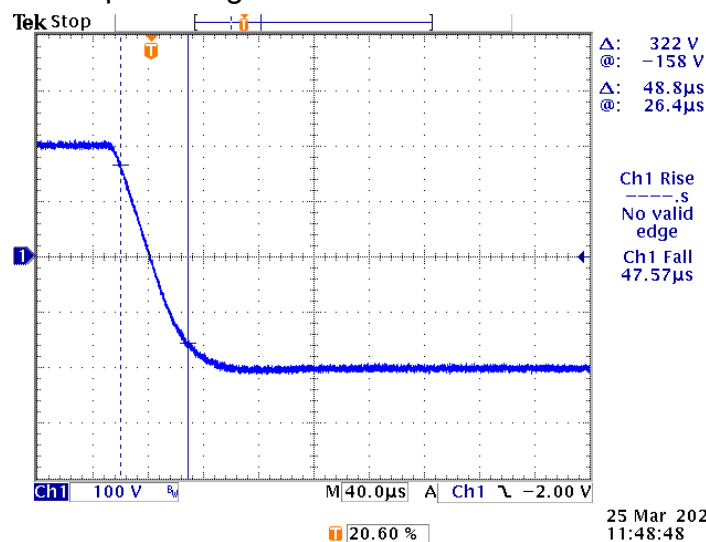


|           |                                                                                                                                                              |                 |          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                  | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                            | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under the rated load condition.<br>RESPONSE: FAST, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |          |

Output voltage rise waveform: -200 > +200 V

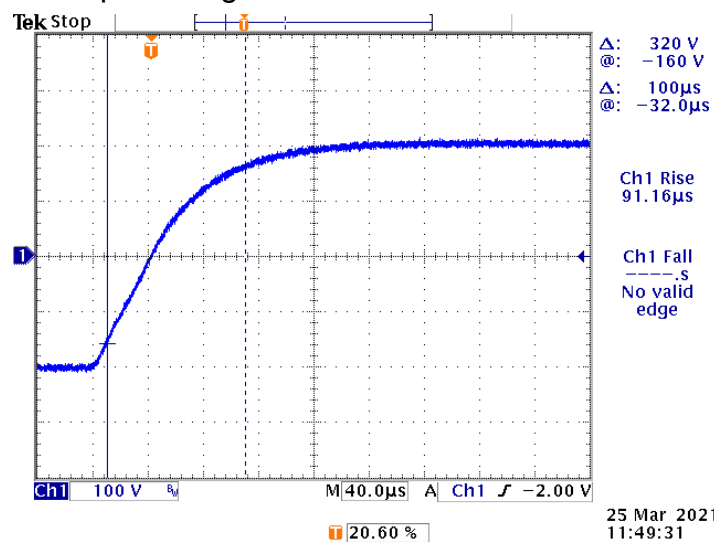


Output voltage fall waveform: +200 > -200 V

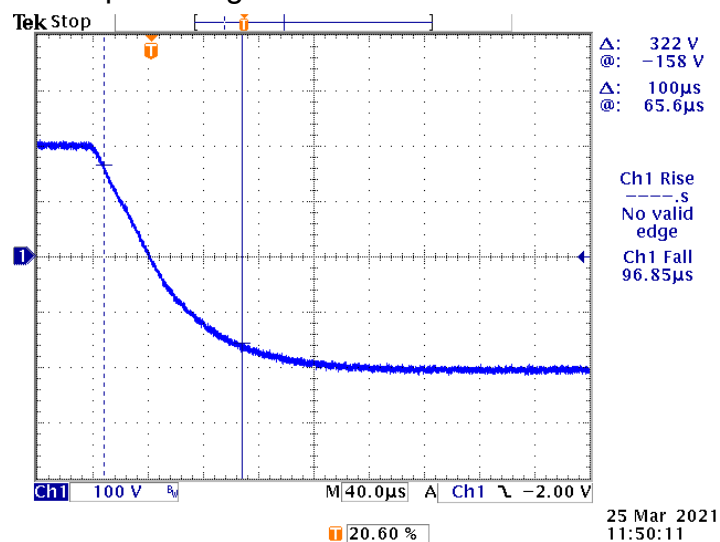


|           |                                                                                                                                                                |                 |          |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                    | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                              | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under the rated load condition.<br>RESPONSE: MEDIUM, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |          |

Output voltage rise waveform: -200 > +200 V

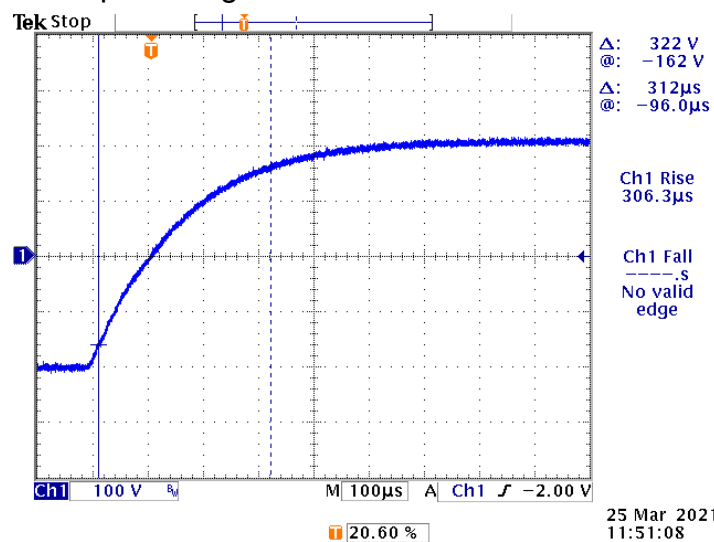


Output voltage fall waveform: +200 > -200 V

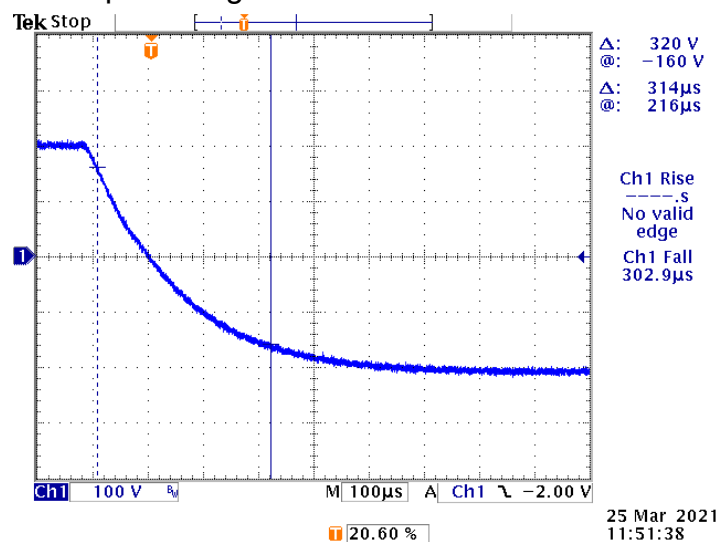


|           |                                                                                                                                                              |                 |          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                  | Temperature     | 25.0°C   |
| Item      | Output Voltage Rise/Fall Waveform                                                                                                                            | Testing Circuit | Figure B |
| Condition | Output voltage: $\pm 200$ Vdc, Measured under the rated load condition.<br>RESPONSE: SLOW, PHASE: 3 $\Phi$ , RANGE: H<br>V SET: -200 > +200 V, +200 > -200 V |                 |          |

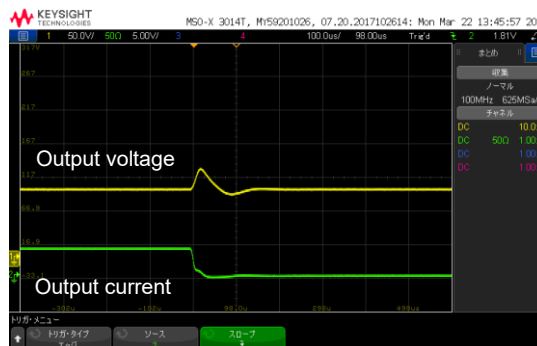
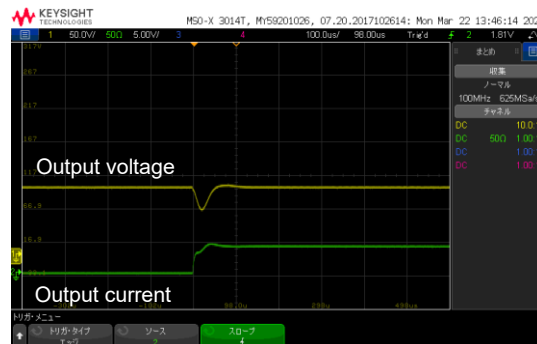
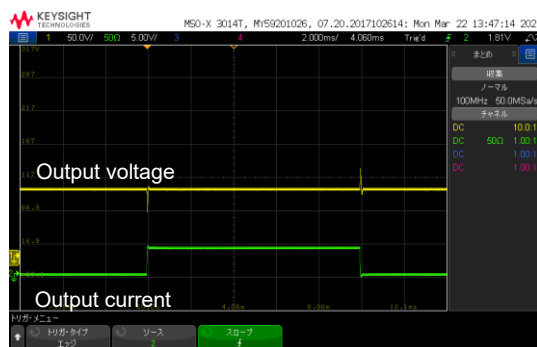
Output voltage rise waveform: -200 > +200 V



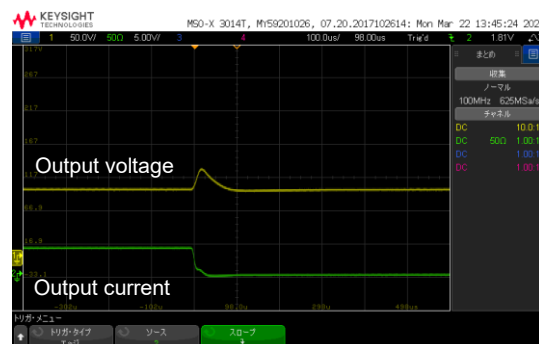
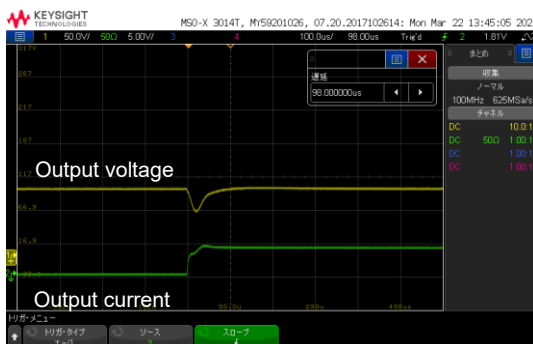
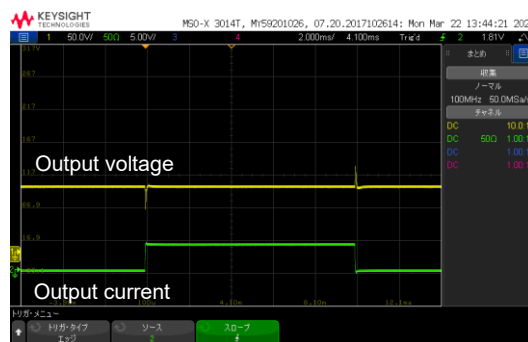
Output voltage fall waveform: +200 > -200 V



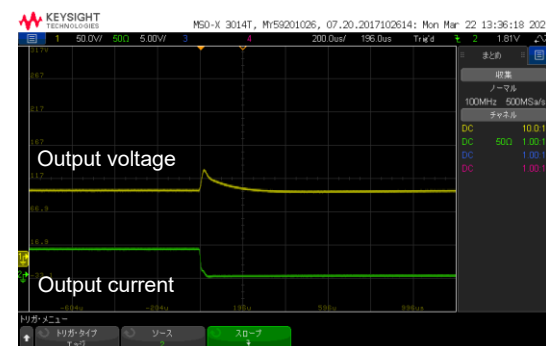
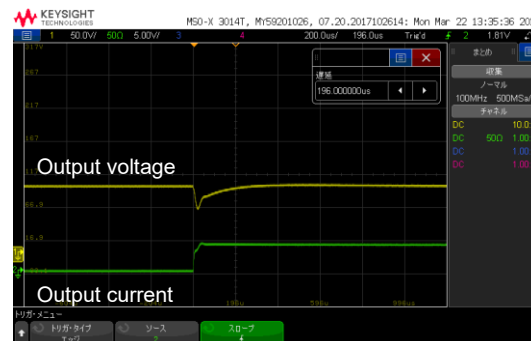
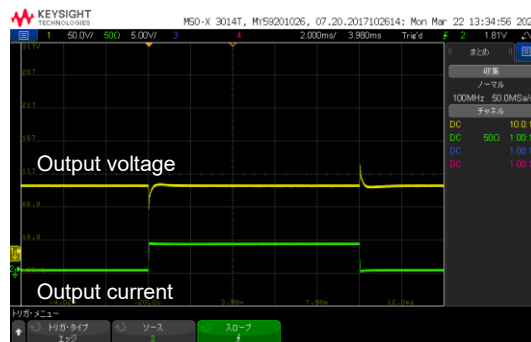
|           |                                                                                              |                 |          |
|-----------|----------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                  | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                  | Testing Circuit | Figure C |
| Condition | RESPONSE: FAST, PHASE: 3Φ, RANGE: L<br>Output voltage: 100 Vdc<br>Output current: 0 A - 20 A |                 |          |



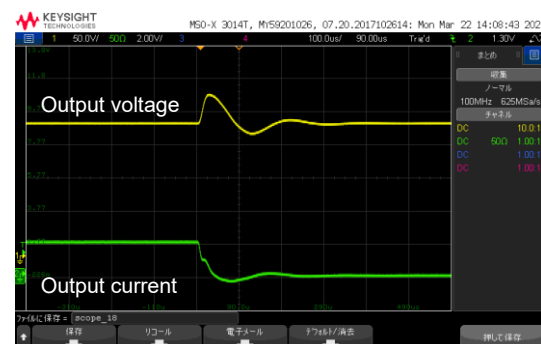
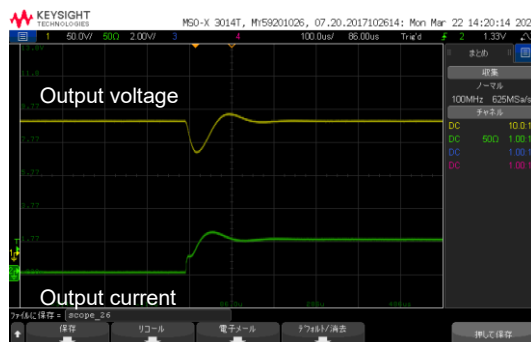
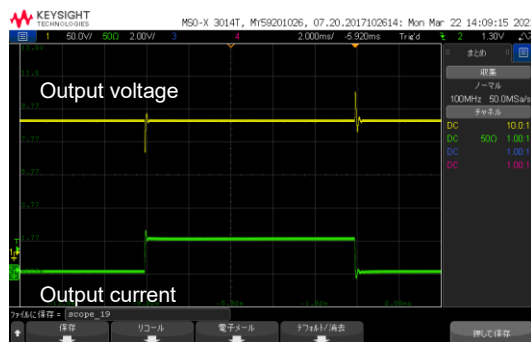
|           |                                                                                                |                 |          |
|-----------|------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                    | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                    | Testing Circuit | Figure C |
| Condition | RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: L<br>Output voltage: 100 Vdc<br>Output current: 0 A - 20 A |                 |          |



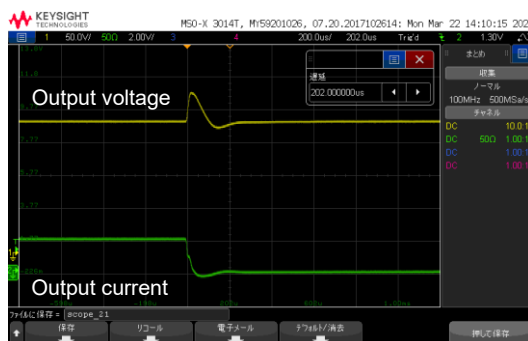
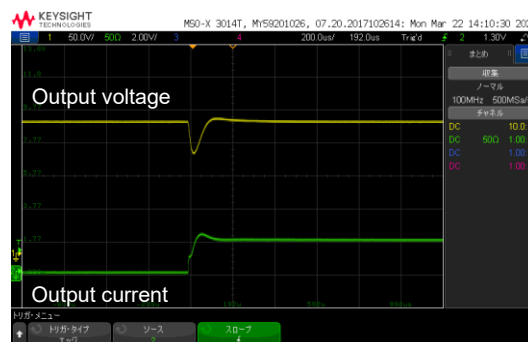
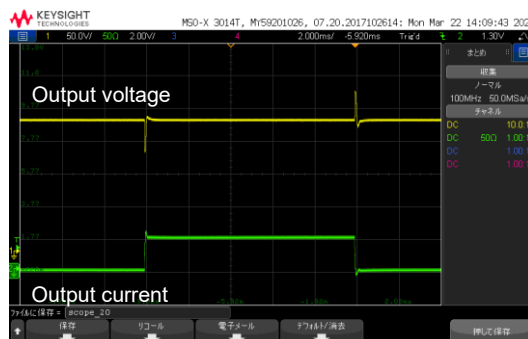
|           |                                                                                              |                 |          |
|-----------|----------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                  | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                  | Testing Circuit | Figure C |
| Condition | RESPONSE: SLOW, PHASE: 3Φ, RANGE: L<br>Output voltage: 100 Vdc<br>Output current: 0 A - 20 A |                 |          |



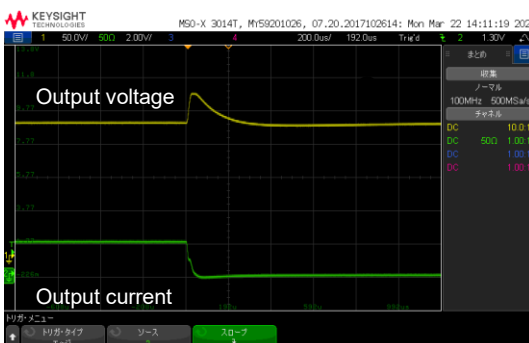
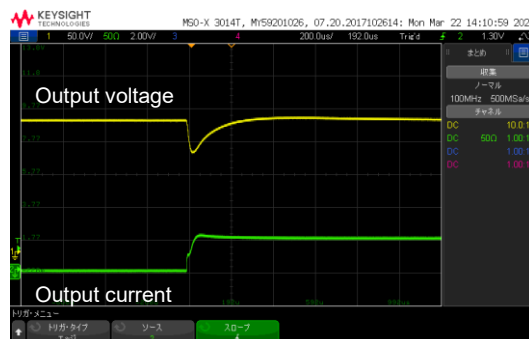
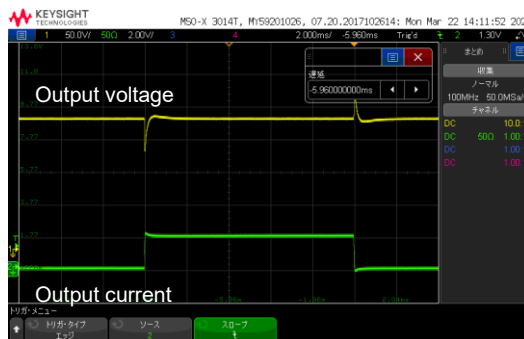
|           |                                                                                              |                 |          |
|-----------|----------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                  | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                  | Testing Circuit | Figure C |
| Condition | RESPONSE: FAST, PHASE: 3Φ, RANGE: H<br>Output voltage: 200 Vdc<br>Output current: 0 A - 10 A |                 |          |



|           |                                                                                                |                 |          |
|-----------|------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                    | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                    | Testing Circuit | Figure C |
| Condition | RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: H<br>Output voltage: 200 Vdc<br>Output current: 0 A - 10 A |                 |          |



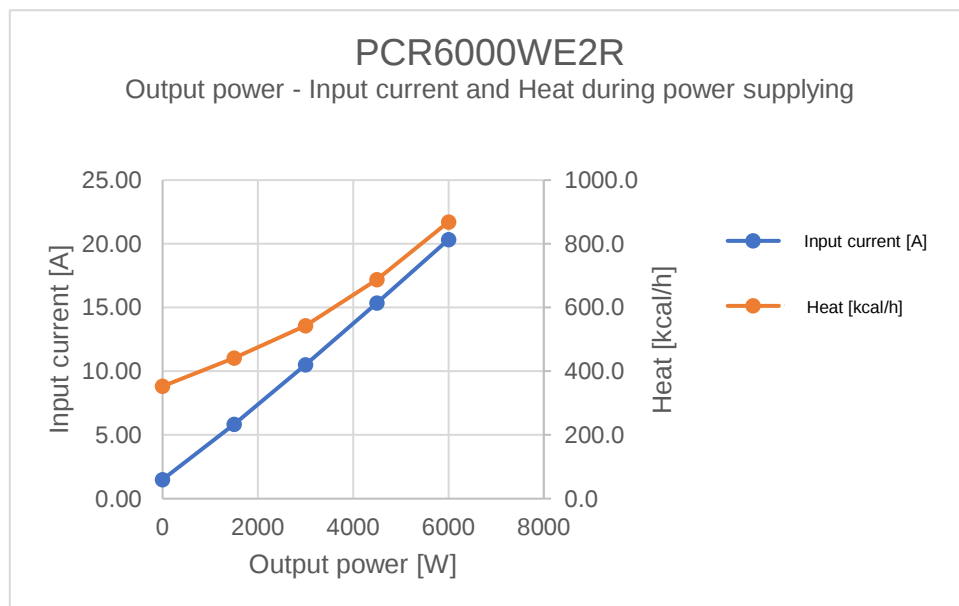
|           |                                                                                              |                 |          |
|-----------|----------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                  | Temperature     | 25.0°C   |
| Item      | Transient Response Waveform                                                                  | Testing Circuit | Figure C |
| Condition | RESPONSE: SLOW, PHASE: 3Φ, RANGE: H<br>Output voltage: 200 Vdc<br>Output current: 0 A - 10 A |                 |          |



|           |                                                                                     |                 |            |
|-----------|-------------------------------------------------------------------------------------|-----------------|------------|
| Model     | PCR6000WE2R                                                                         | Temperature     | 25.0°C     |
| Item      | Power Consumption, Heat and Efficiency during Power Supplying                       | Testing Circuit | Figure D-1 |
| Condition | Input voltage: 3Φ200 Vac<br>RESPONSE: MEDIUM, RANGE: H<br>Output voltage: 1Φ200 Vdc |                 |            |

Power Consumption, Heat and Efficiency during Power Supplying

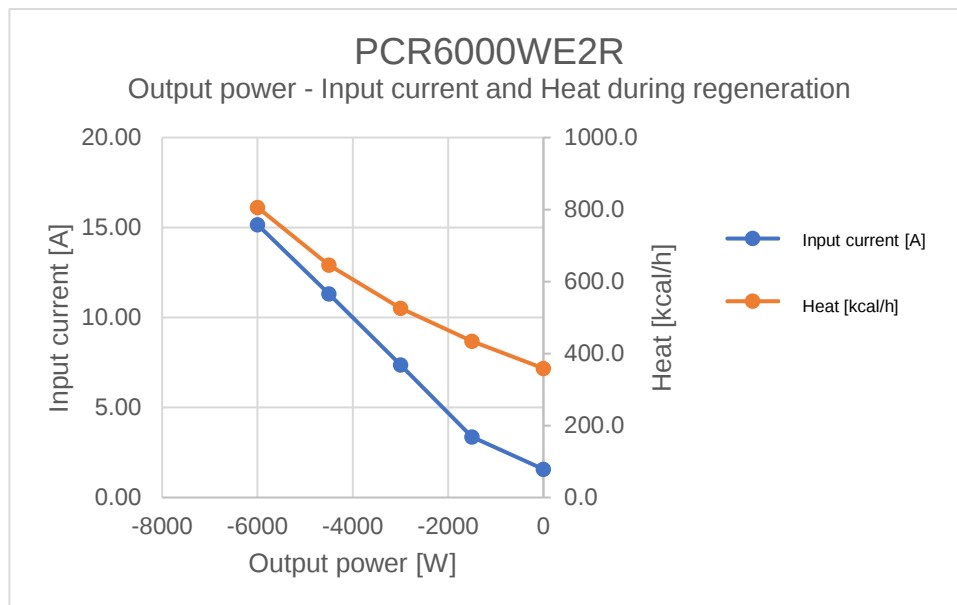
| Input Voltage<br>[V] | Output Voltage<br>[V] | Input Apparent Power<br>[W] | Input Active Power<br>[W] | Input Current<br>[A] | Output Power<br>[W] | Power Consumption<br>[W] | Heat<br>[kcal/h] | Efficiency<br>[%] | Power Factor |
|----------------------|-----------------------|-----------------------------|---------------------------|----------------------|---------------------|--------------------------|------------------|-------------------|--------------|
| 200                  | DC 200                | 518                         | 410                       | 1.50                 | 0                   | 410                      | 352.8            | 0.00              | 0.792        |
|                      |                       | 2026                        | 2013                      | 5.85                 | 1500                | 513                      | 441.4            | 74.52             | 0.994        |
|                      |                       | 3641                        | 3631                      | 10.51                | 3000                | 631                      | 542.9            | 82.62             | 0.997        |
|                      |                       | 5317                        | 5299                      | 15.35                | 4500                | 799                      | 687.5            | 84.92             | 0.997        |
|                      |                       | 7044                        | 7010                      | 20.33                | 6000                | 1010                     | 869.0            | 85.59             | 0.995        |



|           |                                                                                     |                 |            |
|-----------|-------------------------------------------------------------------------------------|-----------------|------------|
| Model     | PCR6000WE2R                                                                         | Temperature     | 25.0°C     |
| Item      | Power Consumption, Heat and Efficiency during Regeneration                          | Testing Circuit | Figure D-2 |
| Condition | Input voltage: 3Φ200 Vac<br>RESPONSE: MEDIUM, RANGE: H<br>Output voltage: 1Φ200 Vdc |                 |            |

Power Consumption, Heat and Efficiency during Regeneration

| Input Voltage<br>[V] | Output Voltage<br>[V] | Input Apparent Power<br>[W] | Input Active Power<br>[W] | Input Current<br>[A] | Output Power<br>[W] | Power Consumption<br>[W] | Heat<br>[kcal/h] | Efficiency<br>[%] | Power Factor |
|----------------------|-----------------------|-----------------------------|---------------------------|----------------------|---------------------|--------------------------|------------------|-------------------|--------------|
| 200                  | DC 200                | 545                         | 417                       | 1.57                 | 0                   | 417                      | 358.8            | 0.00              | 0.765        |
|                      |                       | 1167                        | -995                      | 3.37                 | -1500               | 505                      | 434.5            | 66.33             | -0.853       |
|                      |                       | 2551                        | -2389                     | 7.36                 | -3000               | 611                      | 525.7            | 79.63             | -0.936       |
|                      |                       | 3923                        | -3749                     | 11.32                | -4500               | 751                      | 646.2            | 83.31             | -0.956       |
|                      |                       | 5254                        | -5063                     | 15.17                | -6000               | 937                      | 806.2            | 84.38             | -0.964       |



|           |                                                                                                                                                                                                     |                 |        |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                                                                                                                                                                         | Temperature     | 25.0°C |
| Item      | Protective Conductor Current<br>(Leakage Current)                                                                                                                                                   | Testing Circuit | —      |
| Condition | Output voltage: 100 Vac/200 Vac, Output current: rated current,<br>Sine wave, Load power factor: 1, Output frequency: 45 - 65 Hz<br>*The following information is excerpted from the user's manual. |                 |        |

#### 1P2W input model

|                              |                |           |            |
|------------------------------|----------------|-----------|------------|
|                              | PCR1000WE      | PCR2000WE | PCR3000WE2 |
| Protective conductor current | 3.5 mA or less |           |            |

#### 3P3W input model

|                              |               |               |               |
|------------------------------|---------------|---------------|---------------|
|                              | PCR6000WE2R   | PCR12000WE2R  | PCR18000WE2R  |
| Protective conductor current | 10 mA or less | 15 mA or less | 20 mA or less |

|                              |               |               |               |
|------------------------------|---------------|---------------|---------------|
|                              | PCR24000WE2R  | PCR30000WE2R  | PCR36000WE2R  |
| Protective conductor current | 20 mA or less | 30 mA or less | 35 mA or less |

#### 3P4W input model

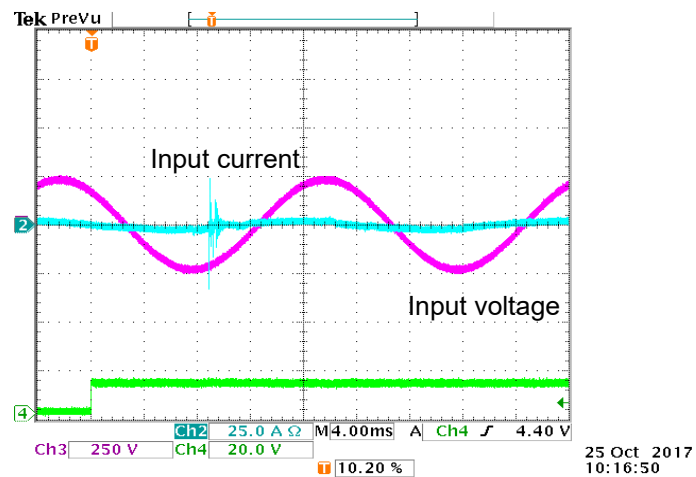
|                              |                |             |             |
|------------------------------|----------------|-------------|-------------|
|                              | PCR6000WE2     | PCR12000WE2 | PCR18000WE2 |
| Protective conductor current | 3.5 mA or less |             |             |

|                              |                |             |             |
|------------------------------|----------------|-------------|-------------|
|                              | PCR24000WE2    | PCR30000WE2 | PCR36000WE2 |
| Protective conductor current | 3.5 mA or less |             |             |

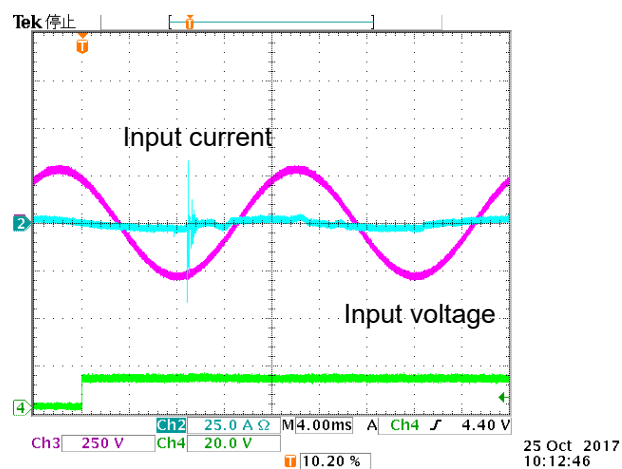
|           |                                 |                 |          |
|-----------|---------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                     | Temperature     | 25.0°C   |
| Item      | Inrush Current Waveform         | Testing Circuit | Figure E |
| Condition | Input voltage: 165 Vac, 200 Vac |                 |          |

## Inrush Current Waveforms:

Input voltage: 165 V/U-phase



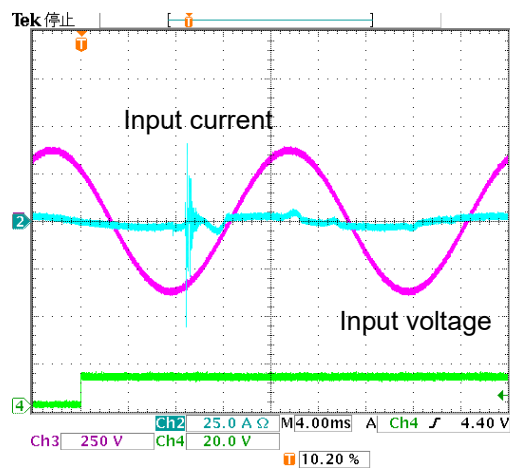
Input voltage: 200 V/U-phase



|           |                         |                 |          |
|-----------|-------------------------|-----------------|----------|
| Model     | PCR6000WE2R             | Temperature     | 25.0°C   |
| Item      | Inrush Current Waveform | Testing Circuit | Figure E |
| Condition | Input voltage: 264 Vac  |                 |          |

Inrush Current Waveform:

Input voltage: 264 V/U-phase



25 Oct 2017  
10:03:32

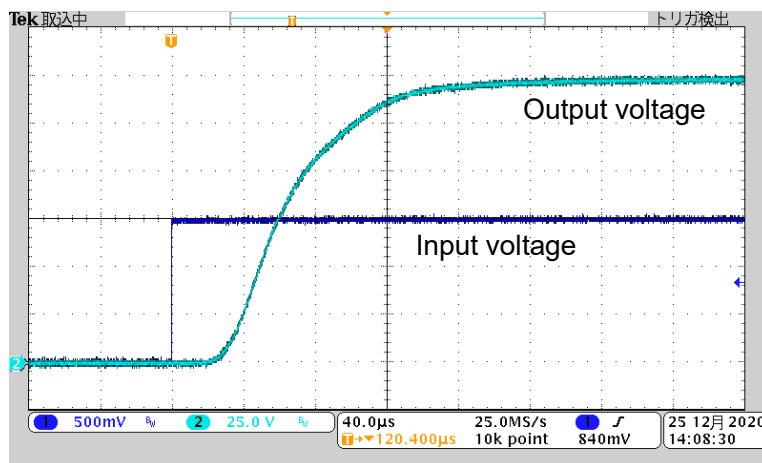
|           |                                                                                                                                                 |                 |        |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                                                                                                                     | Temperature     | 25.0°C |
| Item      | Noise                                                                                                                                           | Testing Circuit | —      |
| Condition | Sound level meter: LA-4440<br>Executed the sequence (fan rotation: 100%).<br>Applied the background noise correction to the noise measurements. |                 |        |

| Measurement Points | Noise Level dB (A) |
|--------------------|--------------------|
| Front side         | 63.8               |
| Left side          | 60.2               |
| Rear side          | 60.8               |
| Right side         | 61.0               |
| Top side           | 60.1               |

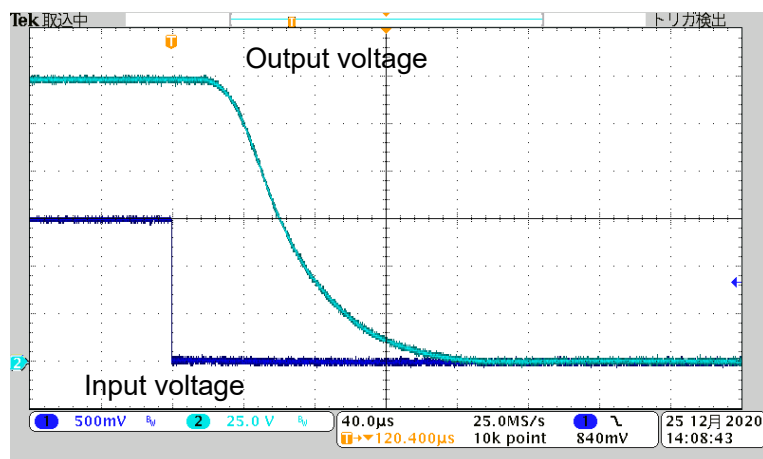
\* Measurement distance: 1 m away from PCR6000WE2R

|           |                                                                                                                                                       |                 |             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C      |
| Item      | Output Voltage Response<br>under Analog Control                                                                                                       | Testing Circuit | Figure<br>F |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: L, EXTDC (amplify the input waveform),<br>Gain: x100, Input voltage: 1.5 Vdc |                 |             |

Output voltage rise response: 0 - 150 Vdc

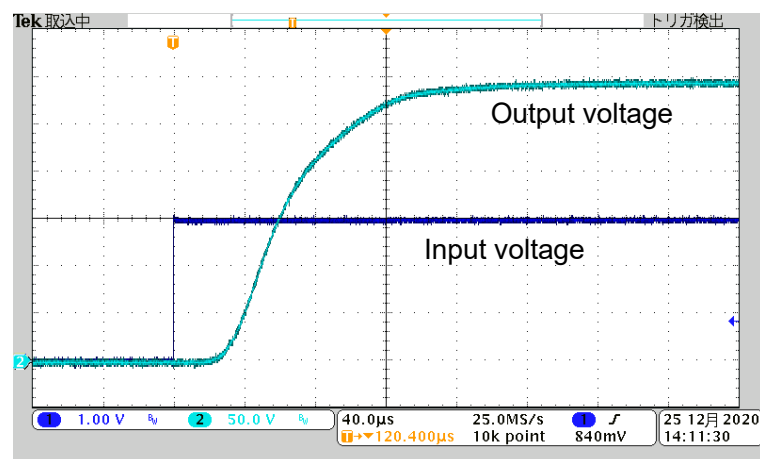


Output voltage fall response: 150 - 0 Vdc

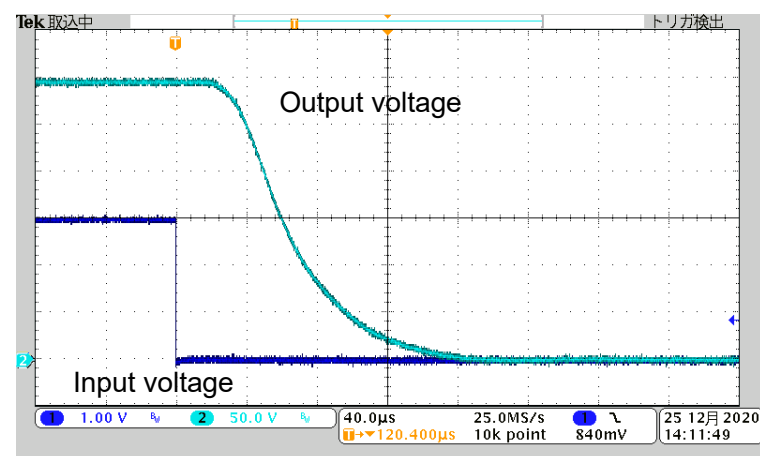


|           |                                                                                                                                                       |                 |             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                           | Temperature     | 25.0°C      |
| Item      | Output Voltage Response<br>under Analog Control                                                                                                       | Testing Circuit | Figure<br>F |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: H, EXTDC (amplify the input waveform),<br>Gain: x100, Input voltage: 3.0 Vdc |                 |             |

Output voltage rise response: 0 - 300 Vdc (H range)

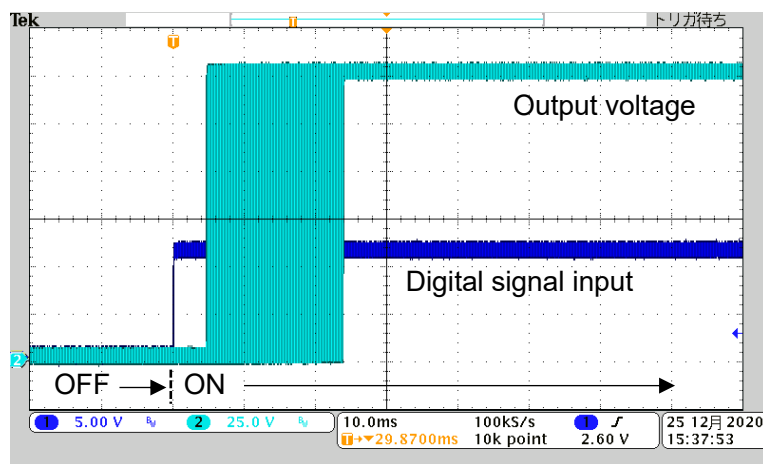


Output voltage fall response: 0 - 300 Vdc (H range)

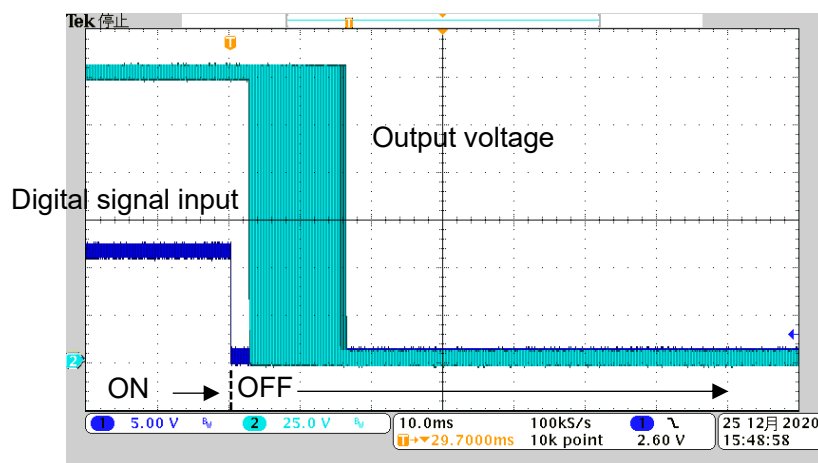


|           |                                                                                                                                                                                 |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output On/Off Response under Digital Control                                                                                                                                    | Testing Circuit | Figure G |
| Condition | Measured under no load condition. RESPONSE: MEDIUM, PHASE: 1Φ, RANGE: L, Performed the output on/off control (Output Control) through the external contact several dozen times. |                 |          |

Output voltage rise response when the output was turned from off to on

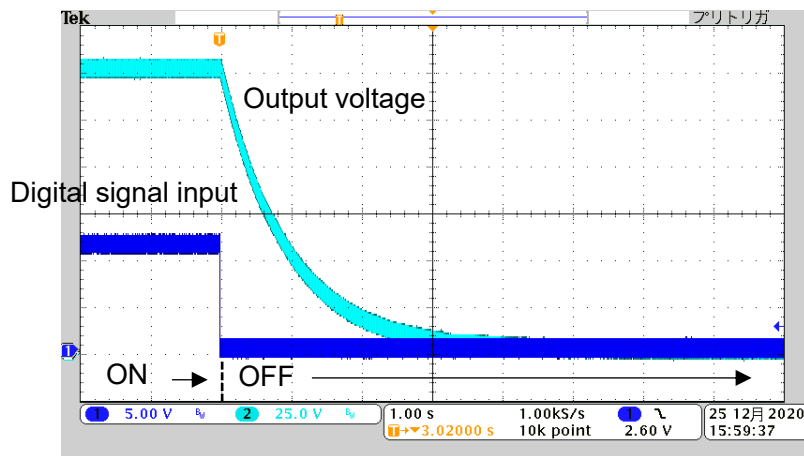


Output voltage fall response when the output was turned from on to off  
(Surge Suppression: ON)



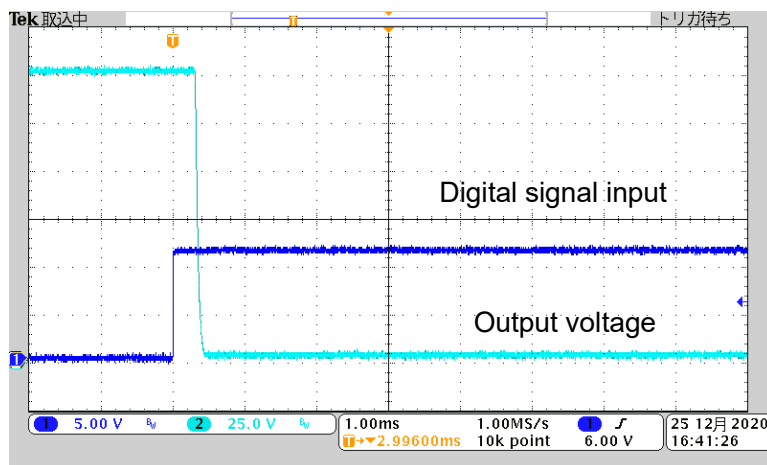
|           |                                                                                                                                                                                       |                 |             |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                                                           | Temperature     | 25.0°C      |
| Item      | Output On/Off Response<br>under Digital Control                                                                                                                                       | Testing Circuit | Figure<br>G |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: L, Performed the output on/off control (Output<br>Control) through the external contact several dozen times. |                 |             |

Output voltage fall response when the output was turned from on to off  
(Surge Suppression: OFF)

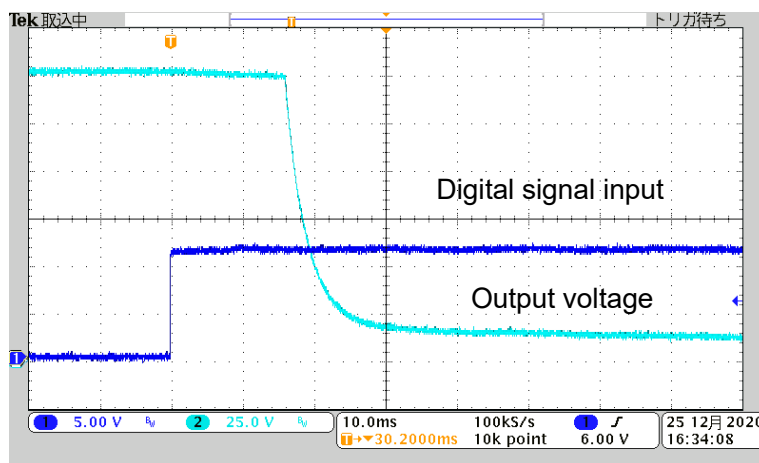


|           |                                                                                                                                                   |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                       | Temperature     | 25.0°C   |
| Item      | Shutdown Response under Digital Control                                                                                                           | Testing Circuit | Figure H |
| Condition | Measured under no load condition. RESPONSE: MEDIUM, PHASE: 1Φ, RANGE: L, Performed the shutdown control (Shut Down) through the external contact. |                 |          |

Output voltage fall response when receiving the shutdown signal  
(Surge Suppression: ON)

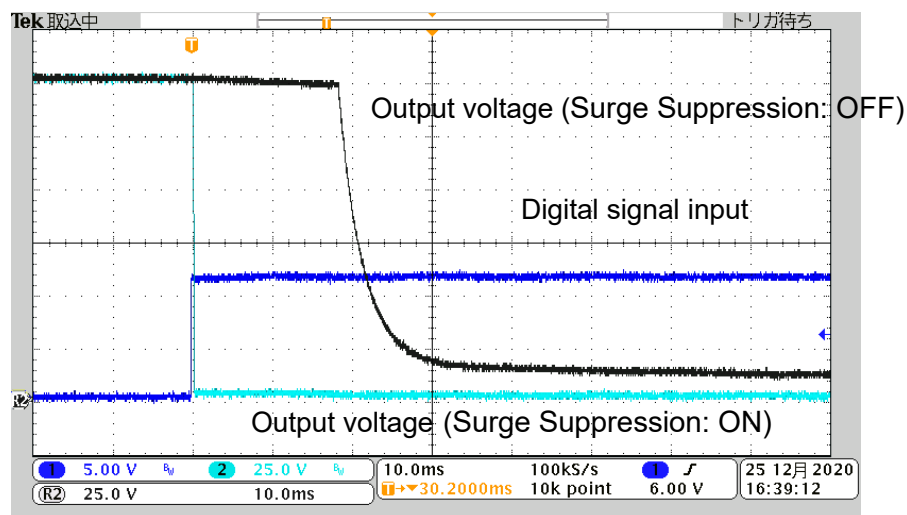


Output voltage fall response when receiving the shutdown signal  
(Surge Suppression: OFF)



|           |                                                                                                                                                   |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                       | Temperature     | 25.0°C   |
| Item      | Shutdown Response under Digital Control                                                                                                           | Testing Circuit | Figure H |
| Condition | Measured under no load condition. RESPONSE: MEDIUM, PHASE: 1Φ, RANGE: L, Performed the shutdown control (Shut Down) through the external contact. |                 |          |

### Comparison between Surge Suppression ON and OFF



Output voltage fall response when receiving the shutdown signal

|           |                                                                                                                                                                                 |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output Voltage with Remote Sensing Cable Disconnected                                                                                                                           | Testing Circuit | Figure J |
| Condition | Output voltage: 155 Vac, RESPONSE: MEDIUM, RANGE: L, Measured under no load condition while the remote sensing function was turned on, but the remote sensing circuit was open. |                 |          |

## Single-phase/Hard Sensing

| Sensing        |                                         | Panel Display (V) | Output Terminal Voltage (V) |
|----------------|-----------------------------------------|-------------------|-----------------------------|
| Local Sensing  |                                         | 155.0             | 154.83                      |
| Remote Sensing | The SENSING L terminal was open.        | 51.6              | 154.82                      |
|                | The SENSING N terminal was open.        | 51.0              | 154.82                      |
|                | Both terminals (SENSING L/N) were open. | 0.1               | 154.83                      |

## Single-phase/Soft Sensing

| Sensing        |                                         | Panel Display (V) | Output Terminal Voltage (V) |
|----------------|-----------------------------------------|-------------------|-----------------------------|
| Local Sensing  |                                         | 155.0             | 154.84                      |
| Remote Sensing | The SENSING L terminal was open.        | 56.7              | 170.39                      |
|                | The SENSING N terminal was open.        | 22.3              | 170.38                      |
|                | Both terminals (SENSING L/N) were open. | 0.1               | 170.37                      |

|           |                                                                                                                                                                                    |                 |          |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                                                        | Temperature     | 25.0°C   |
| Item      | Output Voltage with Remote Sensing Cable Disconnected                                                                                                                              | Testing Circuit | Figure J |
| Condition | Output voltage: 155 Vac, RESPONSE: MEDIUM, RANGE: L,<br>Measured under no load condition while the remote sensing function was turned on, but the remote sensing circuit was open. |                 |          |

### Three-phase/Hard Sensing

| Sensing        |                                         | Panel Display (V) | Output Terminal Voltage (V) |
|----------------|-----------------------------------------|-------------------|-----------------------------|
| Local Sensing  |                                         | 155.0             | 154.83                      |
| Remote Sensing | The SENSING U terminal was open.        | 14.2              | 154.83                      |
|                | The SENSING N terminal was open.        | 155.0             | 153.09                      |
|                | Both terminals (SENSING U/N) were open. | 2.0               | 154.80                      |

### Three-phase/Soft Sensing

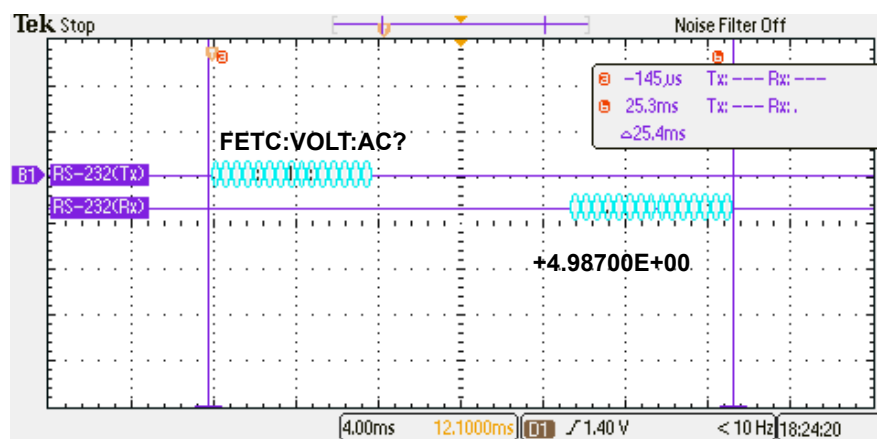
| Sensing        |                                         | Panel Display (V) | Output Terminal Voltage (V) |
|----------------|-----------------------------------------|-------------------|-----------------------------|
| Local Sensing  |                                         | 155.0             | 154.84                      |
| Remote Sensing | The SENSING U terminal was open.        | 12.9              | 170.42                      |
|                | The SENSING N terminal was open.        | 155.0             | 153.09                      |
|                | Both terminals (SENSING U/N) were open. | 2.2               | 170.41                      |

|           |                                                    |                 |        |
|-----------|----------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                        | Temperature     | 25.0°C |
| Item      | Inflow Current to Remote Sensing Terminal          | Testing Circuit | —      |
| Condition | The table below shows the design reference values. |                 |        |

| RANGE | Output Voltage | Inflow Current |
|-------|----------------|----------------|
| H     | 438 Vdc        | 193 uA         |

|           |                                                                                                                                             |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                 | Temperature     | 25.0°C   |
| Item      | Command Control Time<br>(via RS232C Interface)                                                                                              | Testing Circuit | Figure K |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: L, Output voltage: 5 Vac<br>Baud rate: 19200 bps (factory default) |                 |          |

Response time for FETC command: Approx. 25 ms (TYP)



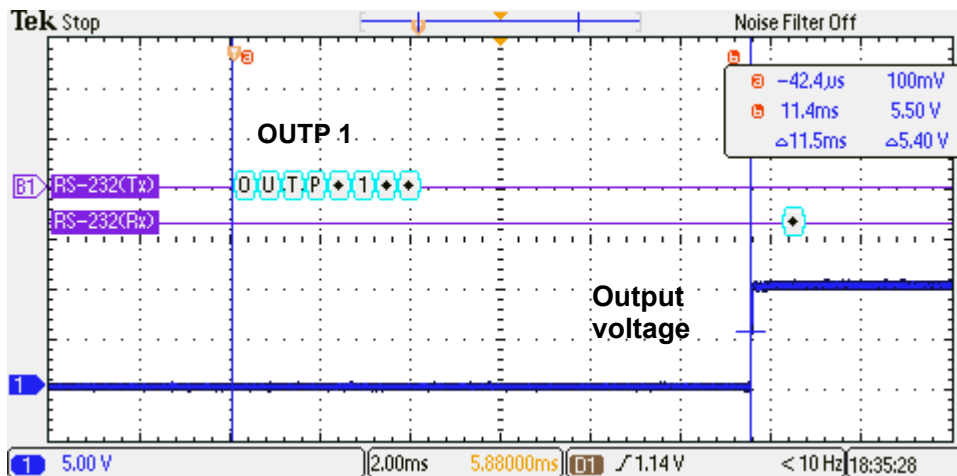
Note: This response time is a typical value (TYP).

#### What is the difference between MEASure and FETC command:

If you use a MEASure command, the measurement is performed, and then the measured value is queried. If you use a FETC command, the measured value is queried without a measurement being performed. Since the MEASure command requires the measurement, it takes longer for the response than the FETC command.

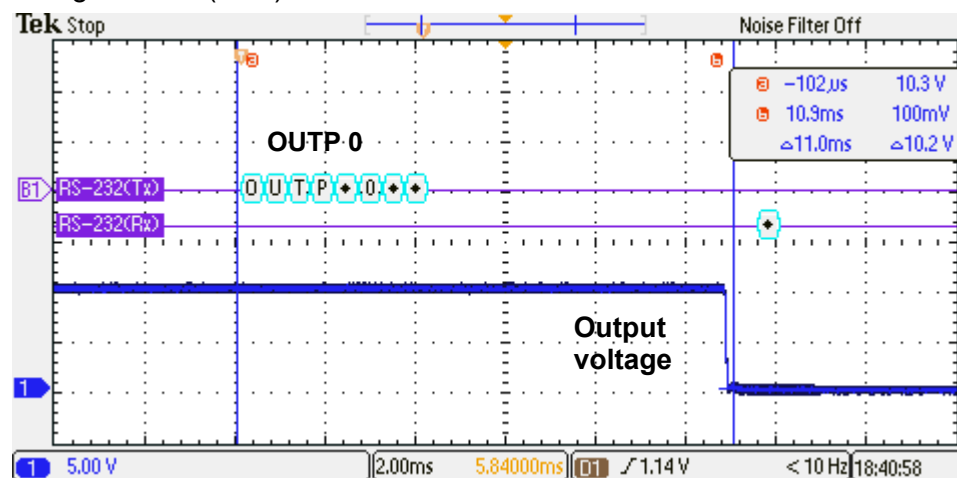
|           |                                                                                                                                             |                 |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                                                 | Temperature     | 25.0°C   |
| Item      | Command Control Time<br>(via RS232C Interface)                                                                                              | Testing Circuit | Figure K |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: L, Output voltage: +10 V<br>Baud rate: 19200 bps (factory default) |                 |          |

Response time from issuing the output-on command to rising the output voltage: 11.5 ms (TYP)



Note: This response time is a typical value (TYP).

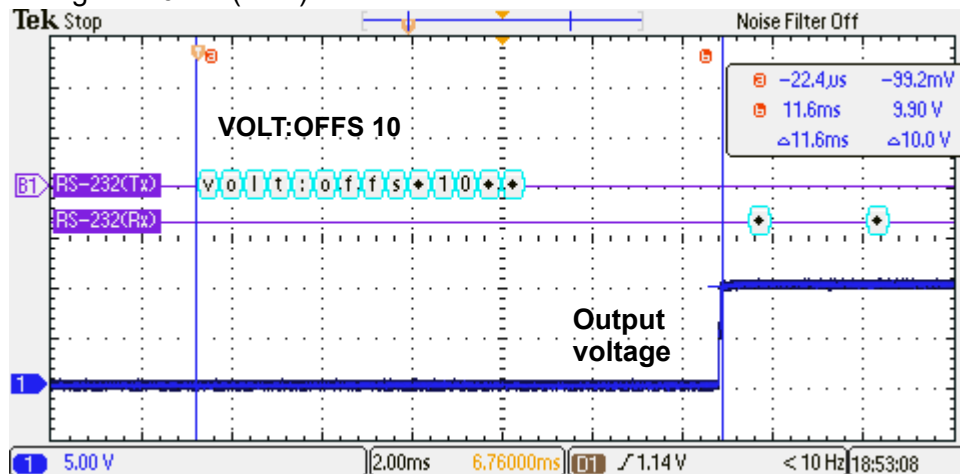
Response time from issuing the output-off command to falling the output voltage: 11 ms (TYP)



Note: This response time is a typical value (TYP).

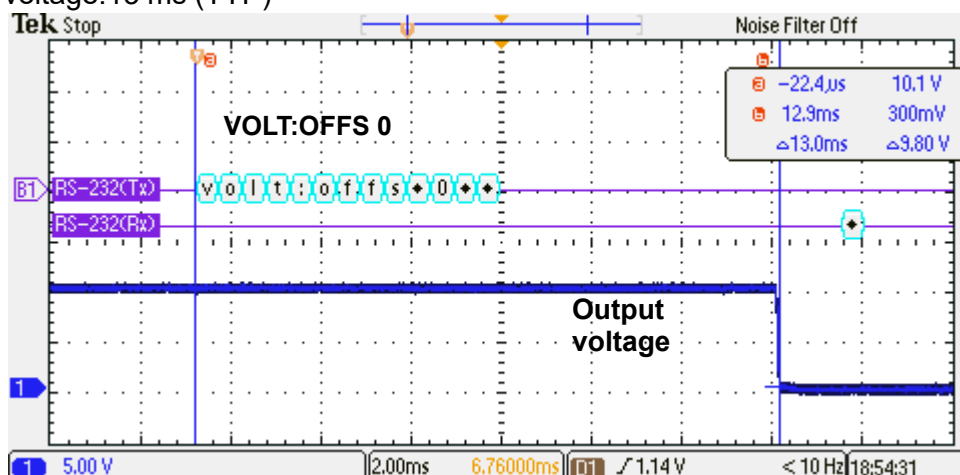
|           |                                                                                                                                             |                 |             |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|
| Model     | PCR6000WE2R                                                                                                                                 | Temperature     | 25.0°C      |
| Item      | Command Control Time<br>(via RS232C Interface)                                                                                              | Testing Circuit | Figure<br>K |
| Condition | Measured under no load condition. RESPONSE: MEDIUM,<br>PHASE: 1Φ, RANGE: L, Output voltage: +10 V<br>Baud rate: 19200 bps (factory default) |                 |             |

Response time from issuing the voltage set command to rising the output voltage: 11.6 ms (TYP)



Note: This response time is a typical value (TYP).

Response time from issuing the voltage set command to falling the output voltage: 13 ms (TYP)



Note: This response time is a typical value (TYP).

|           |                                                              |                 |        |
|-----------|--------------------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                                  | Temperature     | 25.0°C |
| Item      | Panel Display/Analog Control<br>under Digital Remote Control | Testing Circuit | —      |
| Condition | Under no load condition.                                     |                 |        |

|                          |                                                                                                                                                                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remote Control<br>Status | “RMT” is displayed on the front panel.                                                                                                                                                                                                                                                                              |
| REMOTE Command           | RS232C/USB: Move to remote mode by any command.<br>LAN: Move to remote mode by the REMOTE command.                                                                                                                                                                                                                  |
| Remote Control<br>Cancel | <ul style="list-style-type: none"><li>• Press the LOACL key on the front panel.</li><li>• Turn off and on the POWER switch.</li><li>• Transmit the SYSTem:COMMunicate:RLState LOCal command.</li><li>• Transmit the SYSTem:LOCal command.</li></ul> (The panel operation and commands are available in local mode.) |
| Panel Operation          | Invalid<br>(Output-On/Off is also invalid.)                                                                                                                                                                                                                                                                         |
| Analog Control           | The following analog control is prioritized: <ul style="list-style-type: none"><li>• For the output on/off, the analog output-off is prioritized.</li><li>• The voltage and frequency cannot be changed by the panel operation and commands under the analog control.</li></ul>                                     |
| *IDN?                    | Response example:<br>KIKUSUI,PCR3000WE2,WE3RD008,1.00<br>IFC0.03.0035 IOC0.05.0079                                                                                                                                                                                                                                  |

|           |                                                          |                 |        |
|-----------|----------------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                              | Temperature     | 25.0°C |
| Item      | Voltage/Current Measurement Interval and Update Interval | Testing Circuit | —      |
| Condition | Under no load condition.                                 |                 |        |

| Model      | Display Update Interval |
|------------|-------------------------|
| PCR-WE/WE2 | Approx. 100 ms          |

\*You can set a measurement time for PCR-WE/WE2 Series as follows:

### Setting the measurement time

If the measurement time is not set, the voltage and current that are being output may be different from what are displayed on the panel.

With a longer measurement time, the measurements become more stable, but it takes longer to update the display of the measured values. Guidelines for the measurement time when the signal includes an AC component are given below.

- When the period of the AC is known, you can obtain the most accurate measurement results if you set the measurement time to an integer multiple of the period.

Example: If the period of the AC component is 0.1 s, you can obtain the best results in the shortest time if you set the measurement time to 0.1 s.

- When the period of the AC component is unknown, you can obtain comparatively stable measurement results if you set the measurement time to a value that is at least 10 times the expected period.

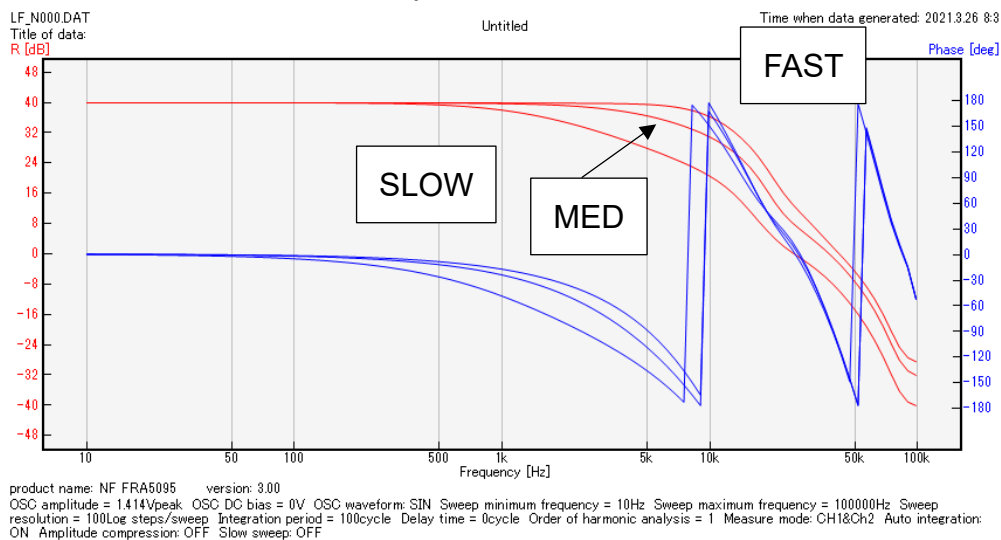
Press OTHERS (SHIFT+MEMORY) > EXT ANLG (F4) > INPUT (F1) > EDIT (F5) > EXTDC (F2) > APERTURE (F3) to set the measurement time.

| Parameter | Title         | Description                                                    |
|-----------|---------------|----------------------------------------------------------------|
| APERTURE  | Aperture Time | Sets the measurement time (0.1 s to 1.0 s, resolution: 0.1 s). |

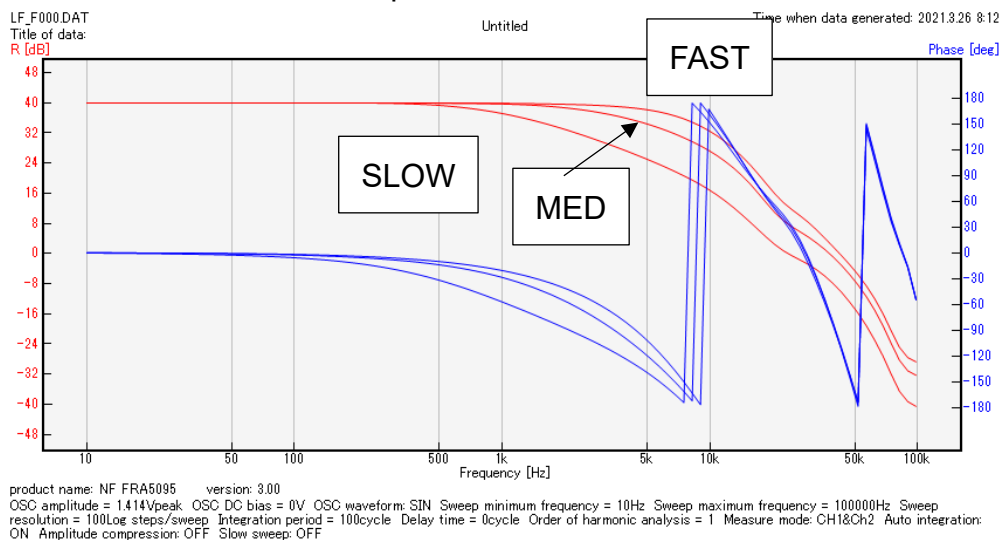
This information is excerpted from the user's manual.

|           |                                                                   |                 |          |
|-----------|-------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                       | Temperature     | 25.0°C   |
| Item      | Frequency Response                                                | Testing Circuit | Figure L |
| Condition | PHASE: 3Φ, RANGE: L<br>EXTDC GAIN: x100<br>INPUT VOLT: 1.41 Vpeak |                 |          |

### U-phase/No Load

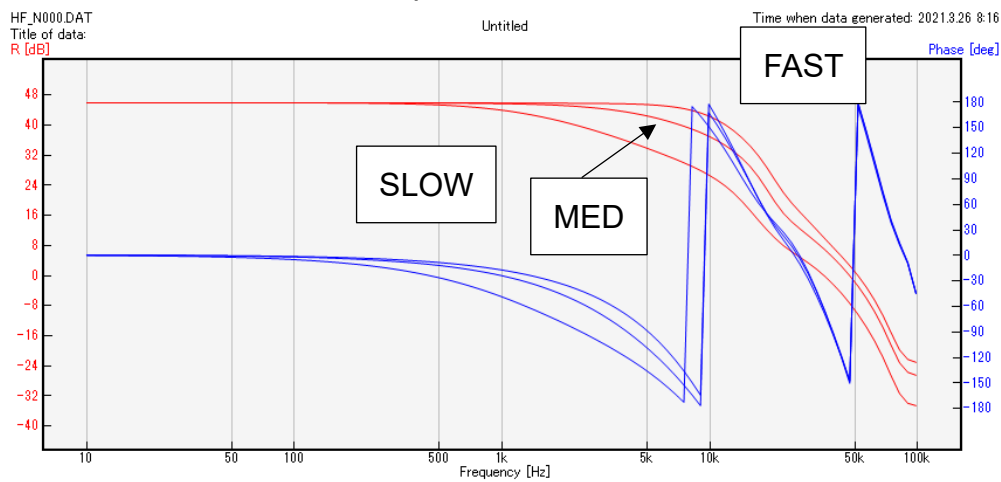


### U-phase/Rated Load

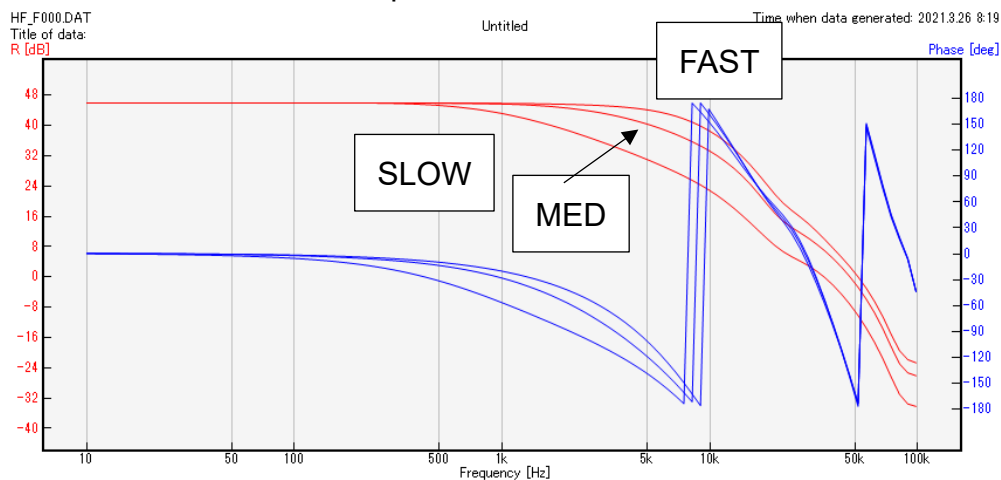


|           |                                                                   |                 |          |
|-----------|-------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                       | Temperature     | 25.0°C   |
| Item      | Frequency Response                                                | Testing Circuit | Figure L |
| Condition | PHASE: 3Φ, RANGE: H<br>EXTDC GAIN: x100<br>INPUT VOLT: 2.82 Vpeak |                 |          |

### U-phase/No Load

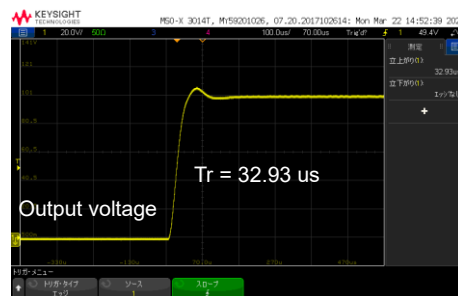


### U-phase/Rated Load



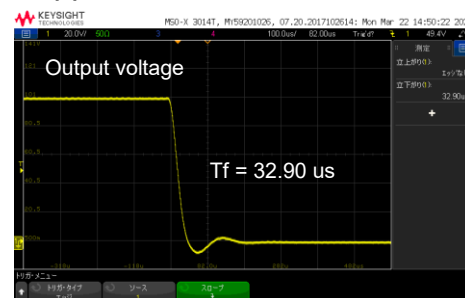
|           |                                                                                                                 |                 |          |
|-----------|-----------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                          | Testing Circuit | Figure M |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: L<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

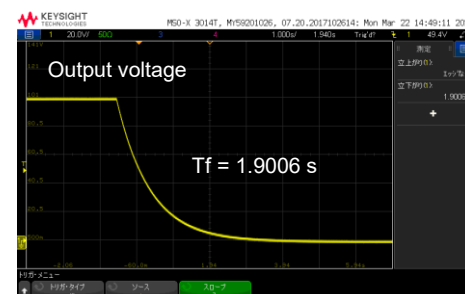


## Output-Off Waveform

Surge Suppression: ON

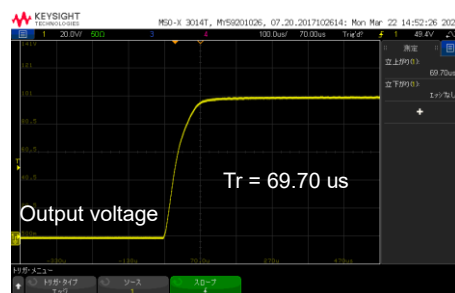


Surge Suppression: OFF



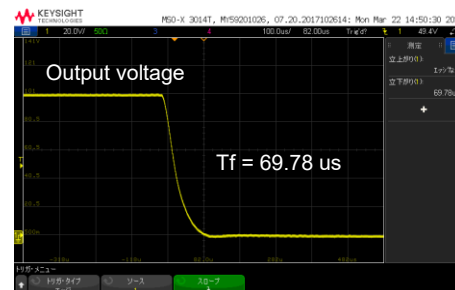
|           |                                                                                                                   |                 |          |
|-----------|-------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                       | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                            | Testing Circuit | Figure M |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: L<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

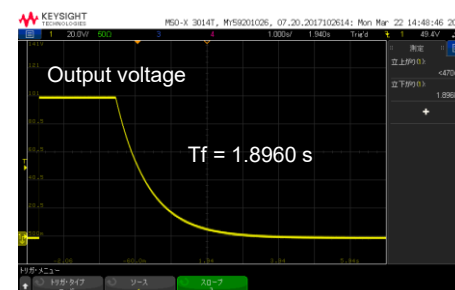


## Output-Off Waveform

Surge Suppression: ON

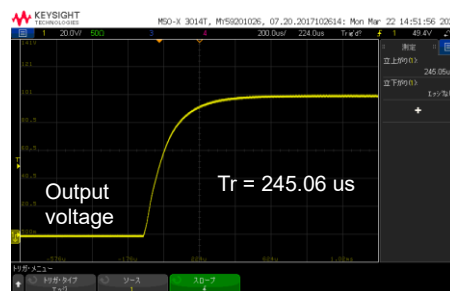


Surge Suppression: OFF



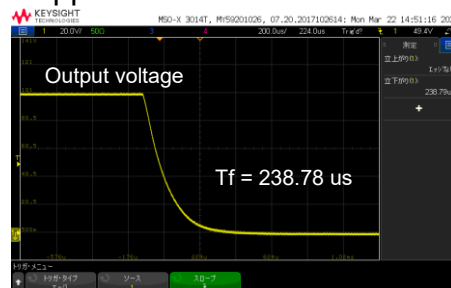
|           |                                                                                                                 |                 |          |
|-----------|-----------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                          | Testing Circuit | Figure M |
| Condition | Output voltage: 100 Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: L<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

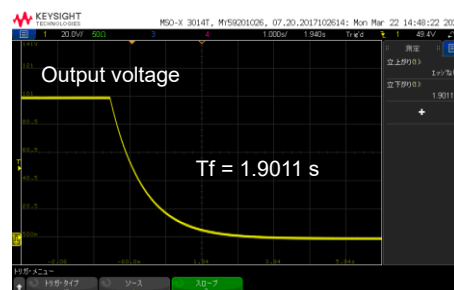


## Output-Off Waveform

Surge Suppression: ON

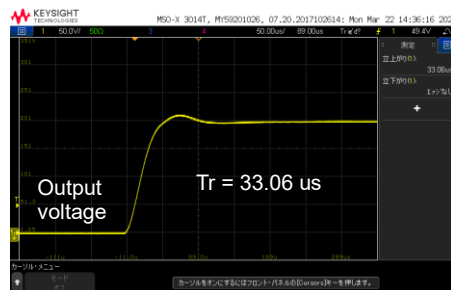


Surge Suppression: OFF



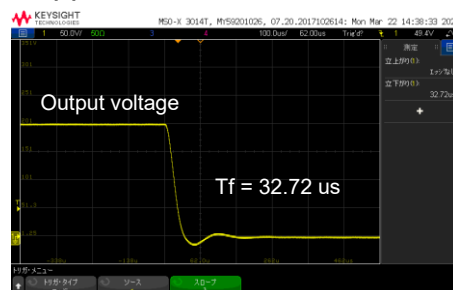
|           |                                                                                                                 |                 |          |
|-----------|-----------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                          | Testing Circuit | Figure M |
| Condition | Output voltage: 200 Vdc, Measured under no load condition.<br>RESPONSE: FAST, PHASE: 3Φ, RANGE: H<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

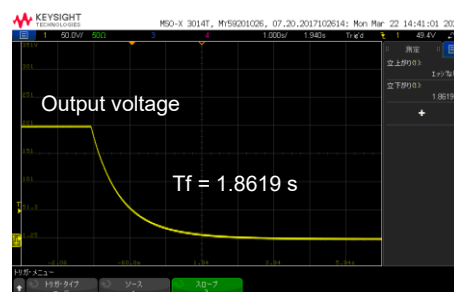


## Output-Off Waveform

Surge Suppression: ON

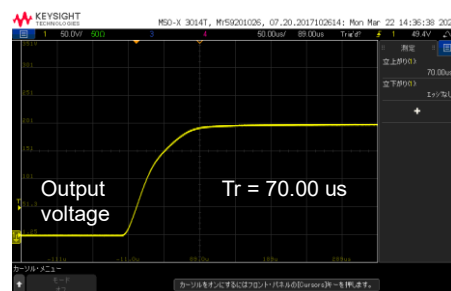


Surge Suppression: OFF



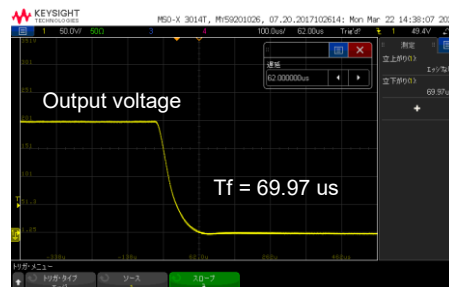
|           |                                                                                                                   |                 |          |
|-----------|-------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                       | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                            | Testing Circuit | Figure M |
| Condition | Output voltage: 200 Vdc, Measured under no load condition.<br>RESPONSE: MEDIUM, PHASE: 3Φ, RANGE: H<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

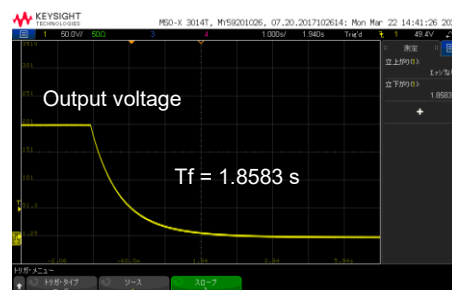


## Output-Off Waveform

Surge Suppression: ON

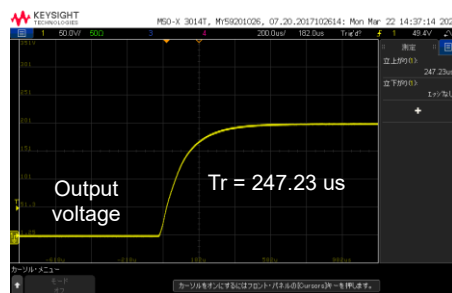


Surge Suppression: OFF



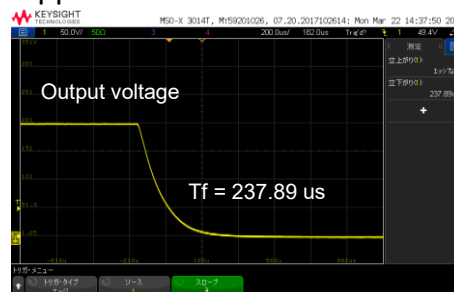
|           |                                                                                                                 |                 |          |
|-----------|-----------------------------------------------------------------------------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                                                                                                     | Temperature     | 25.0°C   |
| Item      | Output On/Off Waveform                                                                                          | Testing Circuit | Figure M |
| Condition | Output voltage: 200 Vdc, Measured under no load condition.<br>RESPONSE: SLOW, PHASE: 3Φ, RANGE: H<br>Tr/Tf: TYP |                 |          |

## Output-On Waveform

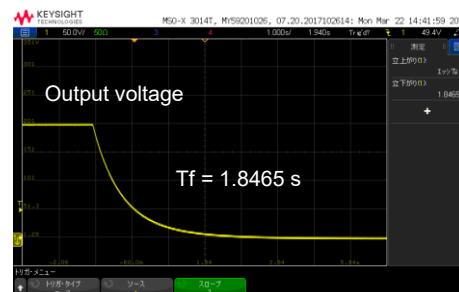


## Output-Off Waveform

Surge Suppression: ON

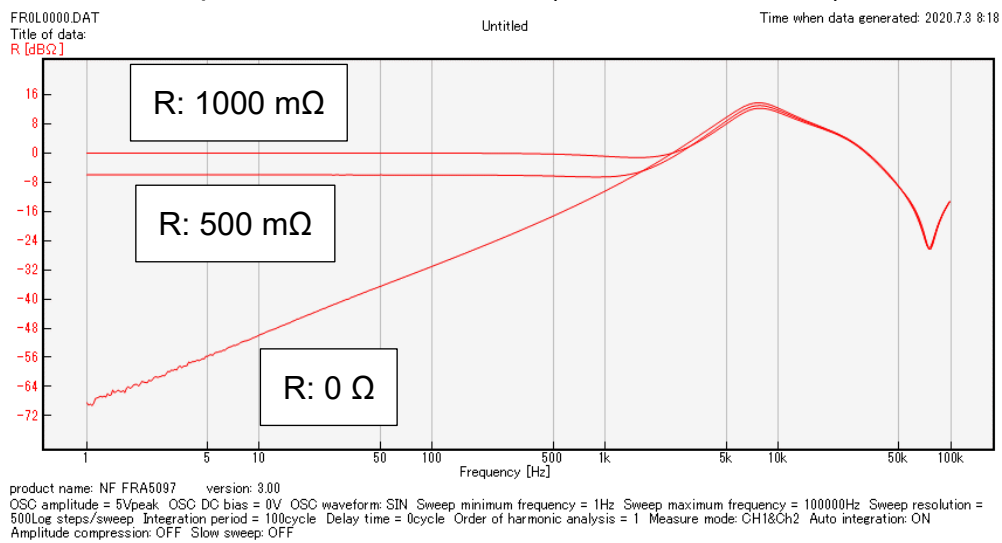


Surge Suppression: OFF

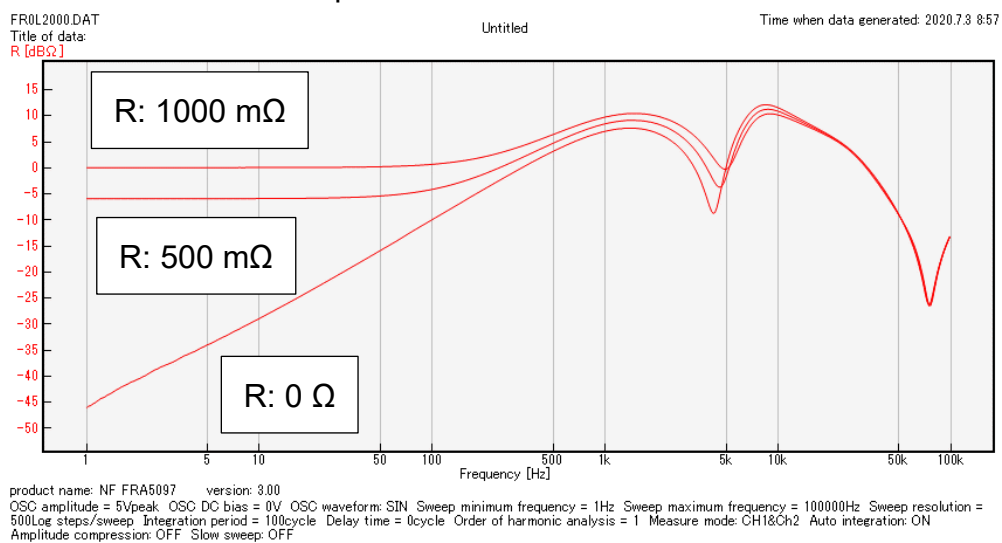


|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: FAST<br>RANGE: L<br>PHASE: 3Φ |                 |          |

### U-phase/Inductance: 0 uH (actual value: 40 uH)

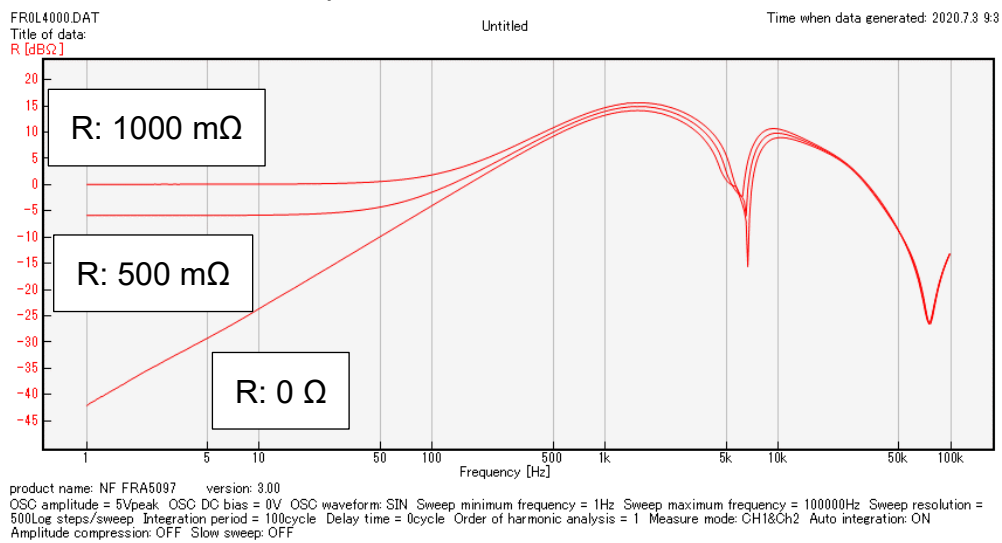


### U-phase/Inductance: 500 uH



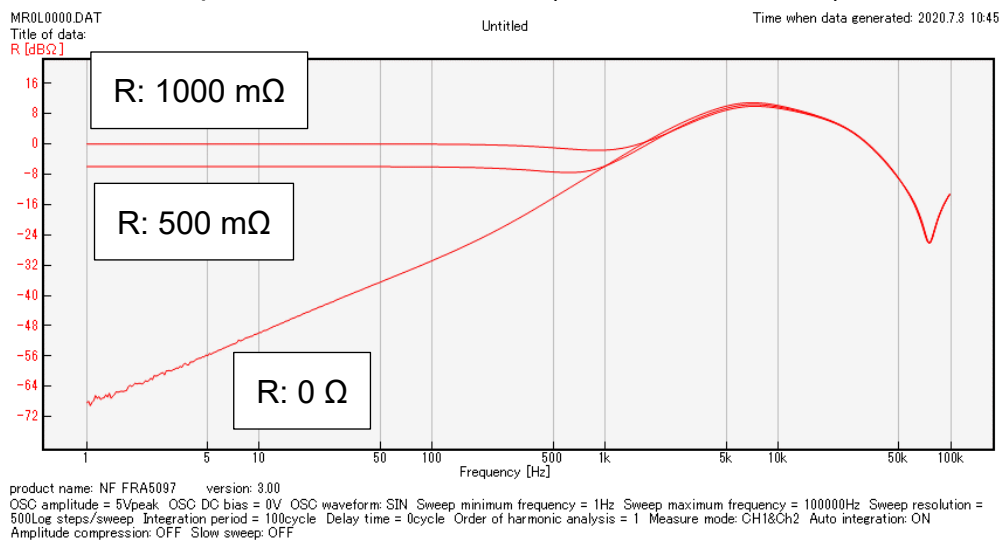
|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: FAST<br>RANGE: L<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 1000 uH

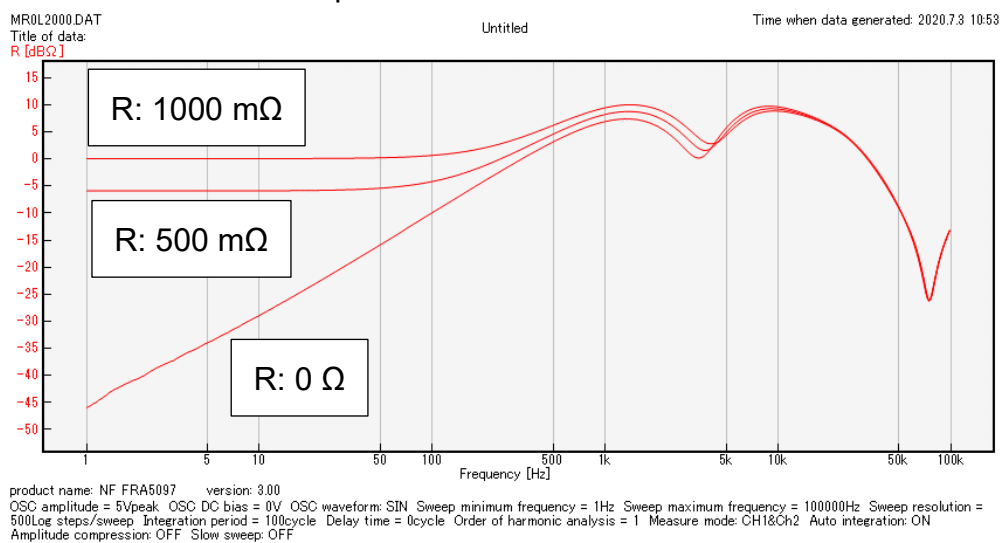


|           |                                           |                 |          |
|-----------|-------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                               | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics          | Testing Circuit | Figure N |
| Condition | RESPONSE: MEDIUM<br>RANGE: L<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 0 uH (actual value: 40 uH)



## U-phase/Inductance: 500 uH



|           |                                           |                 |          |
|-----------|-------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                               | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics          | Testing Circuit | Figure N |
| Condition | RESPONSE: MEDIUM<br>RANGE: L<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 1000 uH

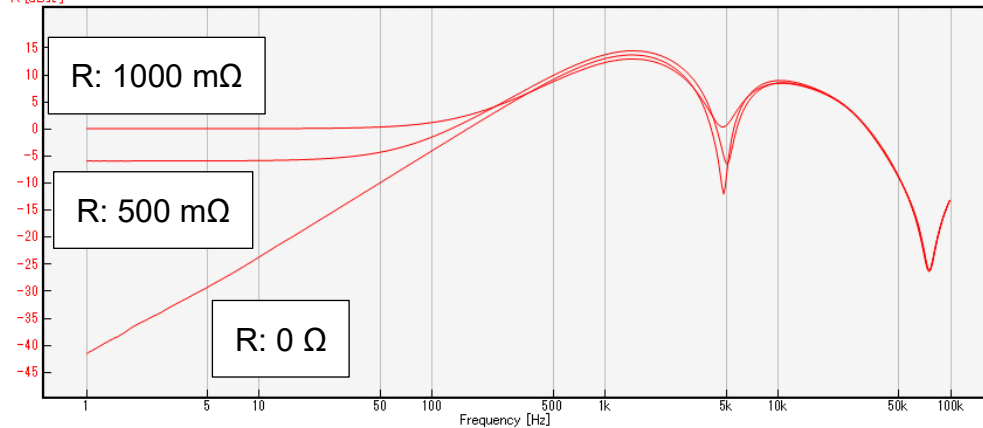
MR0L4000.DAT

Title of data:

Untitled

Time when data generated: 2020.7.3 10:59

R [dBΩ]



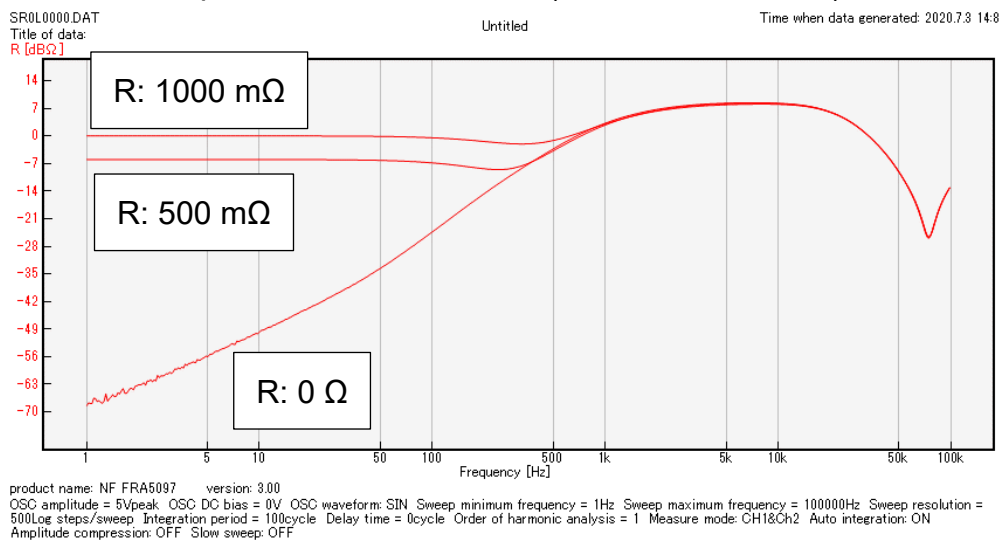
product name: NF FRA5097 version: 3.00

OSC amplitude = 5Vpeak OSC DC bias = 0V OSC waveform: SIN Sweep minimum frequency = 1Hz Sweep maximum frequency = 100000Hz Sweep resolution = 500Log steps/sweep Integration period = 100cycle Delay time = 0cycle Order of harmonic analysis = 1 Measure mode: CH1&Ch2 Auto integration: ON

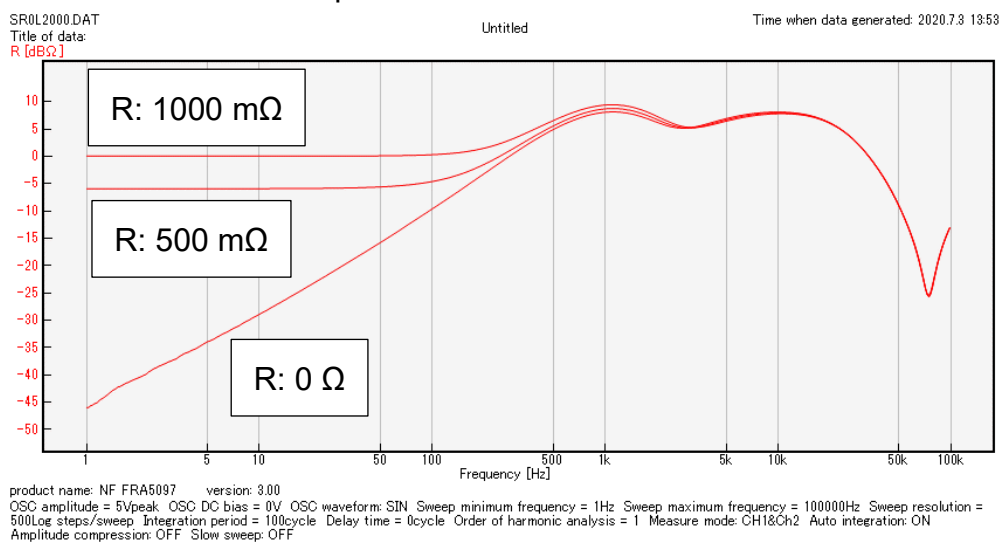
Amplitude compression: OFF Slow sweep: OFF

|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: SLOW<br>RANGE: L<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 0 uH (actual value: 40 uH)



## U-phase/Inductance: 500 uH



|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: SLOW<br>RANGE: L<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 1000 uH

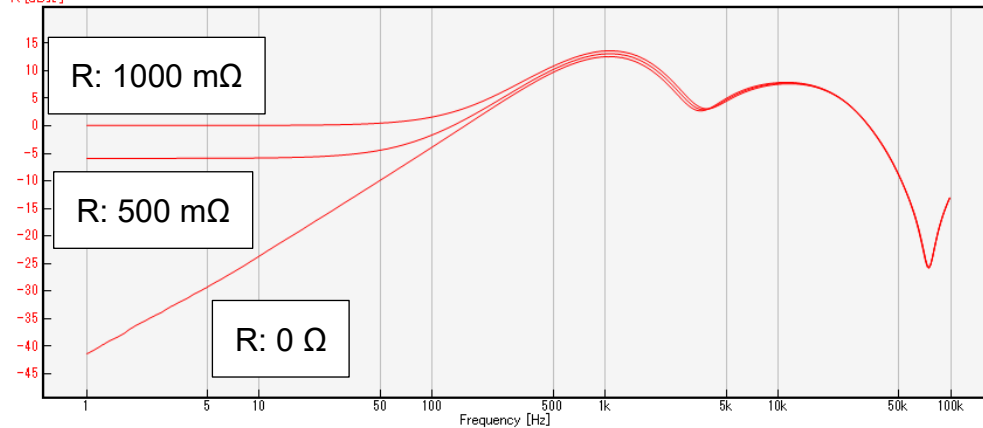
SR0L4000.DAT

Title of data:

Untitled

Time when data generated: 2020.7.3 13:59

R [dBΩ]



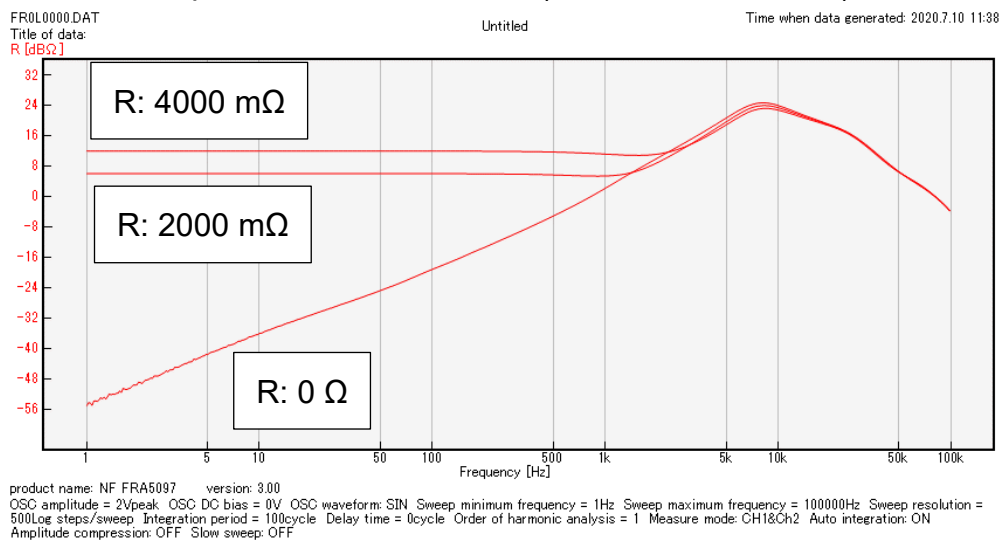
product name: NF FRA5097 version: 3.00

OSC amplitude = 5Vpeak OSC DC bias = 0V OSC waveform: SIN Sweep minimum frequency = 1Hz Sweep maximum frequency = 100000Hz Sweep resolution = 500Log steps/sweep Integration period = 100cycle Delay time = 0cycle Order of harmonic analysis = 1 Measure mode: CH1&Ch2 Auto integration: ON

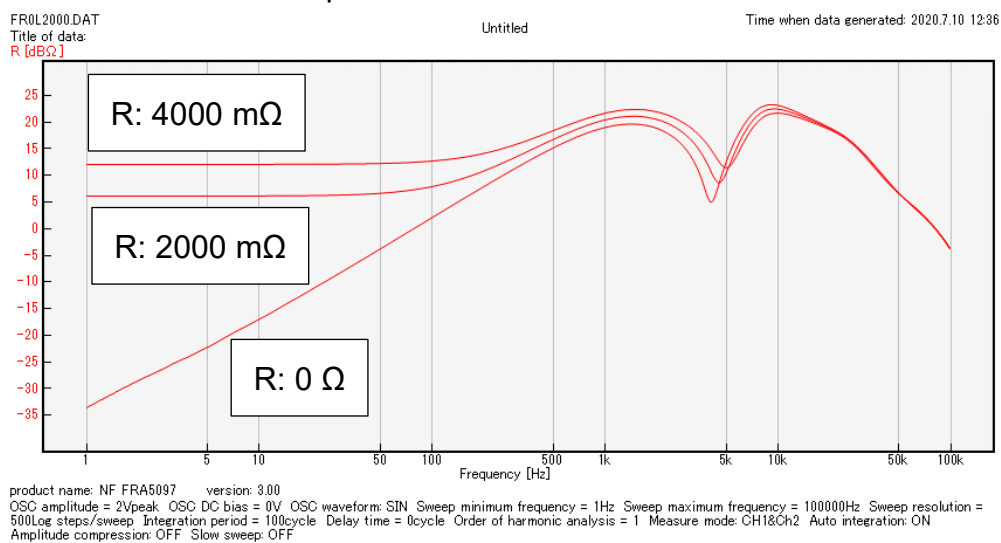
Amplitude compression: OFF Slow sweep: OFF

|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: FAST<br>RANGE: H<br>PHASE: 3Φ |                 |          |

### U-phase/Inductance: 0 uH (actual value: 160 uH)

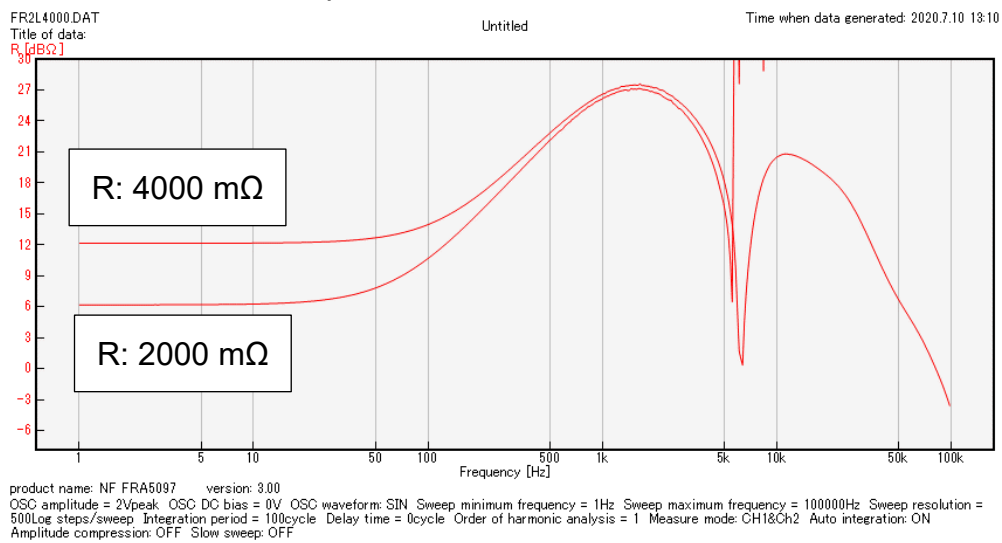


### U-phase/Inductance: 2000 uH



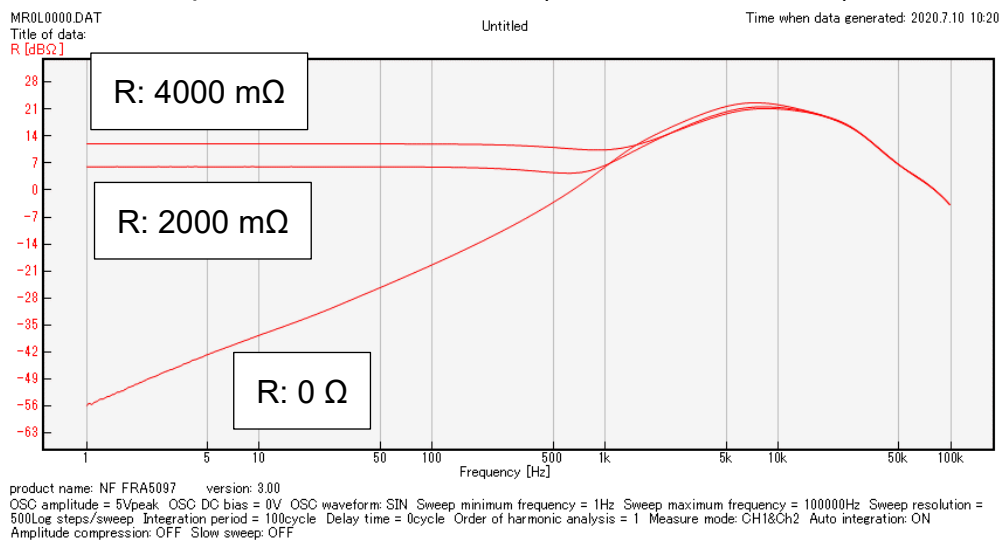
|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: FAST<br>RANGE: H<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 4000 uH

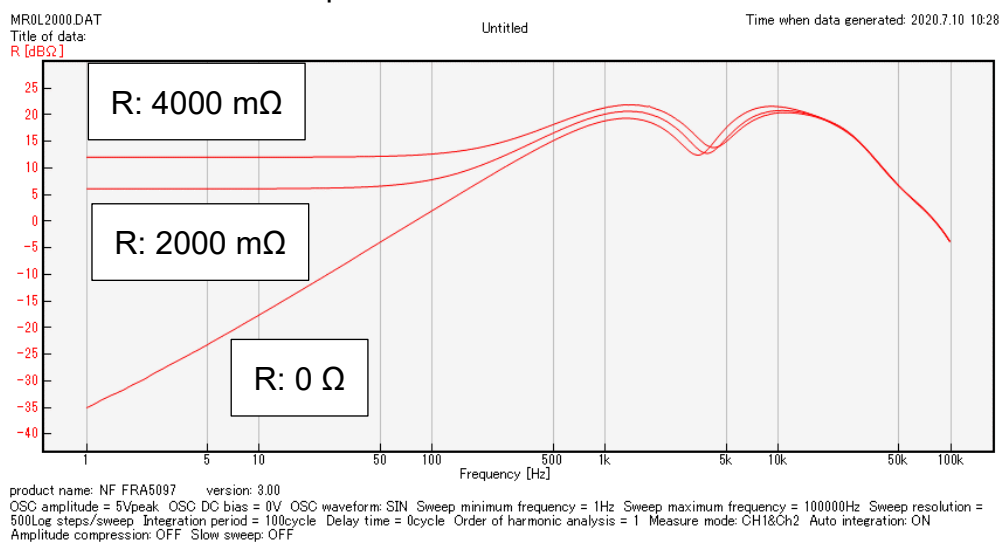


|           |                                           |                 |          |
|-----------|-------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                               | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics          | Testing Circuit | Figure N |
| Condition | RESPONSE: MEDIUM<br>RANGE: H<br>PHASE: 3Φ |                 |          |

### U-phase/Inductance: 0 uH (actual value: 160 uH)

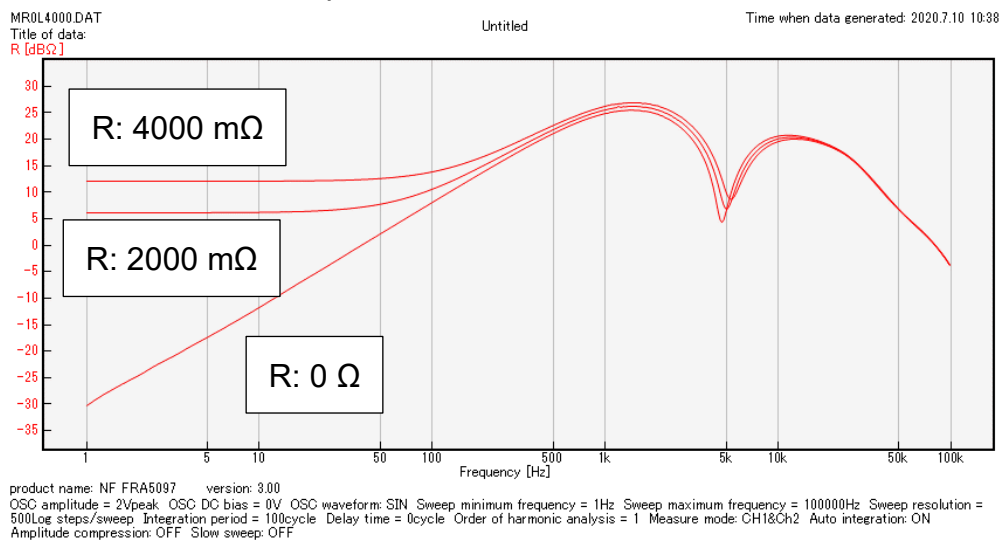


### U-phase/Inductance: 2000 uH



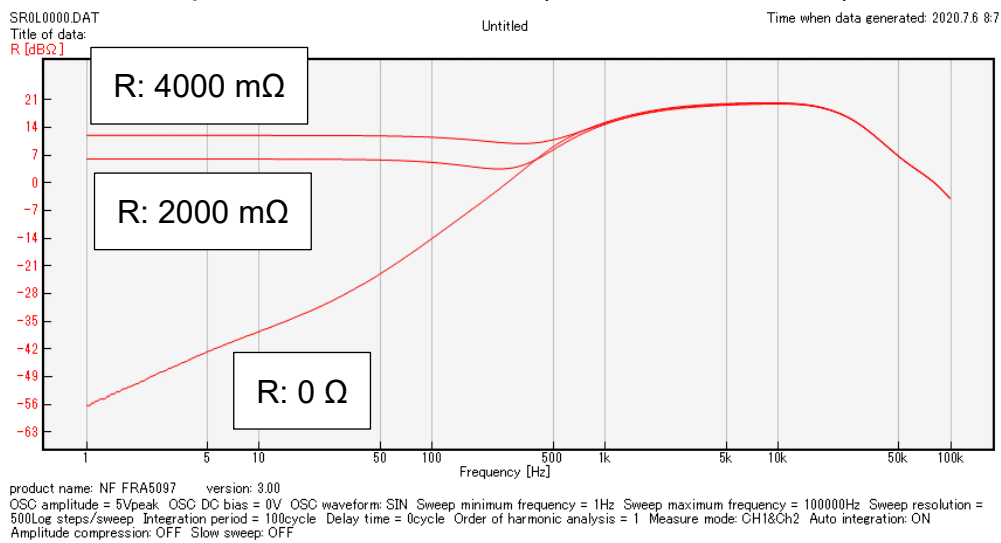
|           |                                           |                 |          |
|-----------|-------------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                               | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics          | Testing Circuit | Figure N |
| Condition | RESPONSE: MEDIUM<br>RANGE: H<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 4000 uH

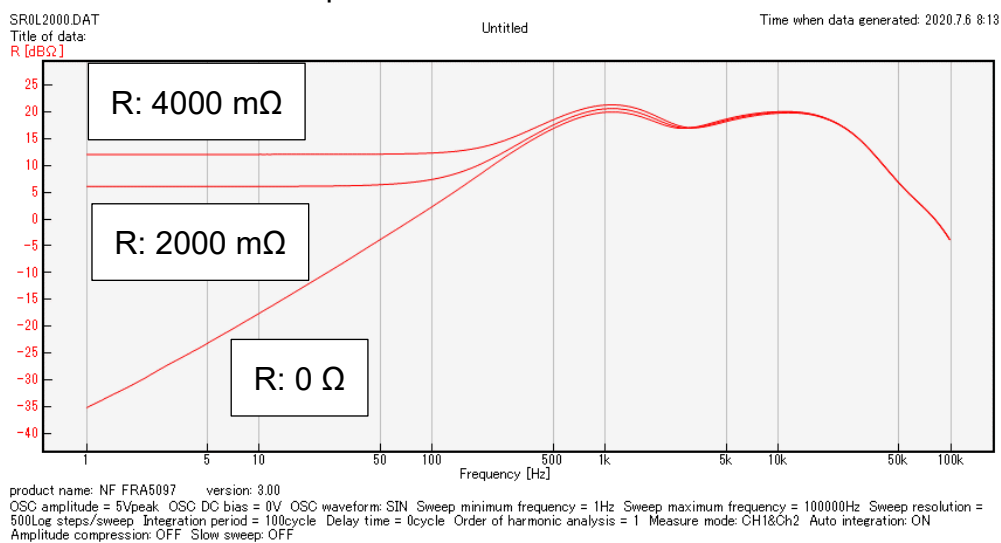


|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: SLOW<br>RANGE: H<br>PHASE: 3Φ |                 |          |

### U-phase/Inductance: 0 uH (actual value: 160 uH)



### U-phase/Inductance: 2000 uH



|           |                                         |                 |          |
|-----------|-----------------------------------------|-----------------|----------|
| Model     | PCR6000WE2R                             | Temperature     | 25.0°C   |
| Item      | Output Impedance Characteristics        | Testing Circuit | Figure N |
| Condition | RESPONSE: SLOW<br>RANGE: H<br>PHASE: 3Φ |                 |          |

## U-phase/Inductance: 4000 uH

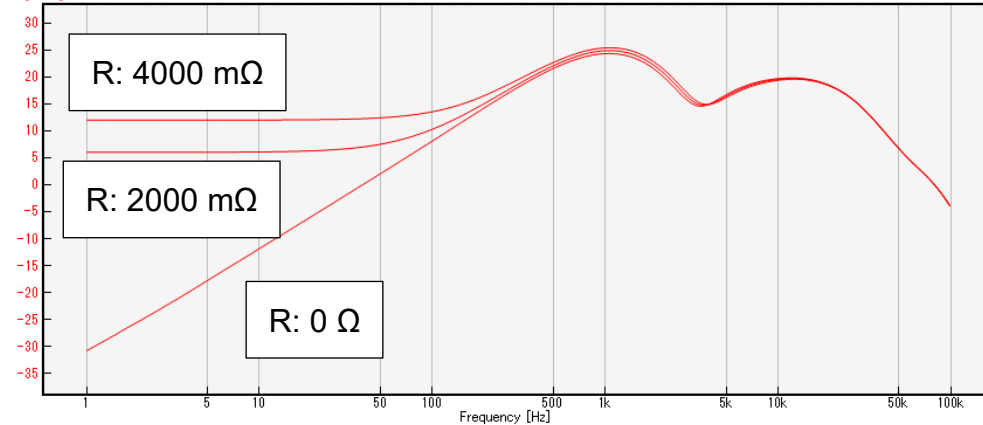
SR0L4000.DAT

Title of data:

Untitled

Time when data generated: 2020.7.6 8:19

R [dBΩ]

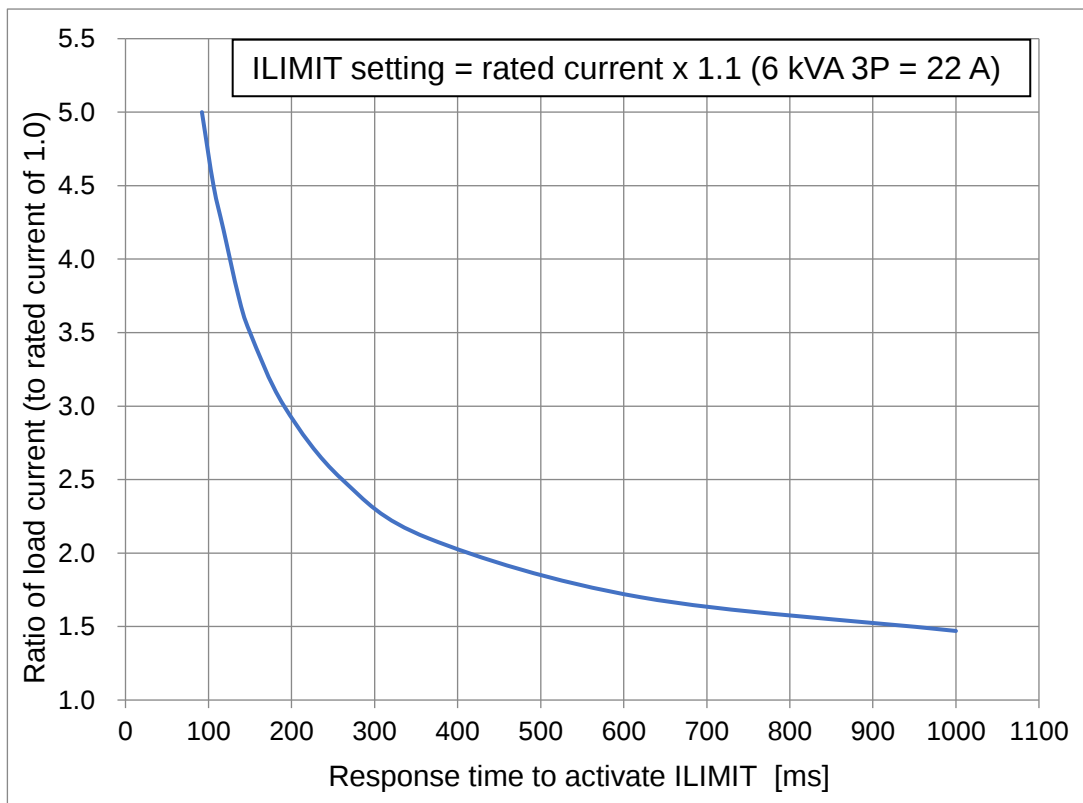


product name: NF FRA5097 version: 3.00

OSC amplitude = 5Vpeak OSC DC bias = 0V OSC waveform: SIN Sweep minimum frequency = 1Hz Sweep maximum frequency = 100000Hz Sweep resolution = 500Log steps/sweep Integration period = 100cycle Delay time = 0cycle Order of harmonic analysis = 1 Measure mode: CH1&Ch2 Auto integration: ON

Amplitude compression: OFF Slow sweep: OFF

|           |                                                    |                 |        |
|-----------|----------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                        | Temperature     | 25.0°C |
| Item      | Current Limit Response                             | Testing Circuit | —      |
| Condition | The graph below shows the design reference values. |                 |        |



|           |                                                  |                 |        |
|-----------|--------------------------------------------------|-----------------|--------|
| Model     | PCR6000WE2R                                      | Temperature     | 25.0°C |
| Item      | Power Limit Response                             | Testing Circuit | —      |
| Condition | The following shows the design reference values. |                 |        |

Power Limit Response Time

$$T[\text{sec}] = \frac{7200 - P_{\text{over}} + P_{\text{rating}}}{4(P_{\text{over}} - P_{\text{rating}})}$$

T[sec] : The time until the power limit activates.

Pover[W] : The overload power

Prating[W]: The rated power

|           |                 |                 |        |
|-----------|-----------------|-----------------|--------|
| Model     | PCR6000WE2R     | Temperature     | 25.0°C |
| Item      | Output Capacity | Testing Circuit | —      |
| Condition |                 |                 |        |

|            | L range | H range |
|------------|---------|---------|
| PCR1000WE  | 2.72 uF | 0.68 uF |
| PCR2000WE  | 5.44 uF | 1.36 uF |
| PCR3000WE  | 8.16 uF | 2.04 uF |
| PCR6000WE  | 15.6 uF | 3.9 uF  |
| PCR12000WE | 31.2 uF | 7.8 uF  |
| PCR18000WE | 46.8 uF | 11.7 uF |
| PCR24000WE | 62.4 uF | 15.6 uF |
| PCR30000WE | 78 uF   | 19.5 uF |
| PCR36000WE | 93.6 uF | 23.4 uF |

## Testing Circuit

Figure A

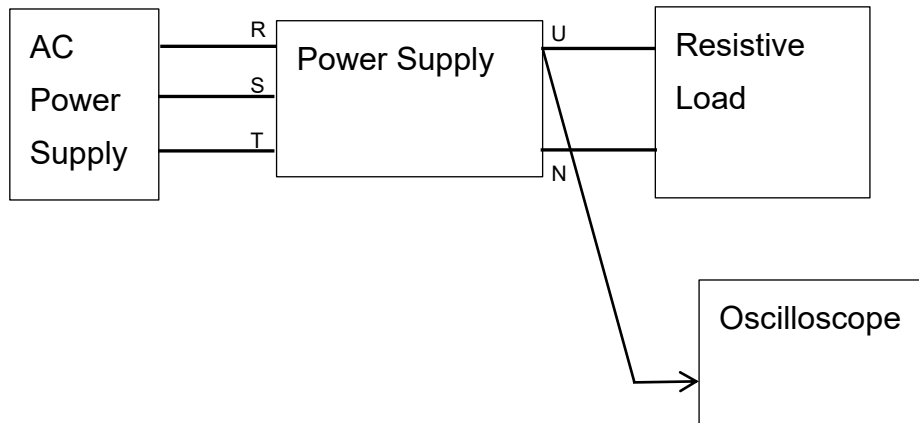


Figure B

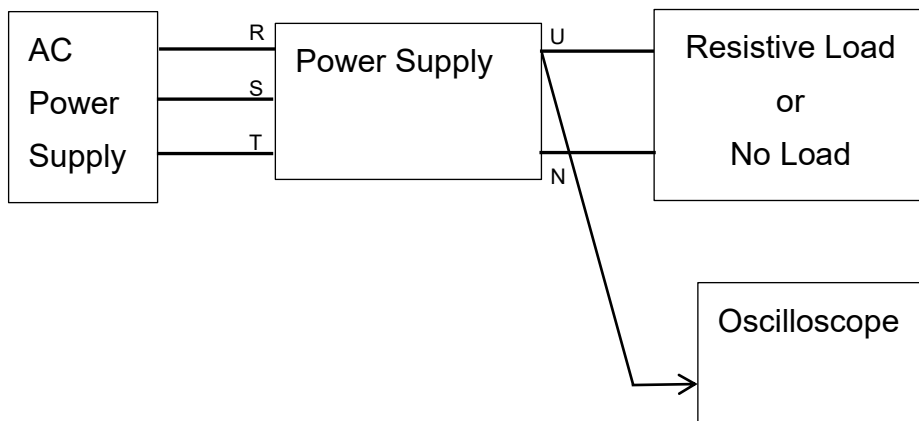


Figure C

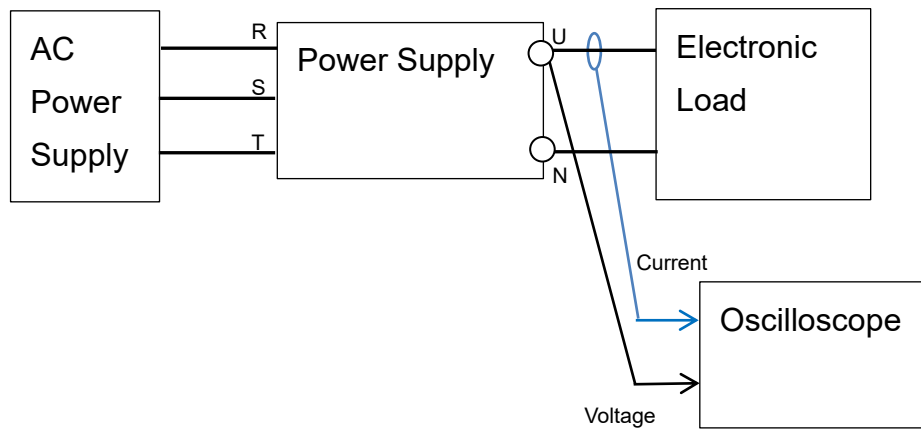


Figure D-1

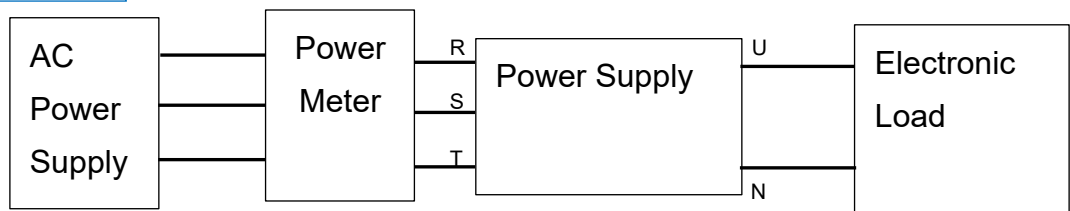


Figure D-2

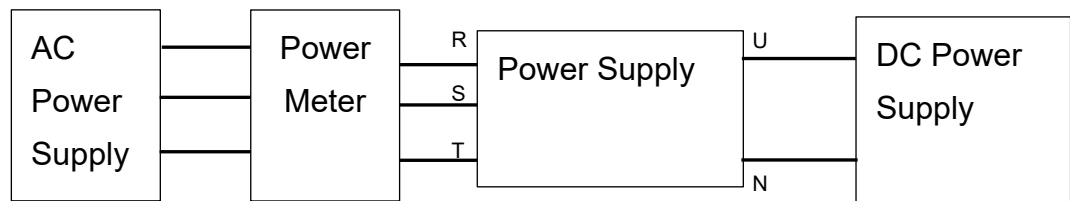


Figure E

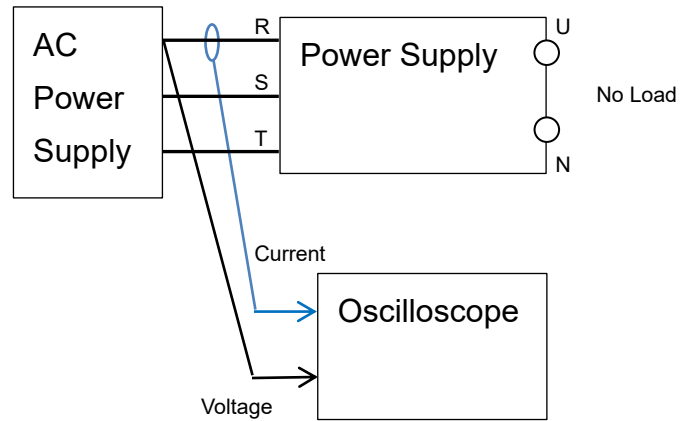


Figure F

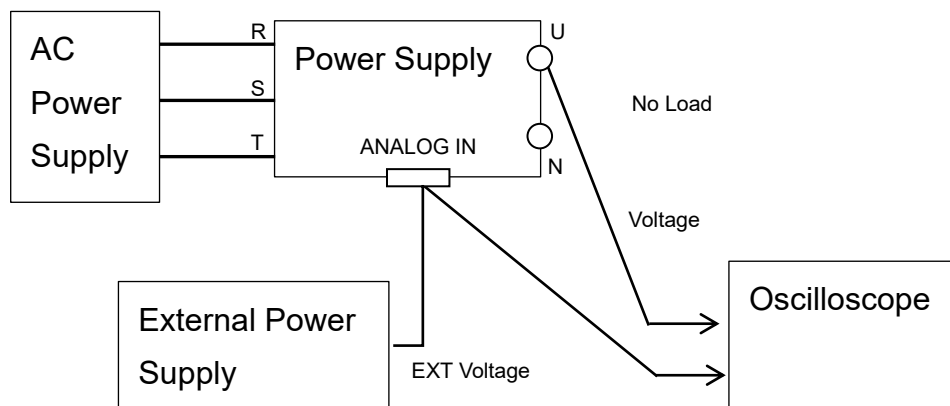


Figure G

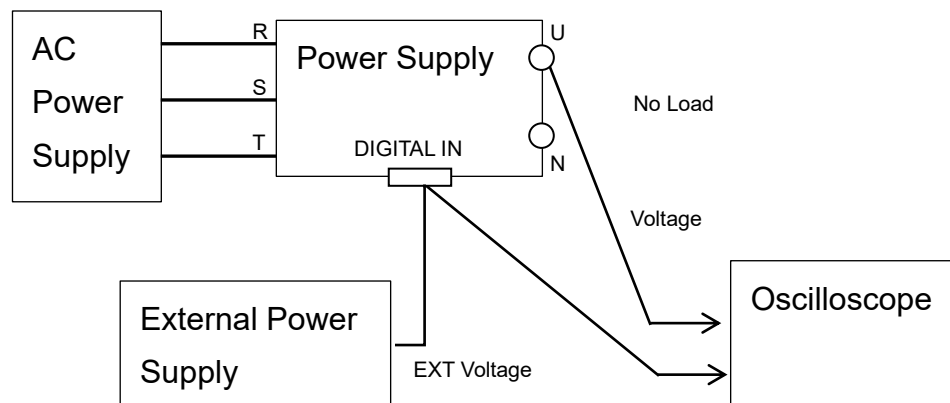


Figure H

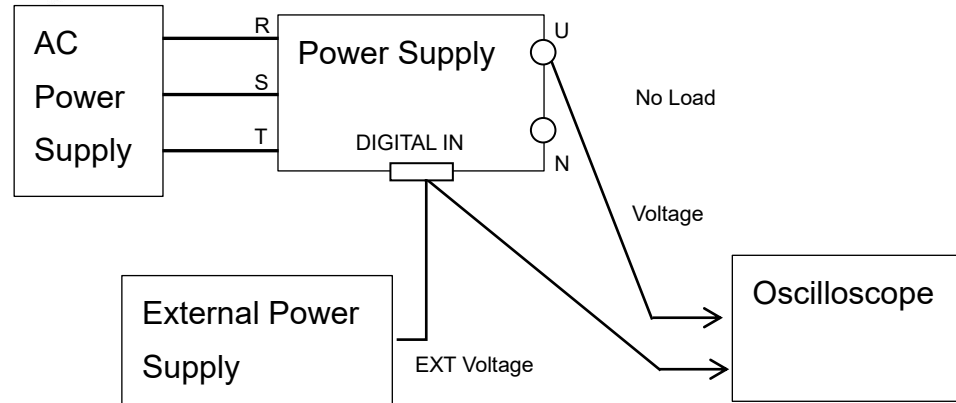


Figure J

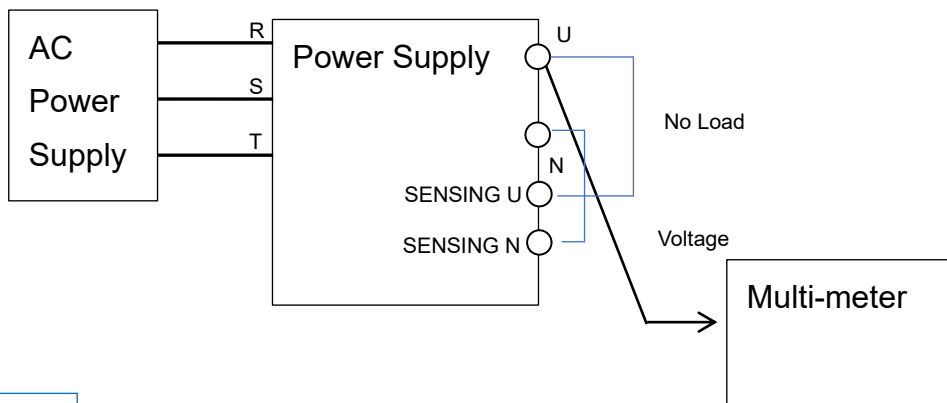


Figure K

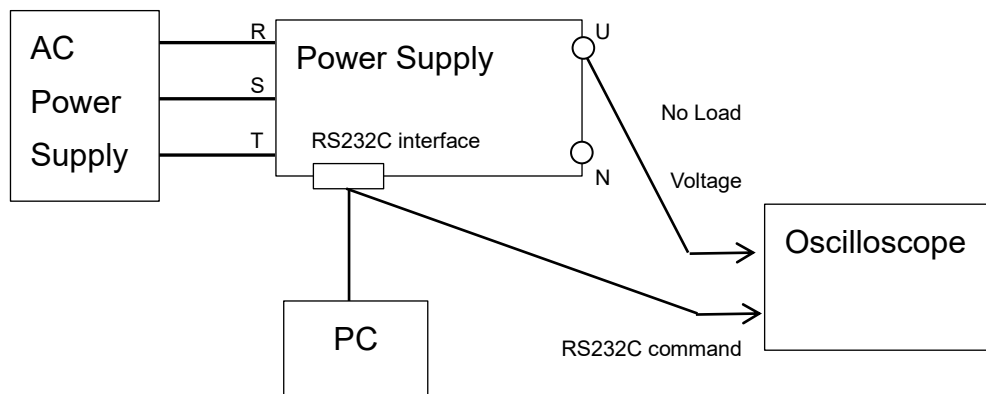


Figure L

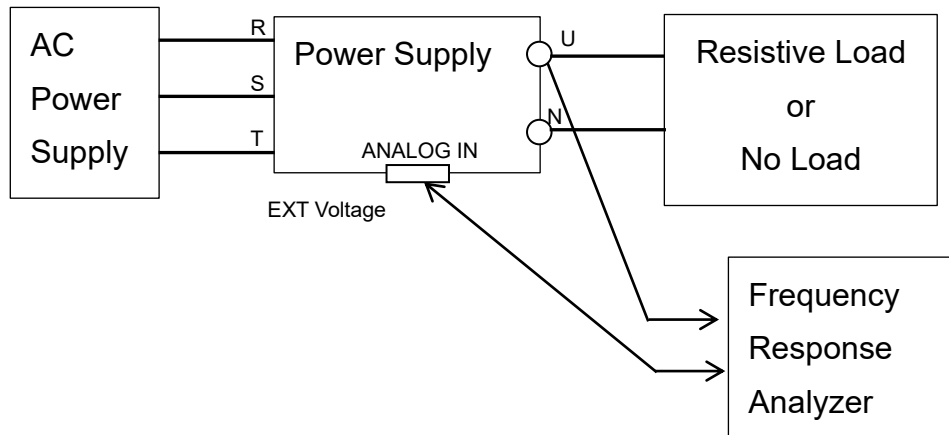


Figure M

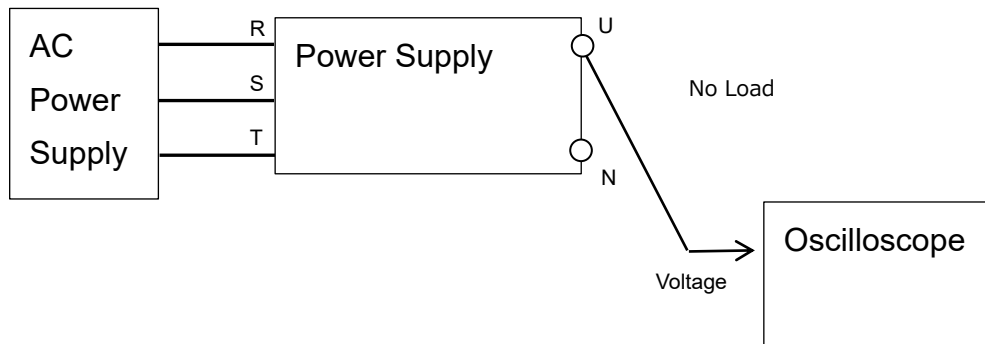


Figure N

