



TEST REPORT
IEC 61000-4-3 / IEC 61000-4-5

Report No.:19-12-RBO-006

Client: JD Auspice Co., LTD.
Product: Surge protection Device
Model: PV40/1000-MVC
Series Model: PV40/1000-MVCR
Manufacturer/supplier: JD Auspice Co., LTD.

Date test item received: 2019/12/02
Date test campaign completed: 2020/01/02
Date of issue: 2020/01/22

The test result only corresponds to the tested sample. It is not permitted to copy this report, in part or in full, without the permission of the test laboratory.

Total number of pages of this test report: 18 pages
Total number of pages of this test photos: 07 pages



Table with 2 columns: Test Engineer (Wayne Wei) and Checked By (Licher Chen)

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Note: 1. The results of the Test Record relate only to the items tested.
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1 TEST REPORT CERTIFICATION

Client : JD Auspice Co., LTD.
Address : No.288-3, Sec.2, Zhonghua Rd., Xinzhuang Dist., New Taipei City 242, Taiwan(R.O.C.)
Manufacturer : JD Auspice Co., LTD.
Address : No.288-3, Sec.2, Zhonghua Rd., Xinzhuang Dist., New Taipei City 242, Taiwan(R.O.C.)
EUT : Surge protection Device
Trade Name : JDA
Model Number : PV40/1000-MVC
Series Model : PV40/1000-MVCR
Test Standard : IEC 61000-4-3:2006/A1:2007/A2:2010
IEC 61000-4-5:2014+A1:2017

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

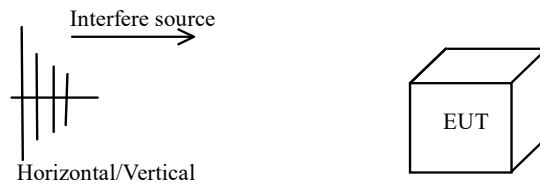
2 TEST DATA & RELATED INFORMATIONS

2.1 RF Radiated Fields (RS) Immunity Test Data

Test Model: PV40/1000-MVC, PV40/1000-MVCR

Test Dated : 2019.12.18	Test Voltage : 230Vac / 50Hz
Test Mode : Light mode	
Test Specification : IEC 61000-4-3	
Ambient Temperature : <u>20</u> °C	Relative Humidity : <u>53% RH</u> Atmospheric Pressure : <u>998 mbar</u>

Test Instruments					
Equipment		Manufacturer	Model No.	Calibration Date	Next Cal. Date
V	Bi-Log Antenna	Sunol	JB6	N/A	N/A
V	Signal Generator	Rohde & Schwarz	SMB 100A	2019/07/01	2020/06/30
V	Power Meter	Boonton	4232A	2019/07/01	2020/06/30
V	Amplifier	AR	1000W1000E	N/A	N/A



Frequency Range	<u>80</u> MHz ~ <u>1000</u> MHz	Field Strength	<u>3</u> V/m	Modulation (AM/ 1kHz/ 80%)
Sweep Rate	: $\leq 1.5 \times 10^{-3}$ ecades/s	Step Size	: ≤ 1 % of preceding frequency value	Dwell Time : <u>3</u> s
Frequency Range (MHz)	Polarization of Device	Directing of Device	Test Result	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	Front	A	
		Rear	A	
		Left	A	
		Right	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	Front	A	
		Rear	A	
		Left	A	
		Right	A	

Note : "A" means the EUT function was correct during the test.

2.2 Surge Immunity Test Data

Test Model: PV40/1000-MVC

Test Dated : 2020.01.02	Test Voltage : 0 Vac / -- Hz	
Test Mode : Standby mode		
Test Specification : IEC 61000-4-5		
Ambient Temperature : <u>22°C</u>	Relative Humidity : <u>53% RH</u>	Atmospheric Pressure : <u>998 mbar</u>

Test Instruments					
Equipment		Manufacturer	Model No.	Calibration Date	Next Cal. Date
V	EMC Immunity tester	TESEQ	NSG 3060	2019/10/21	2020/10/20
V	Coupling-Decoupling Network	TESEQ	NSG 3061	2019/10/21	2020/10/20



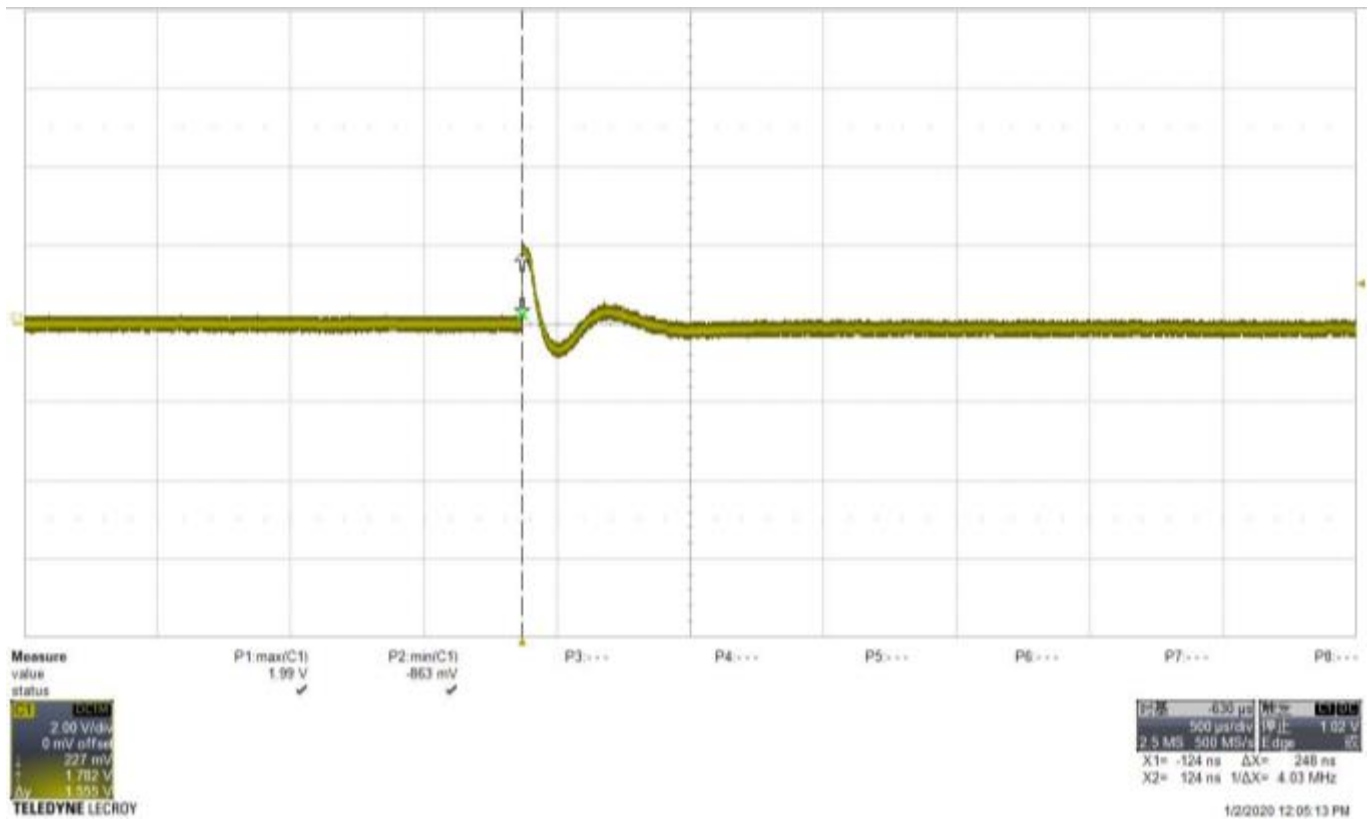
量測信號衰減 1000 倍



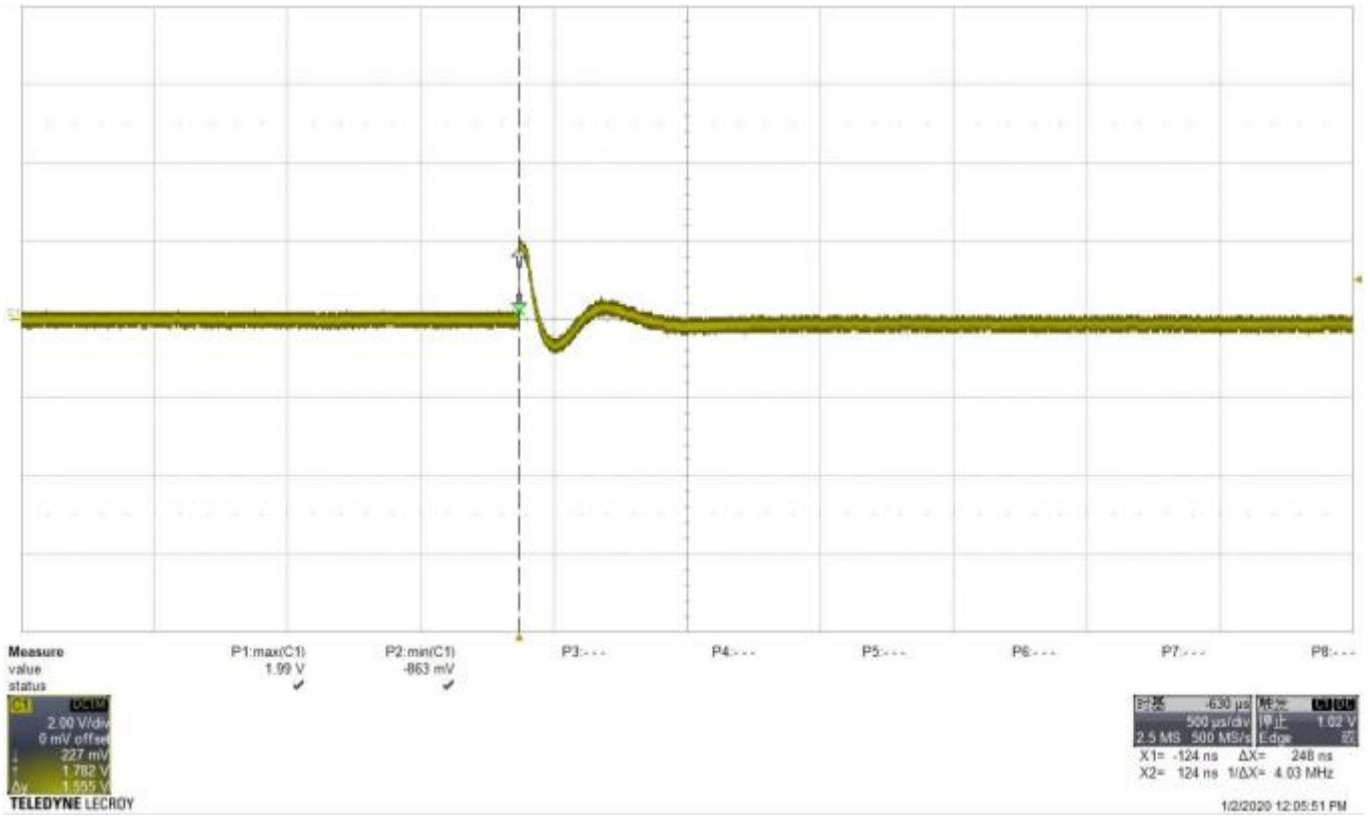
Waveform : 1.2/50µs(8/20µs)		Repetition rate : <u>60</u> sec	Times : POWER <u>5</u> time/each condition
\Voltage \Mode \Polarity \Result			\Phase 0°
4kV	Positive -PE	Positive(+)	A
		Negative(-)	A
	Negative -PE	Positive(+)	A
		Negative(-)	A

Note : “ A ” means the EUT function was correct during the test.

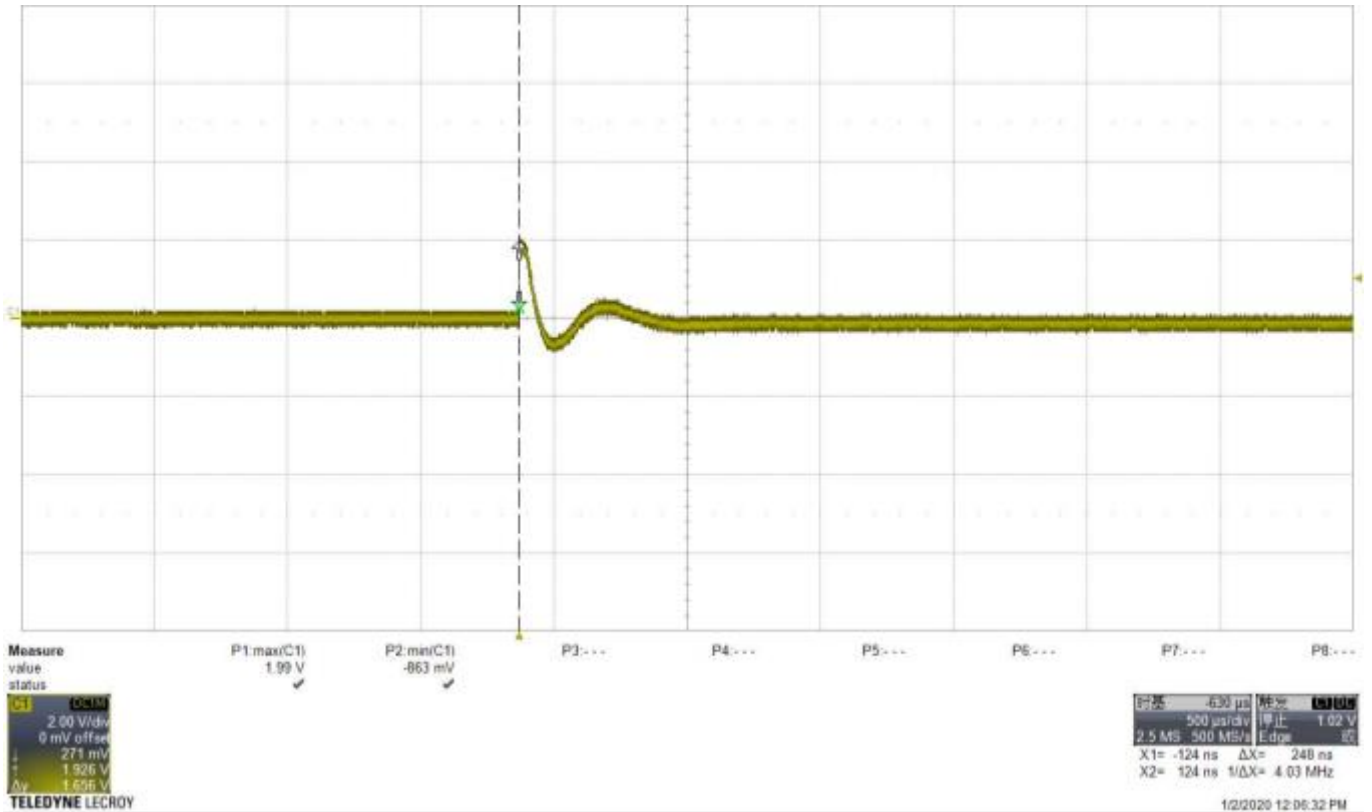
Positive – PE(1) / 4000V



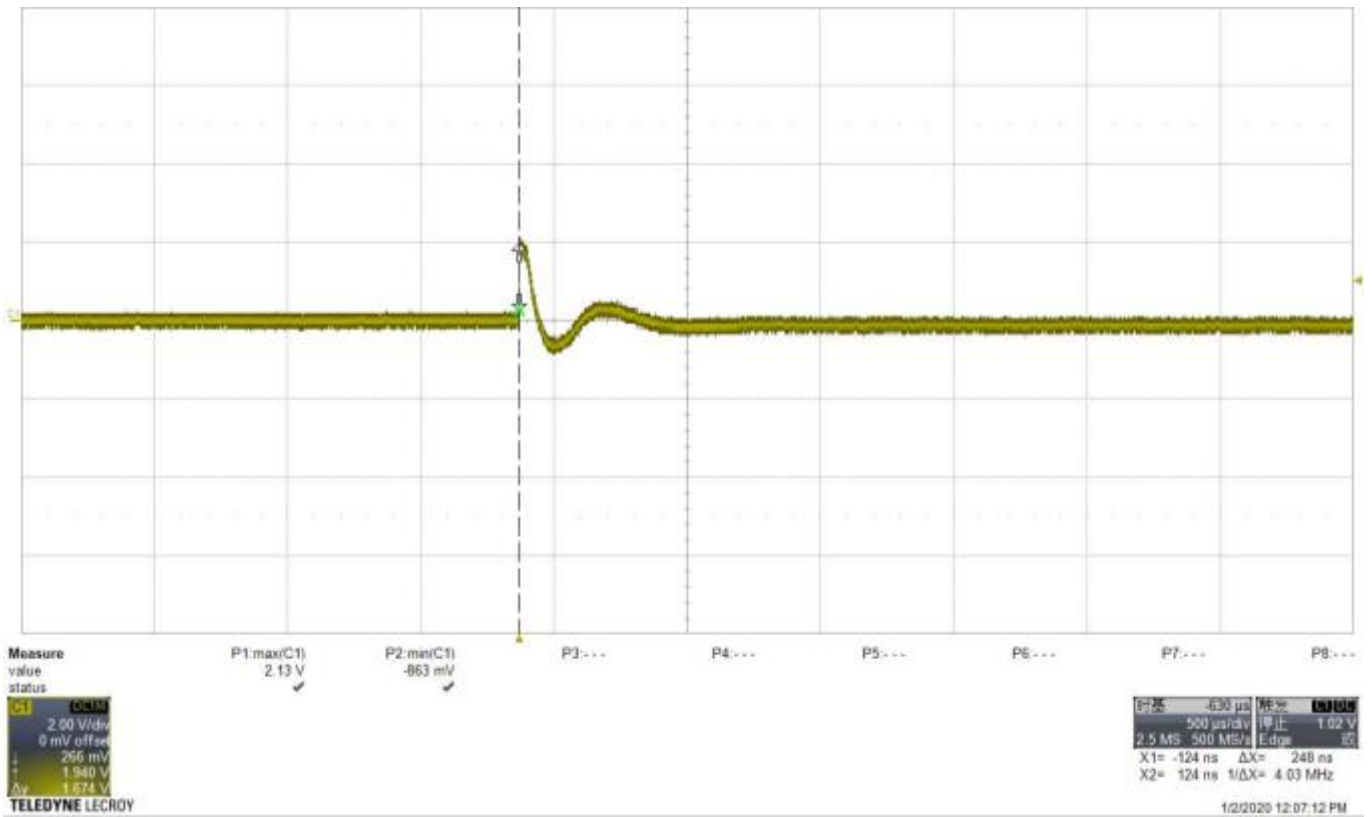
Positive – PE(2) / 4000V



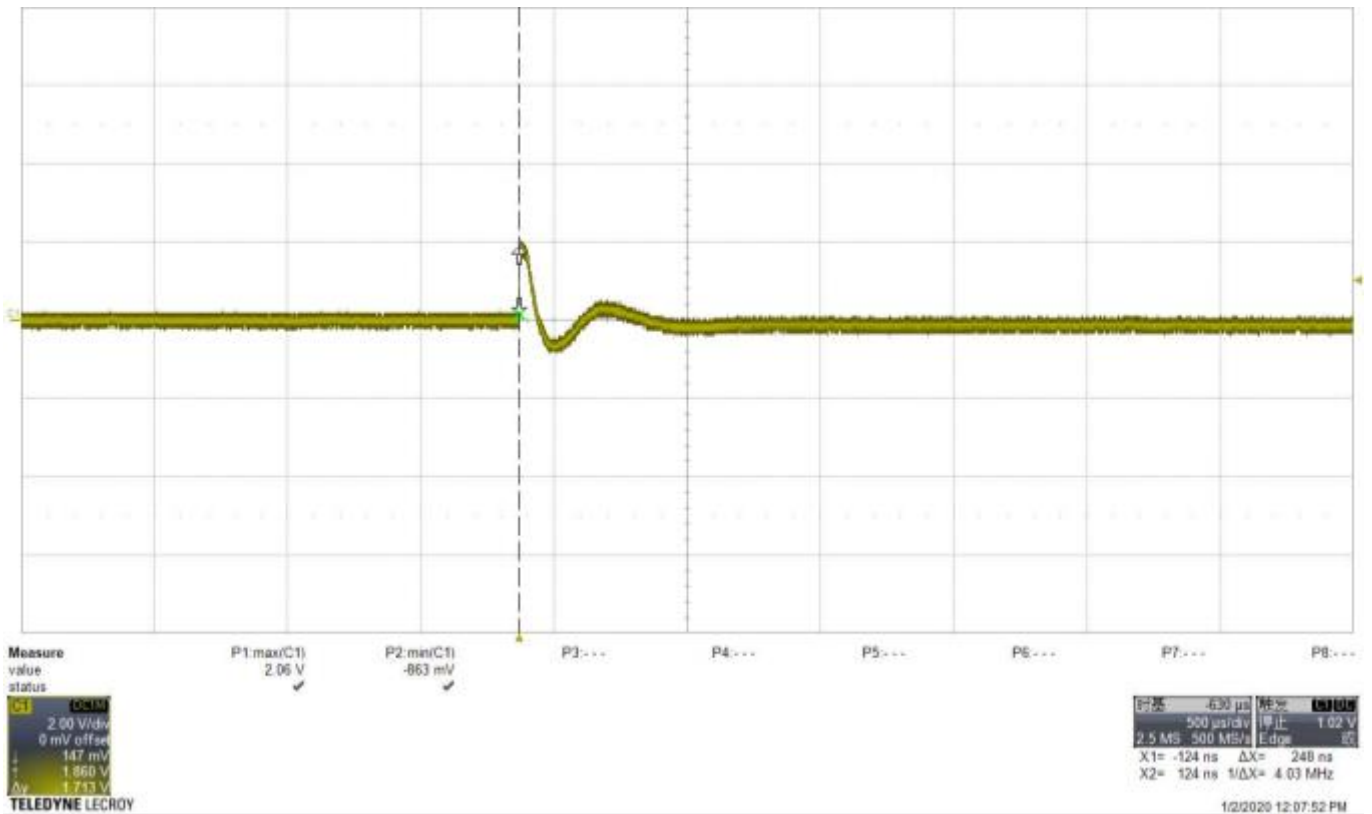
Positive – PE(3) / 4000V



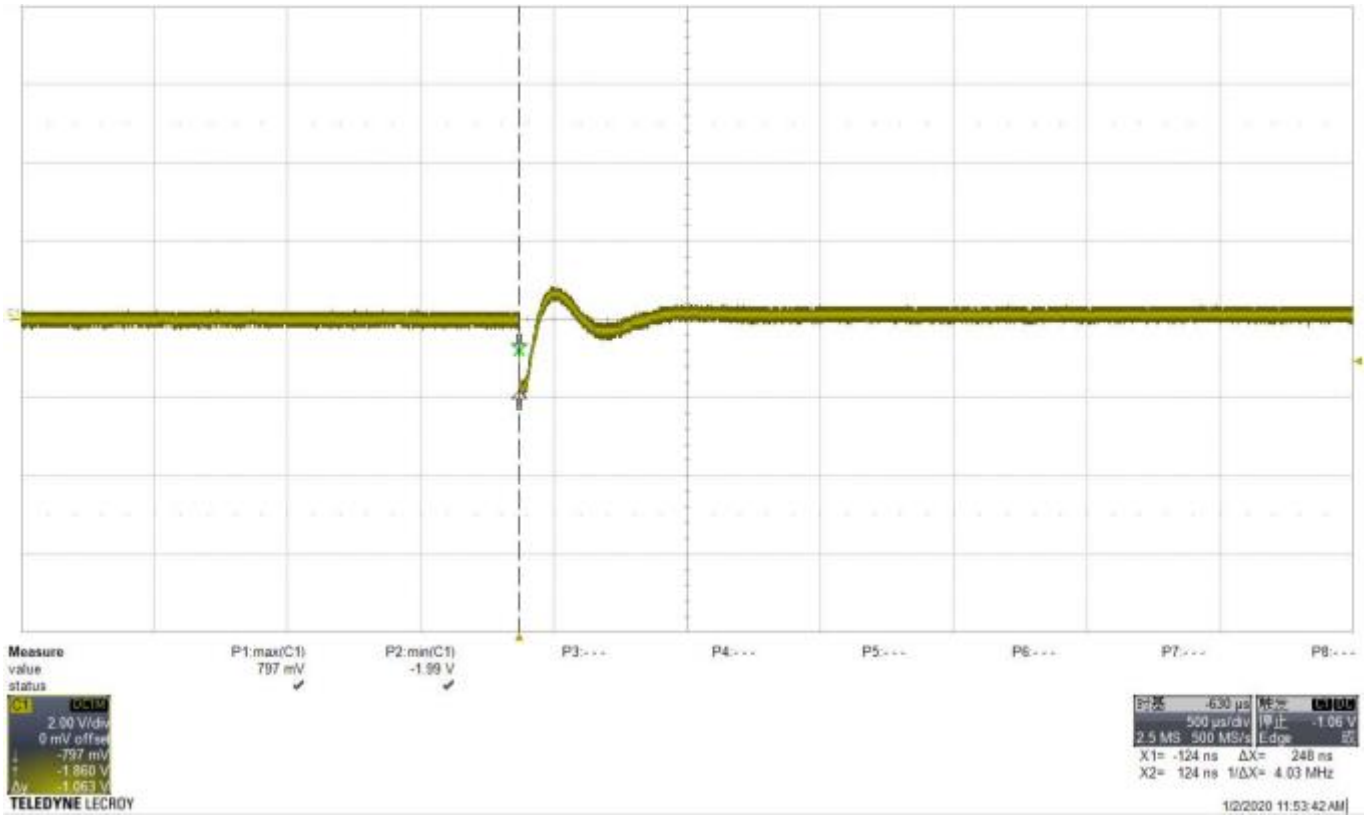
Positive – PE(4) / 4000V



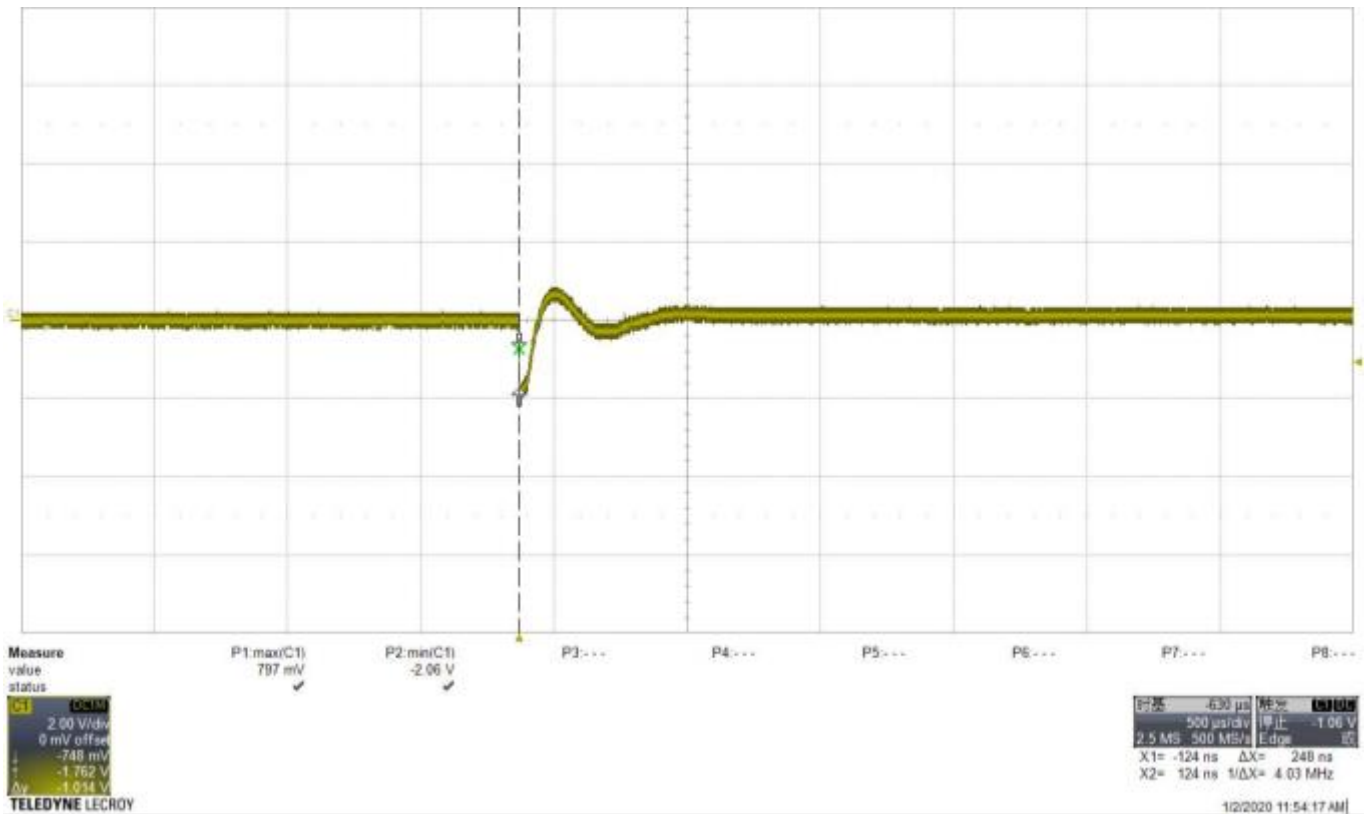
Positive – PE(5) / 4000V



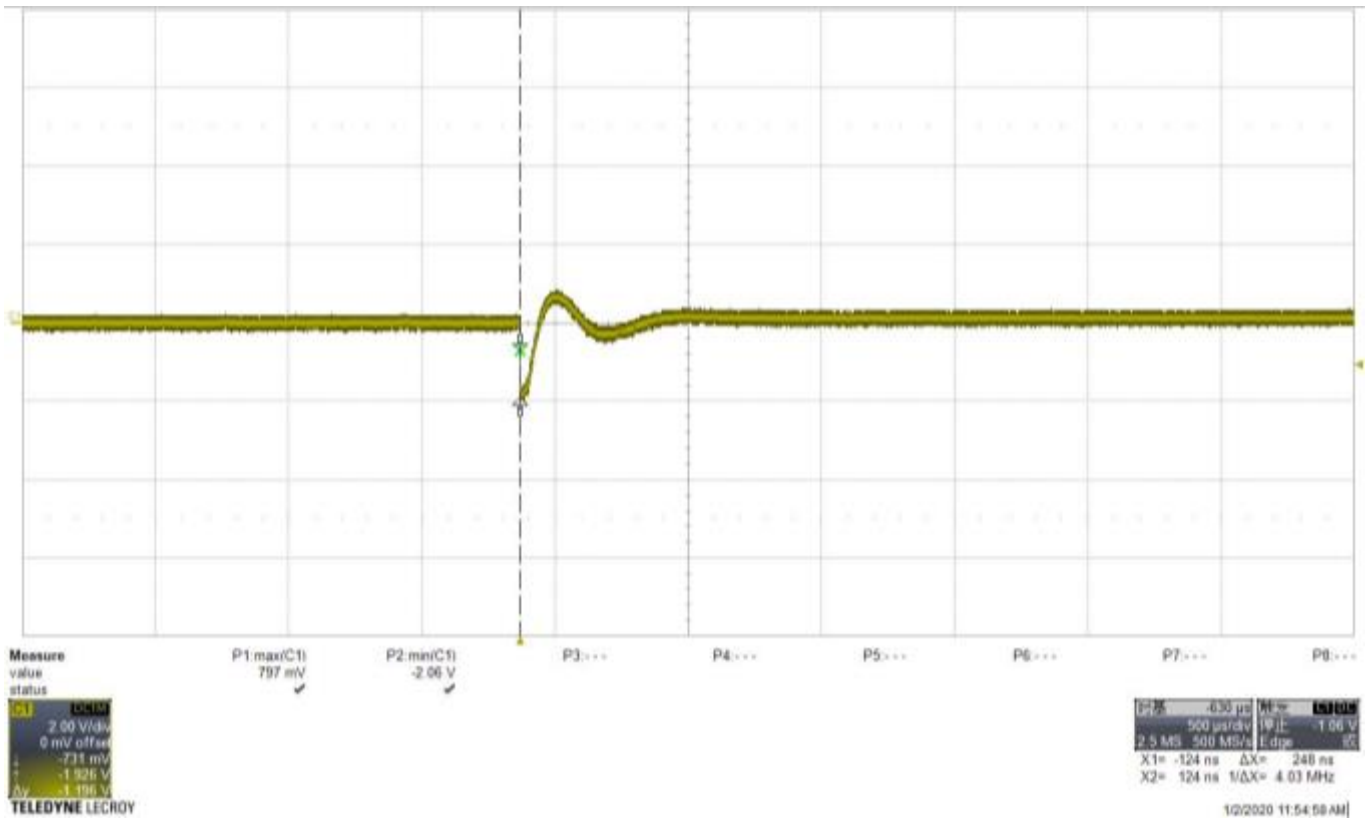
Negative – PE(1) / 4000V



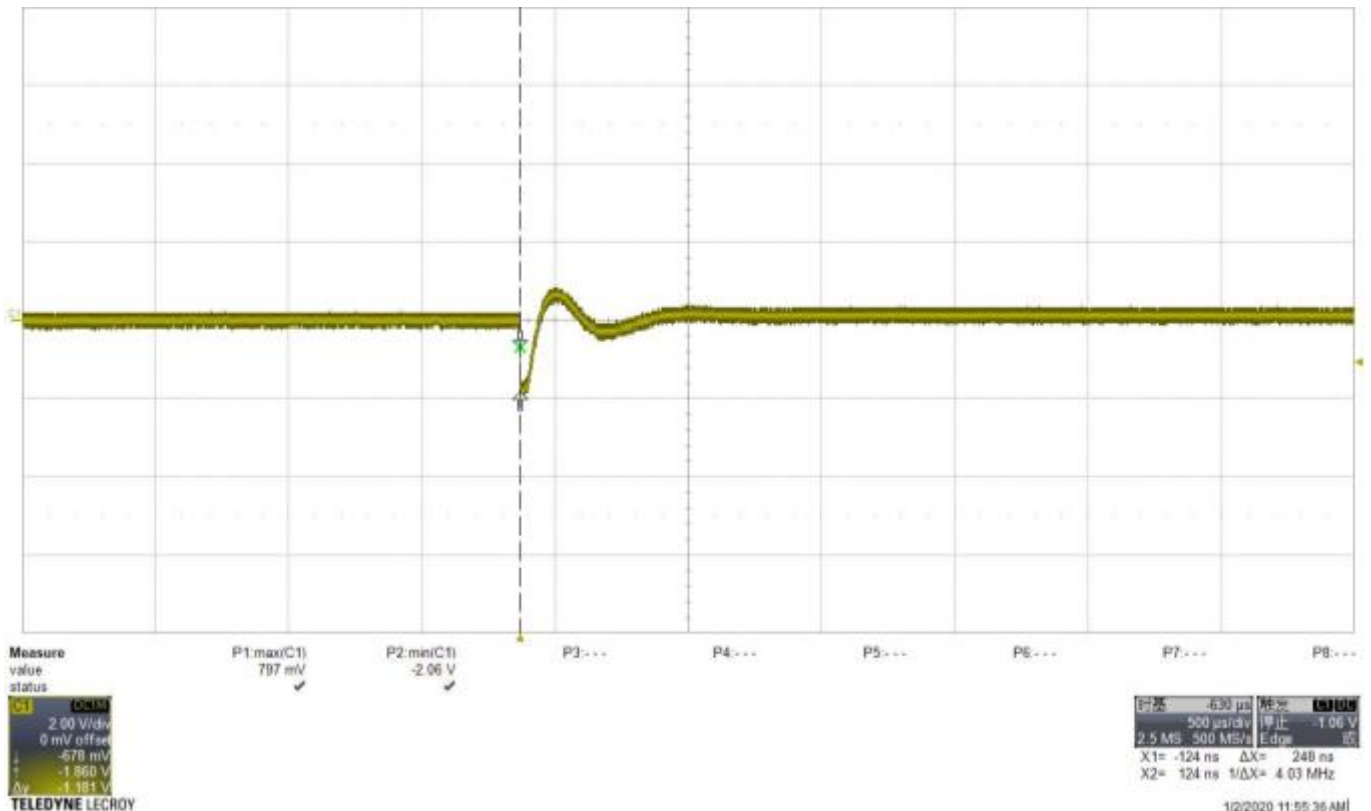
Negative – PE(2) / 4000V



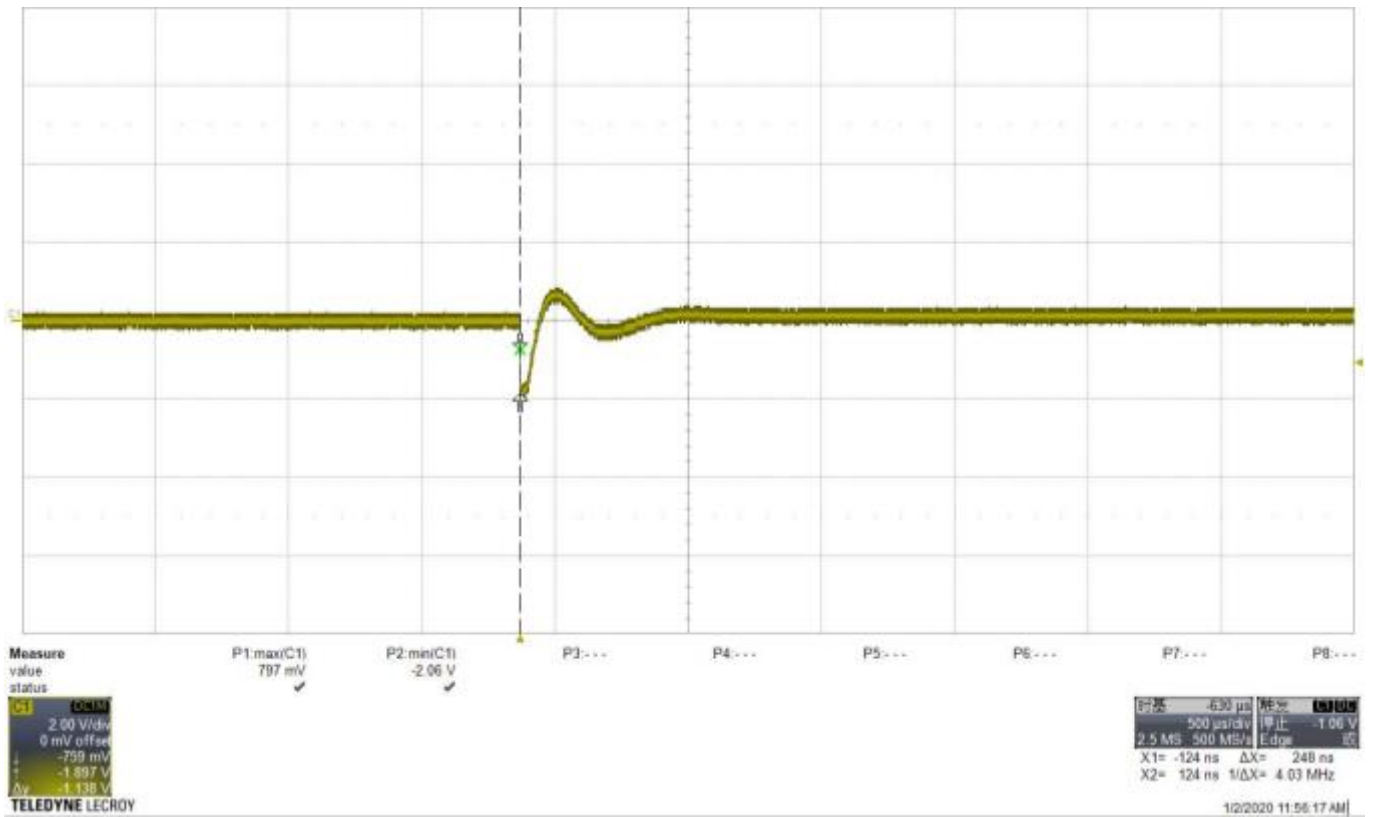
Negative – PE(3) / 4000V



Negative – PE(4) / 4000V



Negative – PE(5) / 4000V



Test Model: PV40/1000-MVCR

Test Dated : 2020.01.02	Test Voltage : 0 Vac / -- Hz
Test Mode : Standby mode	
Test Specification : IEC 61000-4-5	
Ambient Temperature : <u>22°C</u>	Relative Humidity : <u>53% RH</u> Atmospheric Pressure : <u>998 mbar</u>

Test Instruments					
Equipment		Manufacturer	Model No.	Calibration Date	Next Cal. Date
V	EMC Immunity tester	TESEQ	NSG 3060	2019/10/21	2020/10/20
V	Coupling-Decoupling Network	TESEQ	NSG 3061	2019/10/21	2020/10/20

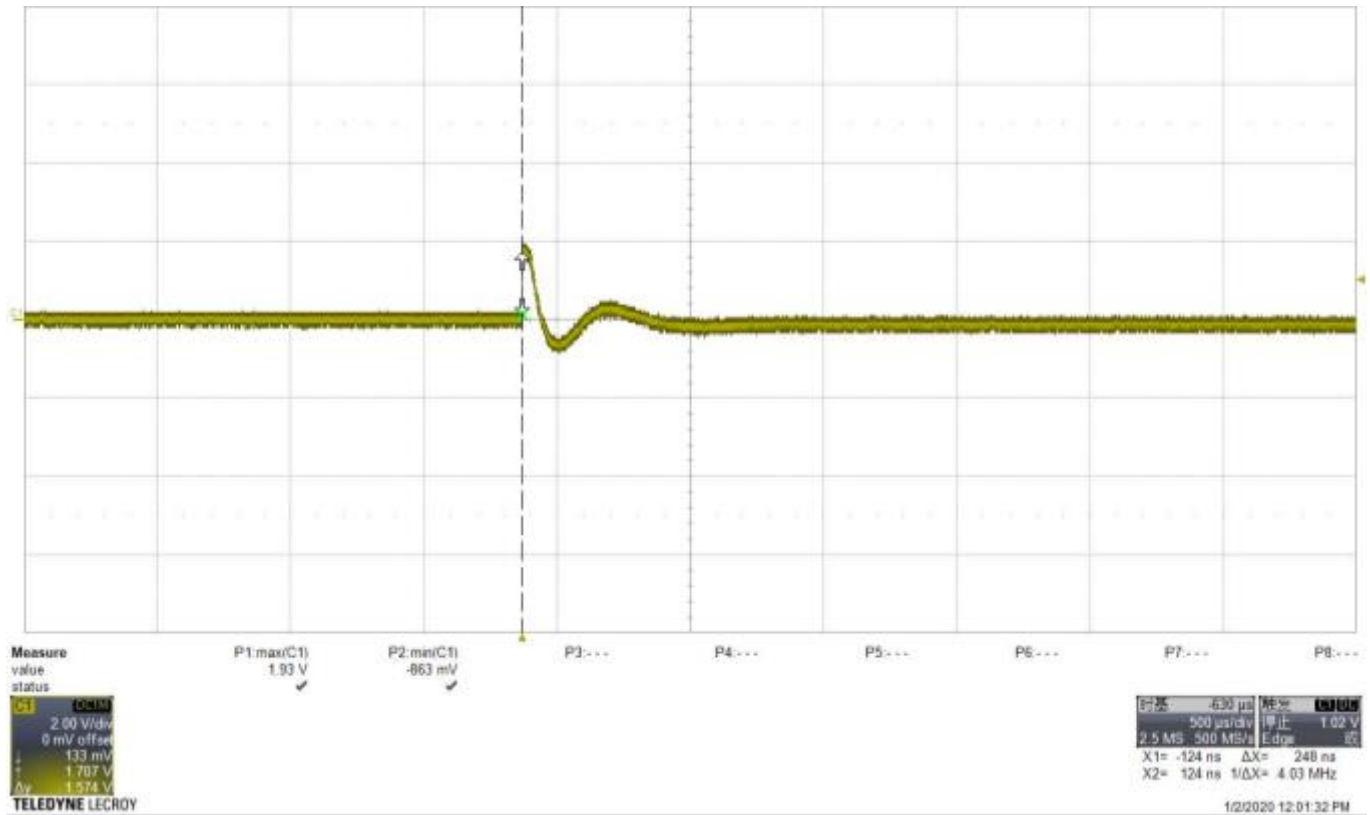


量測信號衰減 1000 倍

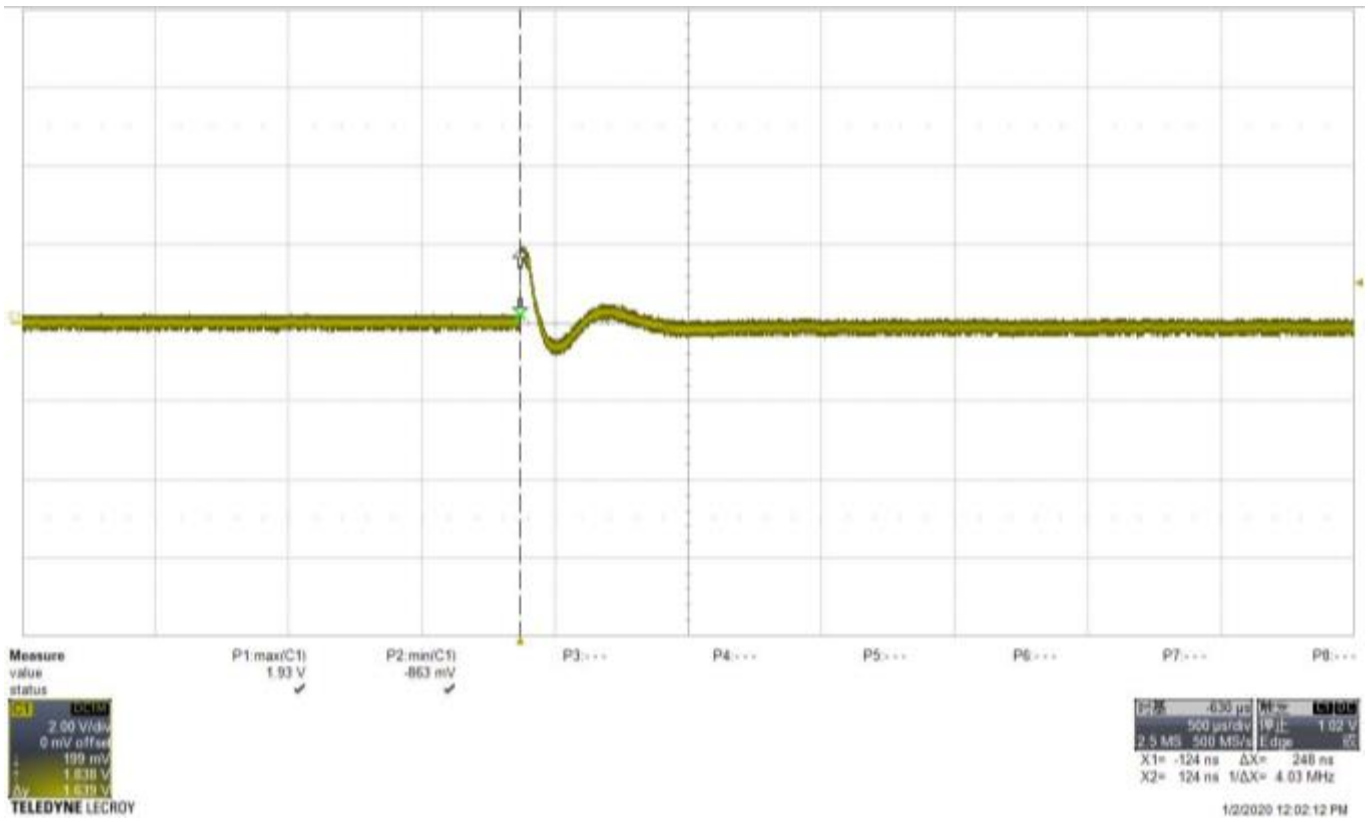
Waveform : 1.2/50µs(8/20µs)		Repetition rate : <u>60</u> sec	Times : POWER <u>5</u> time/each condition
\Phase \Voltage \Mode \Polarity \Result			0°
4kV	Positive -PE	Positive(+)	A
		Negative(-)	A
	Negative -PE	Positive(+)	A
		Negative(-)	A

Note : “ A ” means the EUT function was correct during the test.

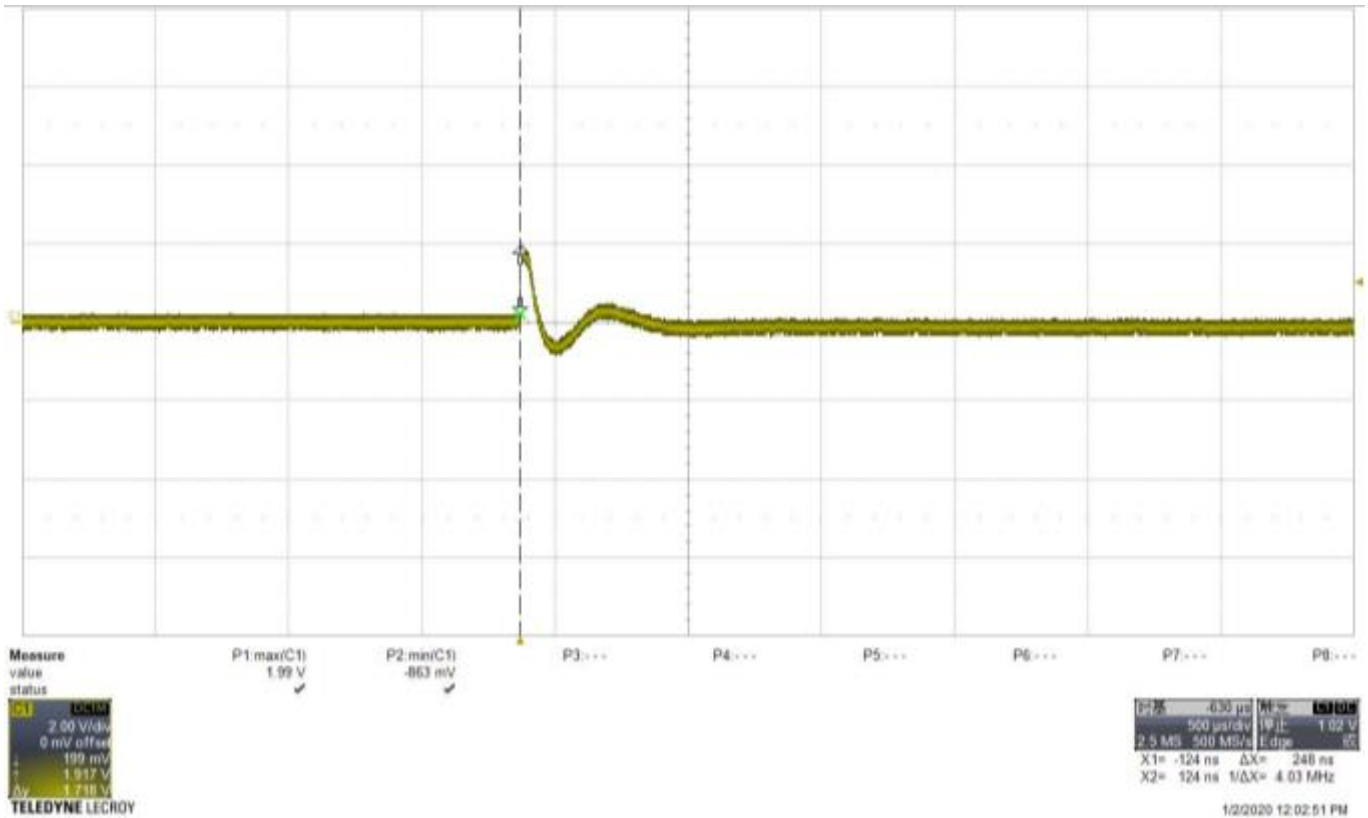
Positive – PE(1) / 4000V



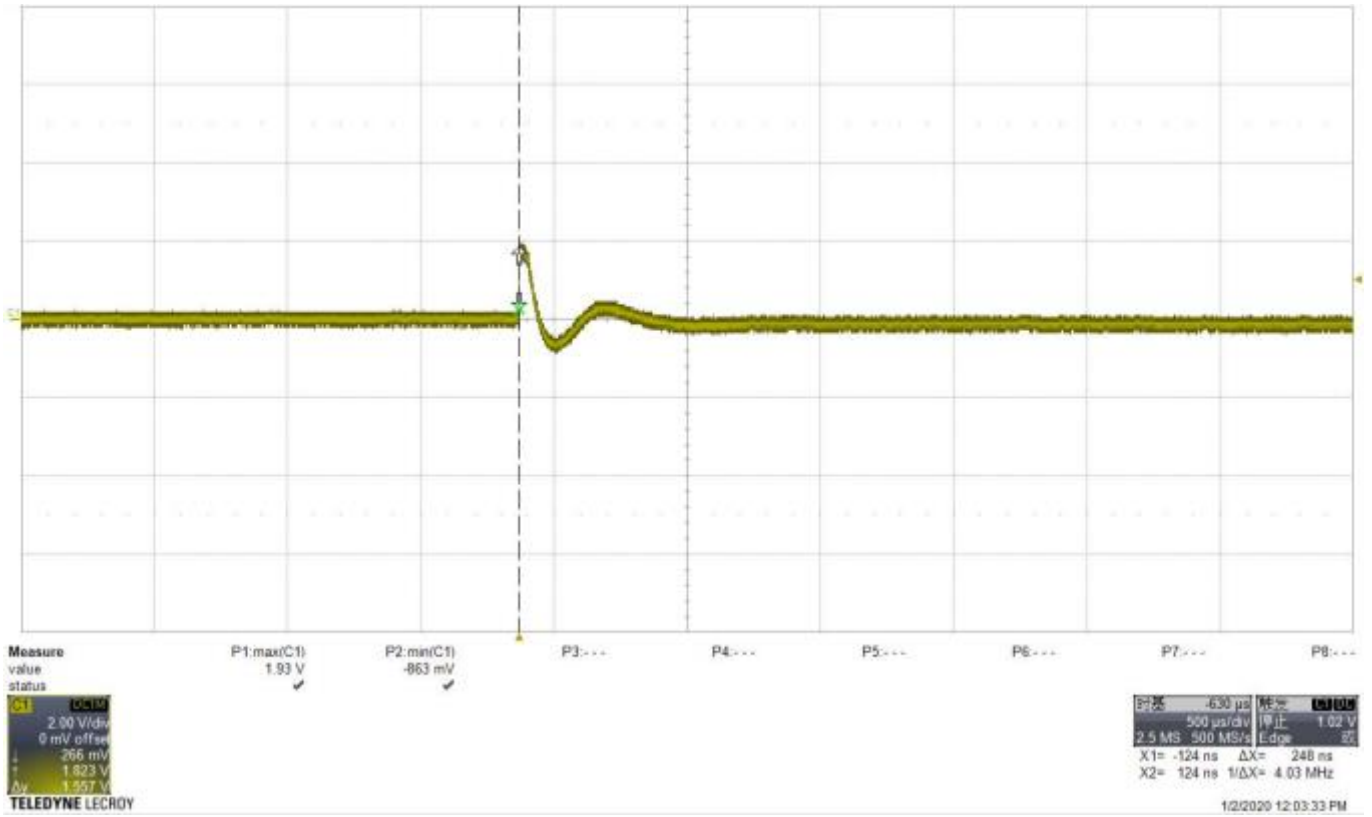
Positive – PE(2) / 4000V



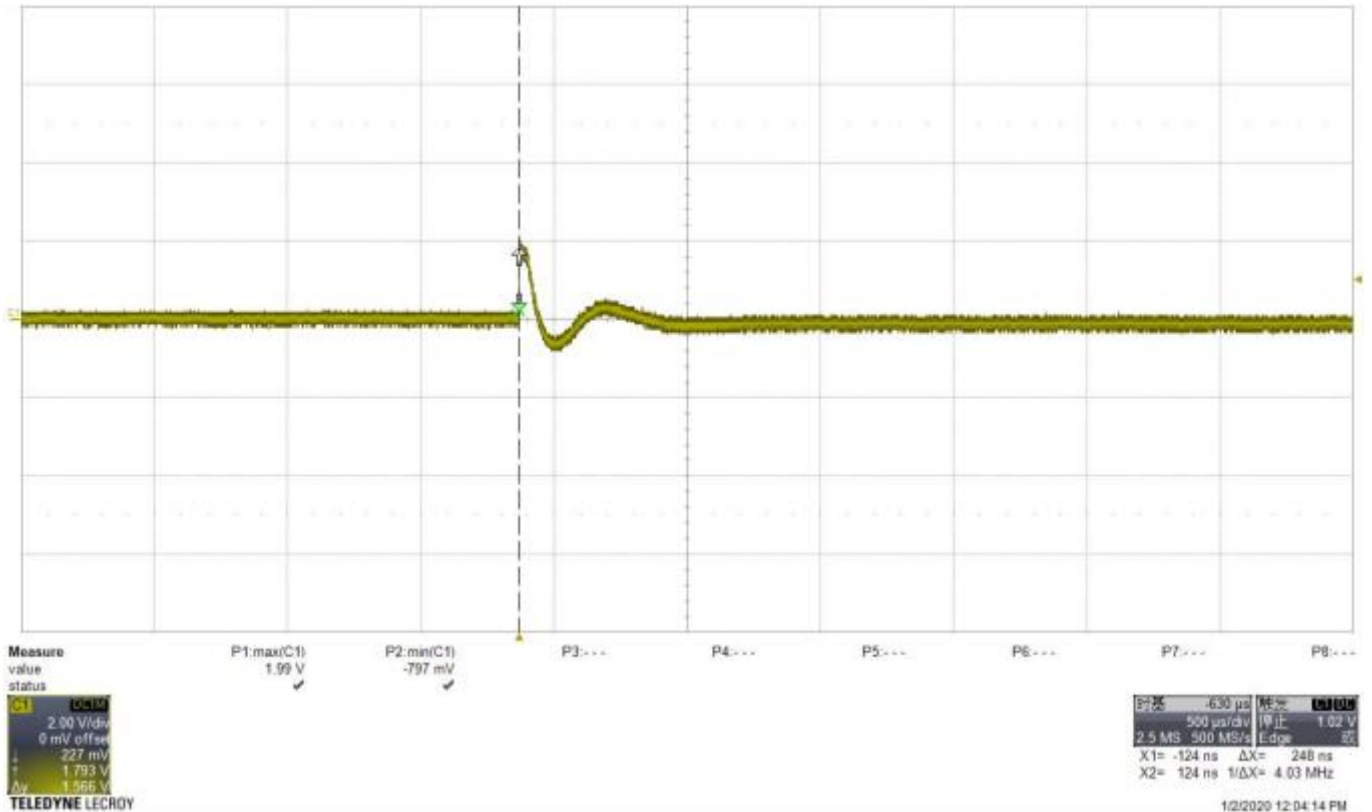
Positive – PE(3) / 4000V



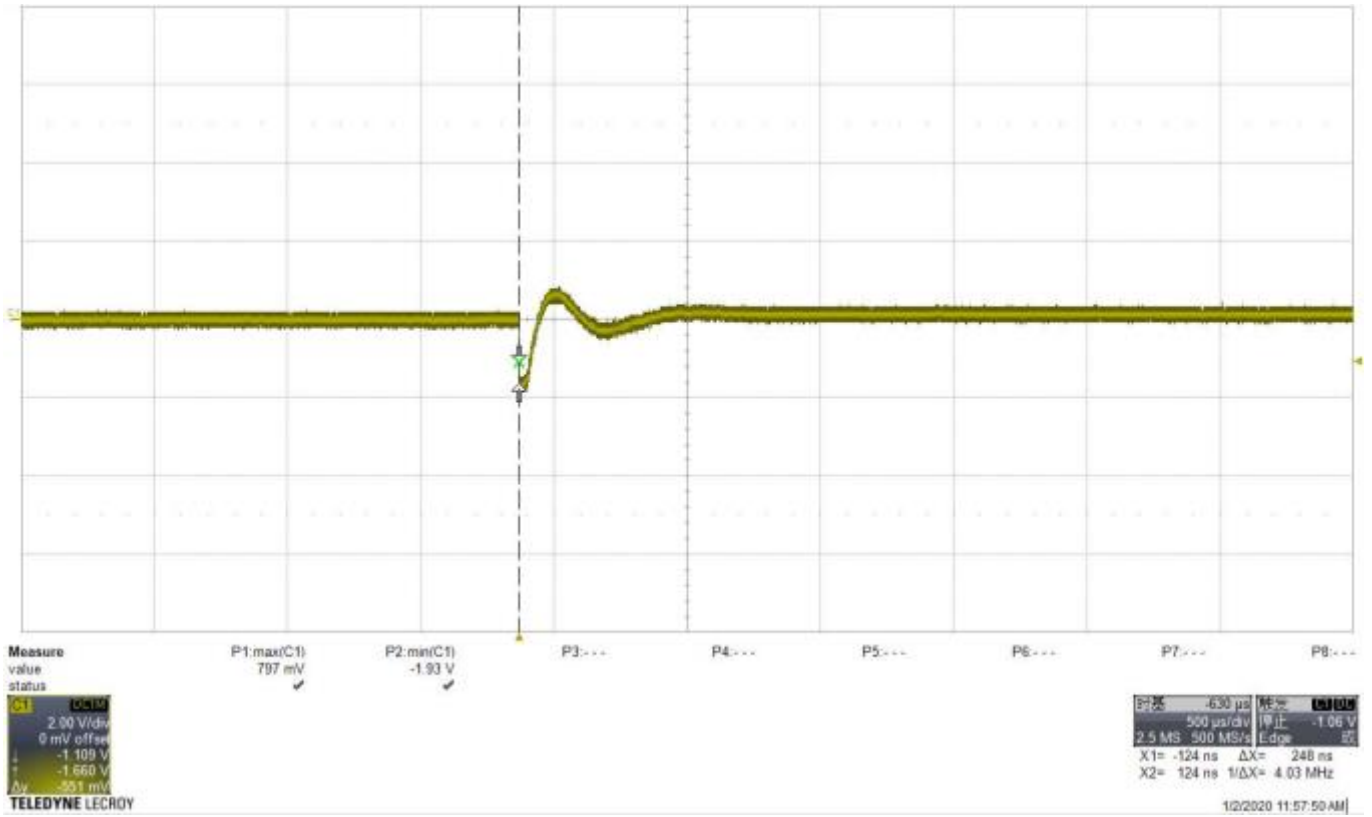
Positive – PE(4) / 4000V



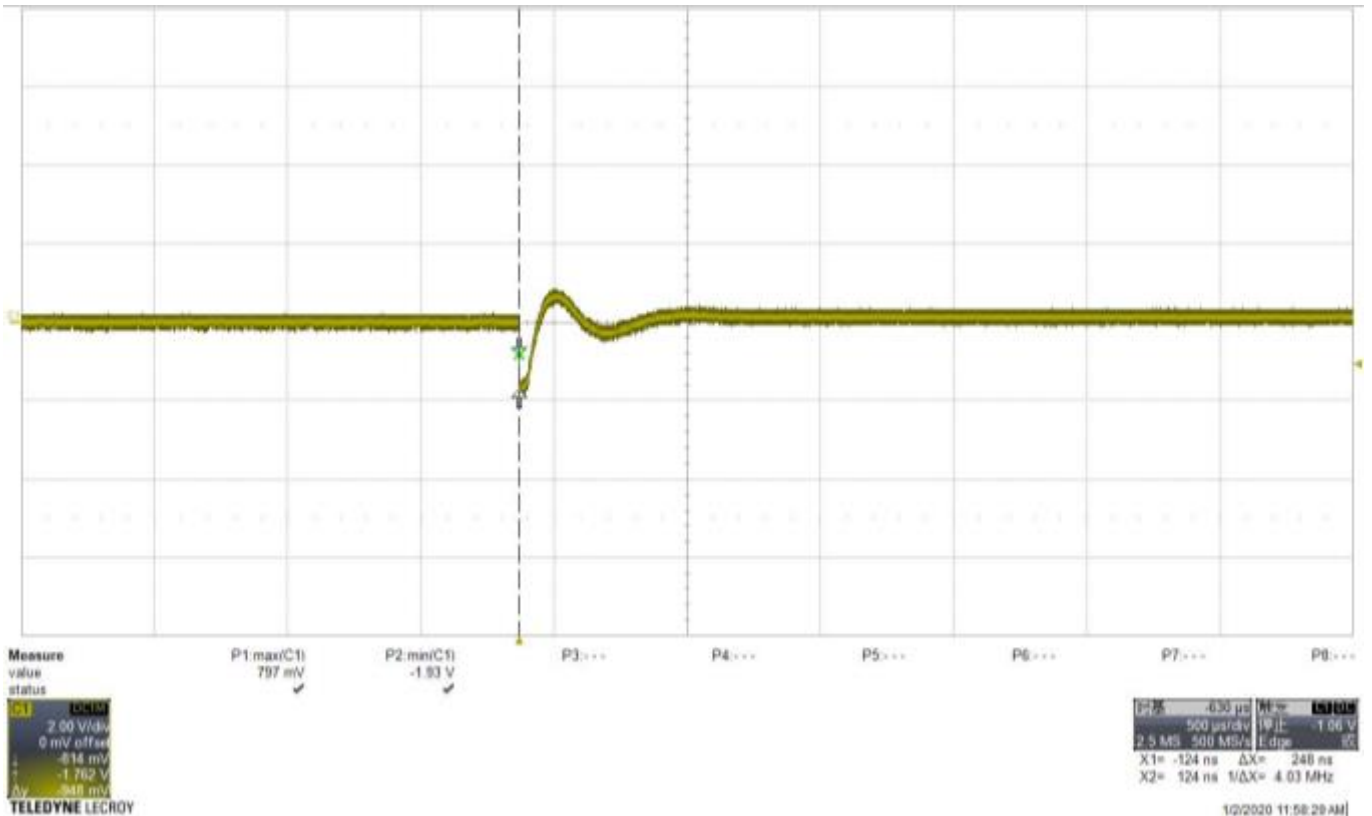
Positive – PE(5) / 4000V



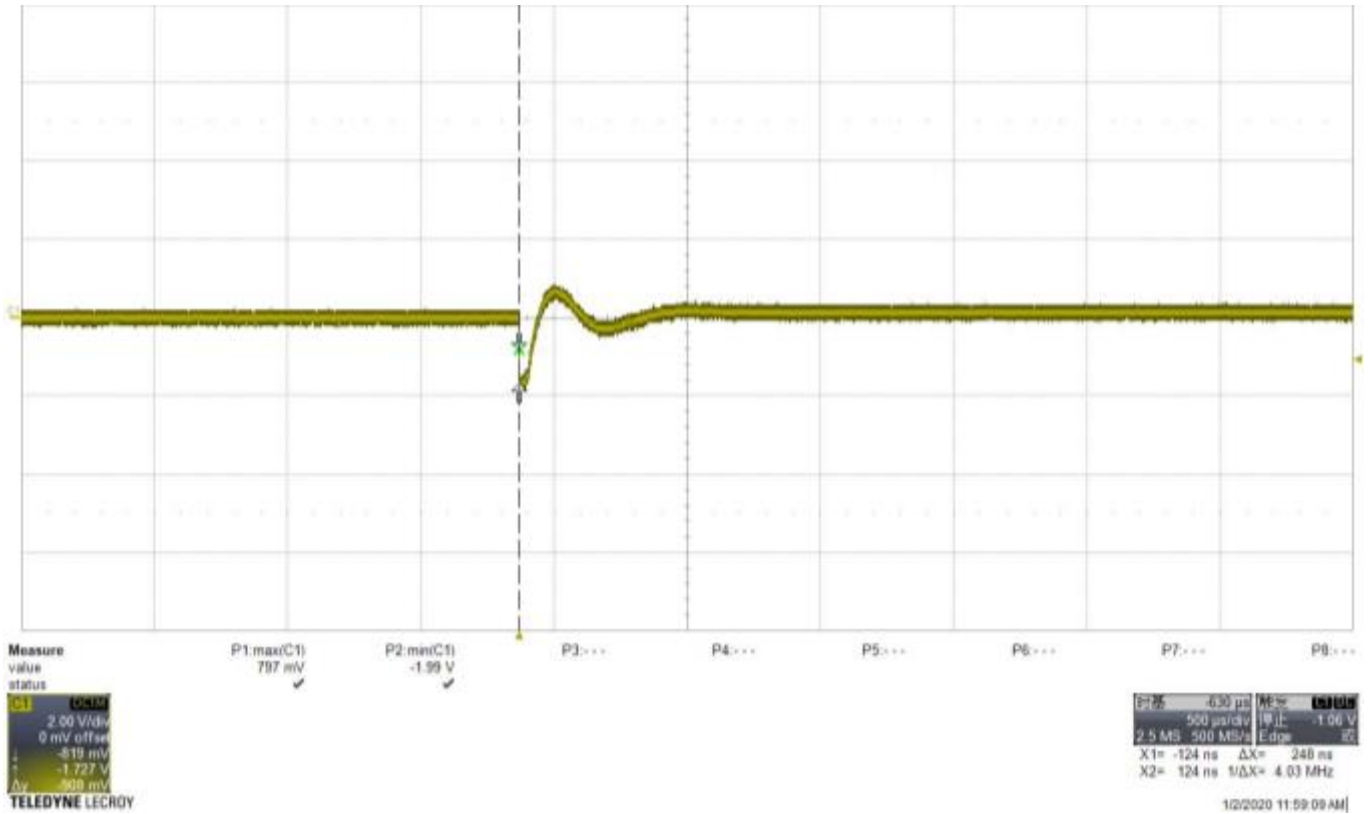
Negative – PE(1) / 4000V



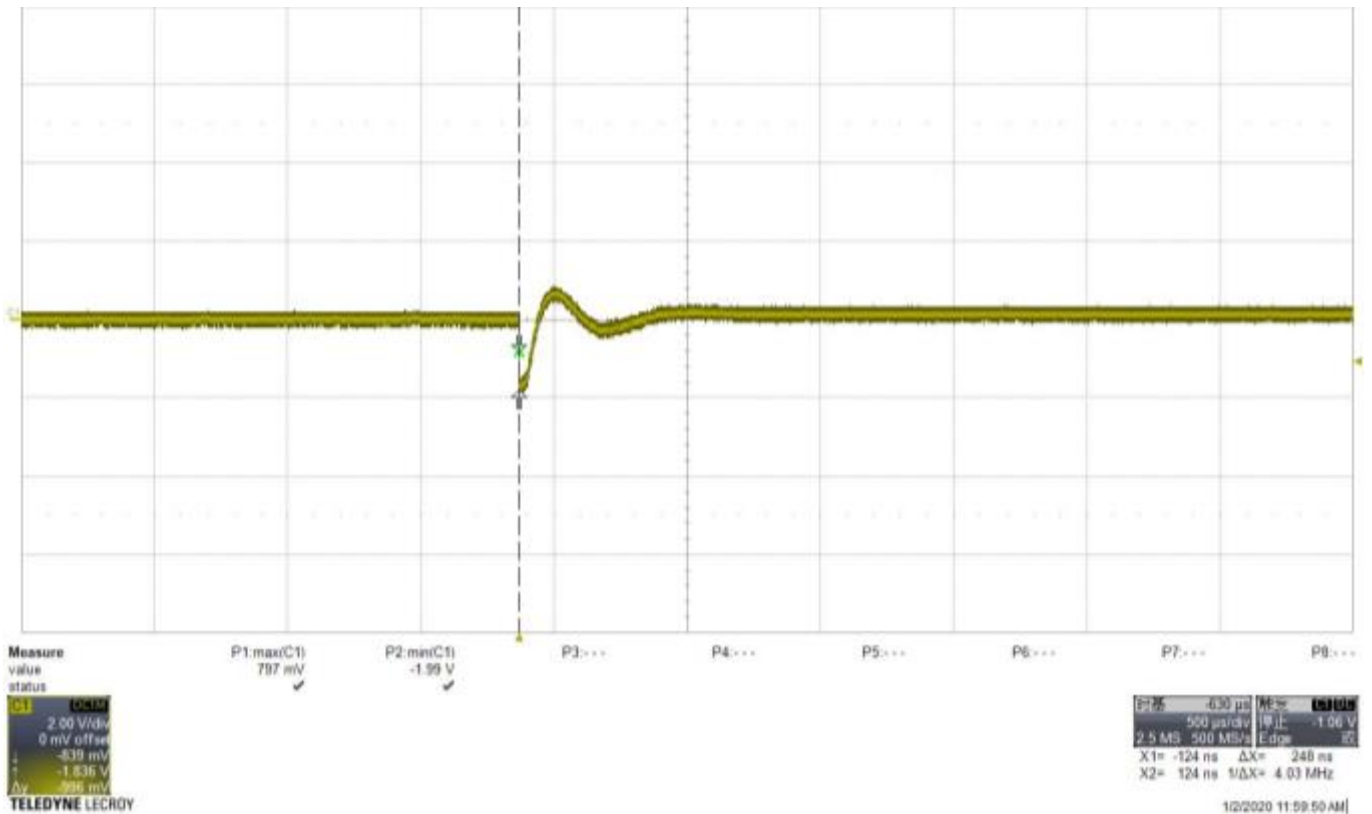
Negative – PE(2) / 4000V



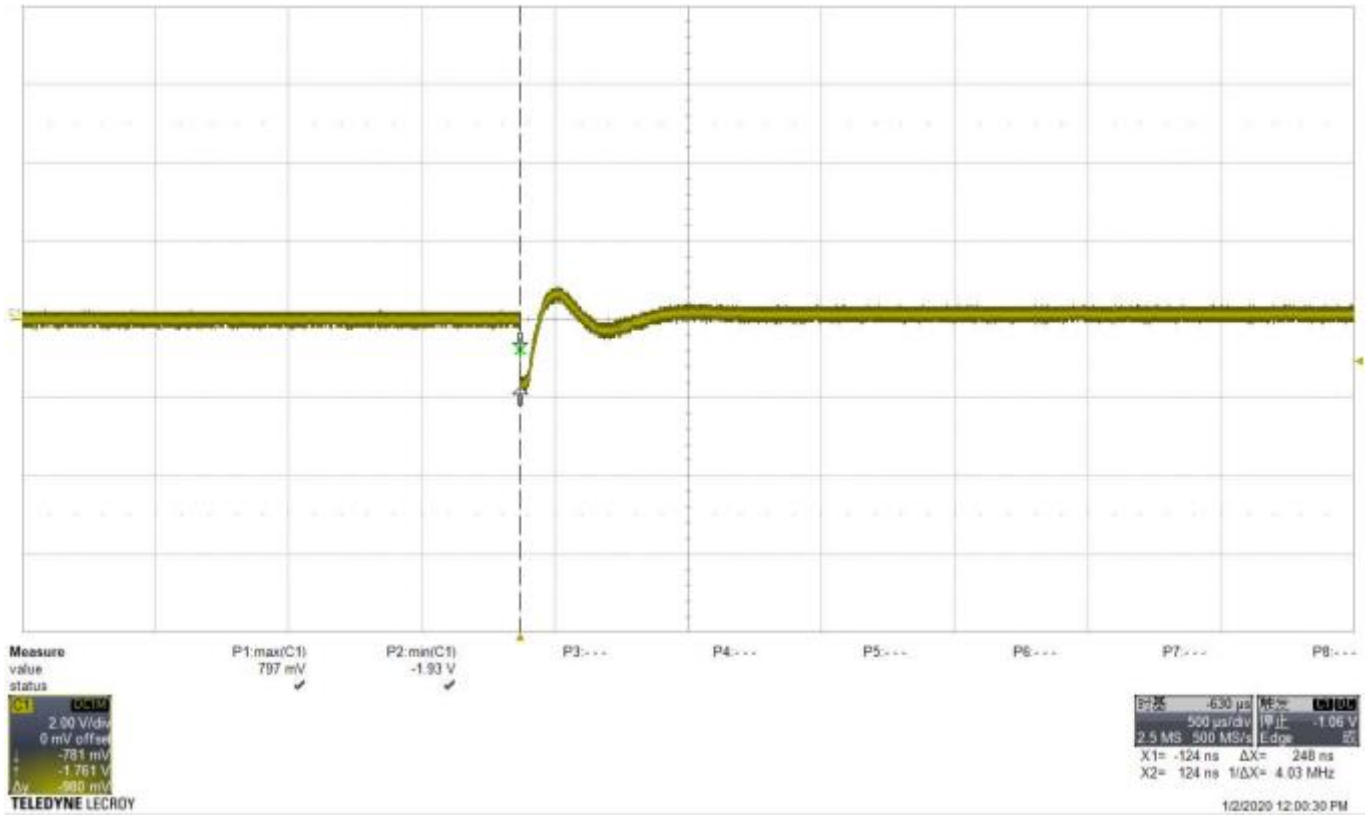
Negative – PE(3) / 4000V



Negative – PE(4) / 4000V



Negative – PE(5) / 4000V

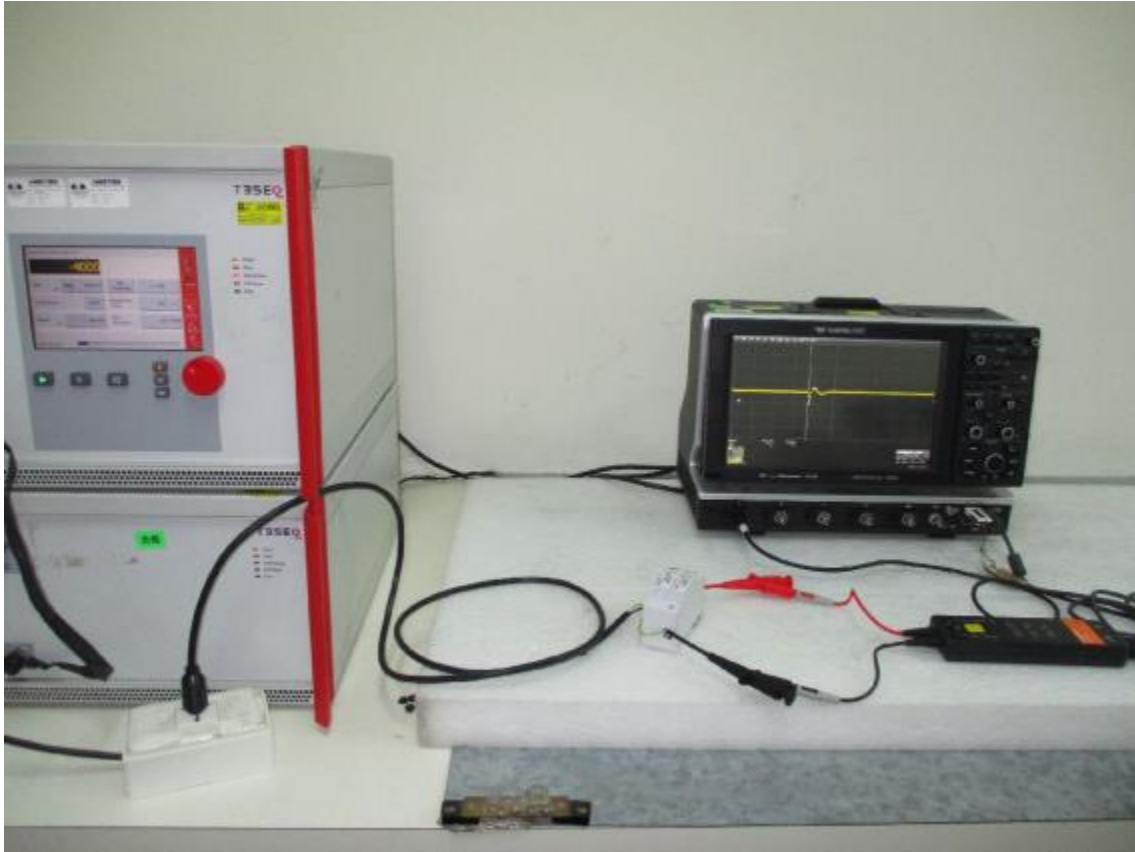


ANNEX A: PHOTOS**1. RF Radiated Fields (RS) Immunity Test Setup Photos****Test Model: PV40/1000-MVC**

Test Model: PV40/1000-MVCR

2. Surge Immunity Test Setup Photos**Test Model: PV40/1000-MVC**

Positive - PE / 4000V



Negative - PE / 4000V

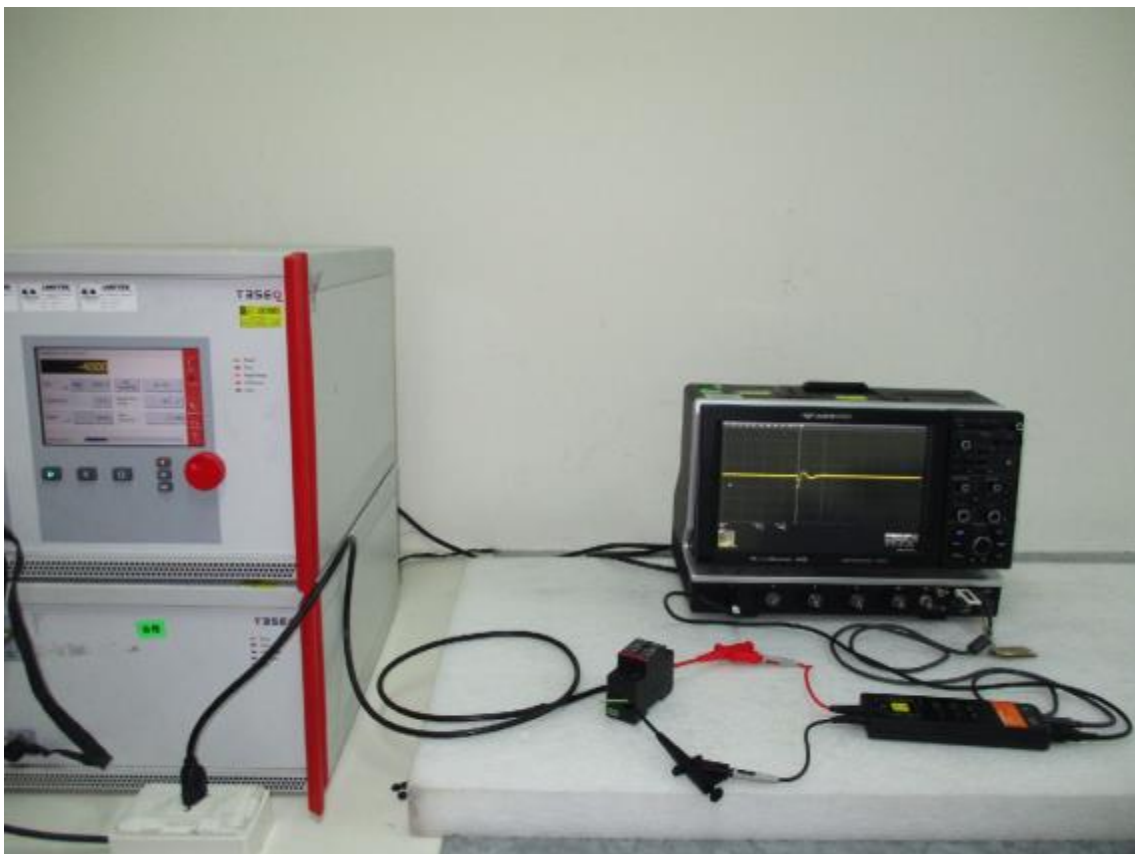


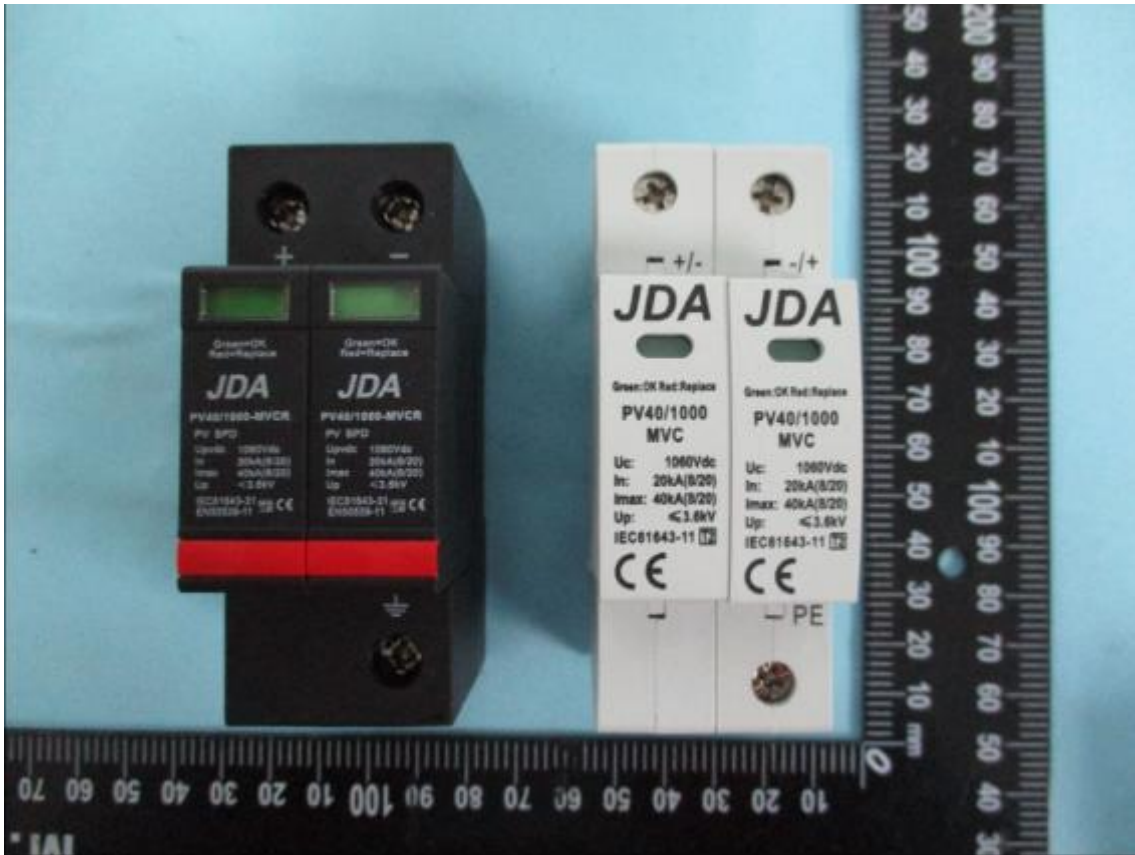
Test Model: PV40/1000-MVCR

Positive - PE / 4000V



Negative - PE / 4000V



3. Outside view 01 of EUT**4. Outside view 02 of EUT**

5. Outside view 03 of EUT**6. Outside view 04 of EUT**

7. Outside view 05 of EUT

ANNEX B: DIFFERENCE INFORMATIONS OF SERIES MODEL

1. Test Model (Main Model): PV40/1000-MVC
2. Test Model (Series Model): PV40/1000-MVCR

The Difference Information:

Model No.	Main Model:	Series Model:
Difference Item	PV40/1000-MVC	PV40/1000-MVCR
PCB Layout and The Circuit Diagram		Basic circuit diagram
Components		
Material		
Function	防止雷電過電壓和瞬間過電壓對直流電力系統和用電設備造成損壞	防止雷電過電壓和瞬間過電壓對直流電力系統和用電設備造成損壞
Shape & Color	白色	黑色
Other	無信控	有信控(NC C NO)
Notes: (1) " O " means the item is same with Main model. (2) " X " means the item is different with main model. And please explain it.		

Remark: 1. The multiple listing recognized without test basis is according to information supplied by manufacturer.

2. The manufacturer or supplier's quality system shall ensure that the tested model or apparatus is representative of the series-produced apparatus concerned.

Manufacturer / Supplier

Company Name : JD Auspice Co., LTD.

Signature : 白揚科技有限公司

Name/Title : 吳國榮 Date : 2020/02/05