

校准证书

CALIBRATION CERTIFICATE

证书编号: J15126902501 号
Certificate No.

客户名称

Customer

客户地址

Address of customer

计量器具名称

Name of Samples

型号 / 规格

Type/Specification

出厂编号

Series No.

制造单位

Manufacturer

No. 3, Roodsar St., shahid Azodi St., Karimkhan-e-zand Blvd., Tehran - IRAN

Surge Generator

SG61000-5

0506P1615048

Lisun Electronics Inc

批准人

Approved by

核验员

Checked By

校准员

Calibrated By

校准日期 2015 年 11 月 17 日
Date of calibration Year Month Day



地址(Address): 上海市江月路900号

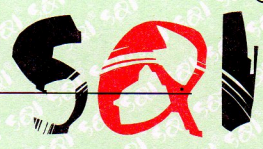
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本次计量所依据的技术文件(代号、名称):

Reference documents for the calibration (code, name)



- GB/T 17626.1-2006 电磁兼容 试验和测量技术 抗扰度试验总论
- GB/T 17626.1-2006 Electromagnetic compatibility-Testing and measurement techniques-Overview of immunity tests
- GB/T 17626.5-2008 电磁兼容 试验和测量技术 浪涌(冲击)抗扰度试验
- GB/T 17626.5-2008 Electromagnetic compatibility-Testing and measurement techniques-Surge immunity test
- SQI/JL-BD-90 雷击浪涌发生器不确定度评定
- SQI/JL-BD-90 Uncertainty evaluation of surge generator

计量地点及环境条件:

Location and environmental condition

计量地点: 委托方现场实验室

其它: /

Location

Others

环境温度: 22 °C;

相对湿度: 60 %

Ambient temperature

Relative humidity

本次计量所使用的主要计量标准器具:

Main measurement standards used in this verification

名称/型号 Name/Type	编号 Number	测量范围/准确度 Measuring range/Accuracy	证书编号/有效期限 Certificate No./Due date
示波器DP04014B-L	C023952	DC-1GHz /±1.5%	J15126000473 2016-7-19
		0-100V /±1.5%	
高压探头/P6015A	30-17	1000:1 /±2%	J15125000478/ 2016-8-6
电流探头	JL-A-A1-A081211-2	500A/1mV /±2%	J15126902318/ 2016-10-20

以上计量标准器具的量值均可溯源到国家基准。

Quantity values of above measurement standards used in this calibration are traced to those of the national primary standards in the P.R. China.

结果/说明:

Results and additional explanation

所测数据符合仪器技术要求
数据见后页

本证书提供的结果仅对本次被检(校)样品有效, 未经本院许可, 不得部分采用本证书的内容。

The data are valid only for the Sample(s), Partly using this certificate will not be admitted unless allowed.

结果/说明 (续页):

Results and additional explanation (continued page)

OUT口

开路电压波 (1.2/50 μ s)测试

Open Circuit Voltage Wave (1.2/50 μ s) Test

电压指示值 (kV) Indicating Value of the voltage	开路电压实测值 (kV) Actual Value Of Open Circuit Voltage	开路电压值 范围 (kV) Open Circuit Voltage Range	波前时间实 测tr (μ s) Measured Wavefront Time	波前时间范 围tr (μ s) Wavefront Time Range	半峰值时间实测 值T2 (μ s) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μ s) Half Peak Time Range
0.5	0.51	0.45~0.55	1.009	0.84~1.56	53.3	40~60
1	1.02	0.9~1.1	1.015	0.84~1.56	53.4	40~60
2	2.05	1.8~2.2	1.007	0.84~1.56	53.3	40~60
4	4.06	3.6~4.4	1.012	0.84~1.56	53.2	40~60
6	6.09	5.4~6.6	1.008	0.84~1.56	53.5	40~60
-0.5	-0.51	-0.55~-0.45	1.018	0.84~1.56	53.1	40~60
-1	-1.04	-1.1~-0.9	1.012	0.84~1.56	53.0	40~60
-2	-2.06	-2.2~-1.8	1.015	0.84~1.56	53.3	40~60
-4	-4.07	-4.4~-3.6	1.007	0.84~1.56	52.8	40~60
-6	-6.10	-6.6~-5.4	1.013	0.84~1.56	53.2	40~60

短路电流波 (8/20 μ s)测试

Short Circuit Current Wave Test

电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μ s) Measured Wavefront Time	波前时间范 围tr (μ s) Wavefront Time Range	半峰值时间实测 值T2 (μ s) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μ s) Half Peak Time Range
0.5	245	225~275	7.41	6.4~9.6	20.6	16~24
1	495	450~550	7.45	6.4~9.6	20.8	16~24
2	990	900~1100	7.43	6.4~9.6	20.3	16~24
4	1975	1800~2200	7.47	6.4~9.6	20.5	16~24
6	2970	2700~3300	7.42	6.4~9.6	21.0	16~24
-0.5	240	225~275	7.49	6.4~9.6	20.5	16~24
-1	490	450~550	7.44	6.4~9.6	20.7	16~24
-2	985	900~1100	7.43	6.4~9.6	20.6	16~24
-4	1975	1800~2200	7.43	6.4~9.6	20.8	16~24
-6	2955	2700~3300	7.41	6.4~9.6	20.9	16~24



L-N

电压指示值 (kV) Indicating Value of the voltage	开路电压实测值 (kV) Actual Value Of Open Circuit Voltage	开路电压值 范围 (kV) Open Circuit Voltage Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	0.49	0.45~0.55	0.995	0.84~1.56	49.6	25~60
4	3.88	3.6~4.4	0.998	0.84~1.56	49.8	25~60
-0.5	-0.48	-0.55~-0.45	0.991	0.84~1.56	49.3	25~60
-4	-3.86	-4.4~-3.6	0.999	0.84~1.56	48.7	25~60
电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	245	225~275	7.25	6.4~9.6	20.6	16~24
4	1965	1800~2200	7.21	6.4~9.6	20.7	16~24

L-PE

电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	0.49	0.45~0.55	0.997	0.84~1.56	38.2	25~60
4	3.89	3.6~4.4	0.999	0.84~1.56	37.3	25~60
-0.5	-0.48	-0.55~-0.45	0.994	0.84~1.56	37.9	25~60
-4	-3.85	-4.4~-3.6	0.993	0.84~1.56	37.6	25~60
电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	40.5	37.5~45.8	2.47	2~3	25.3	20~30
4	323	300~366	2.49	2~3	25.1	20~30

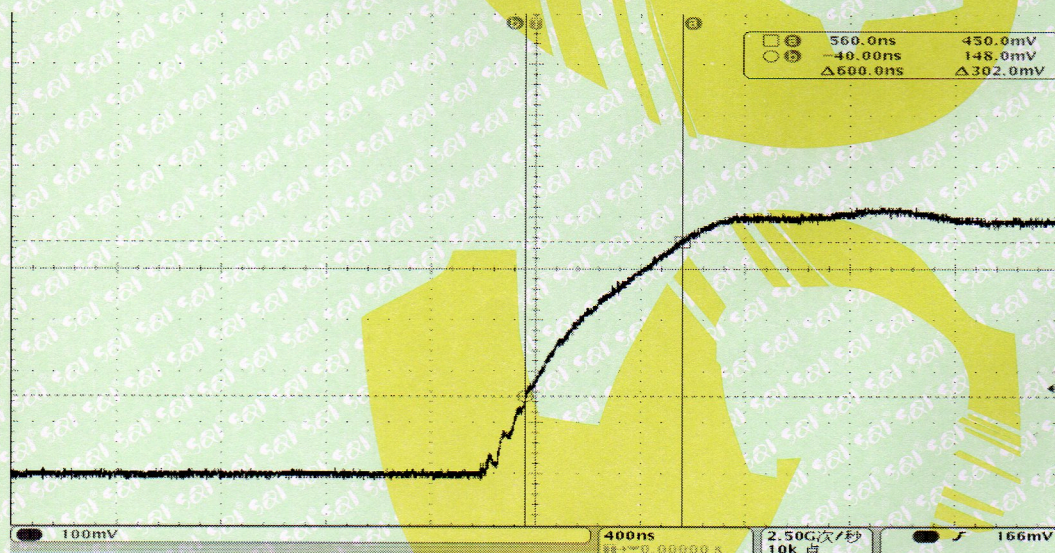
N-PE

电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	0.48	0.45~0.55	0.998	0.84~1.56	37.6	25~60
4	3.87	3.6~4.4	0.995	0.84~1.56	37.3	25~60
-0.5	-0.48	-0.55~-0.45	0.997	0.84~1.56	37.2	25~60
-4	-3.85	-4.4~-3.6	1.000	0.84~1.56	37.5	25~60
电压指示值 (kV) Indicating Value of the voltage	短路电流实测值 (A) Measured Values Of Short Circuit Current	短路电流值 范围 (A) Short Circuit Current Range	波前时间实 测tr (μs) Measured Wavefront Time	波前时间范 围tr (μs) Wavefront Time Range	半峰值时间实测 值T2 (μs) Measured Values Of Half Peak Time	半峰值时间范 围T2 (μs) Half Peak Time Range
0.5	41.3	37.5~45.8	2.45	2~3	25.2	20~30
4	325	300~366	2.50	2~3	25.5	20~30

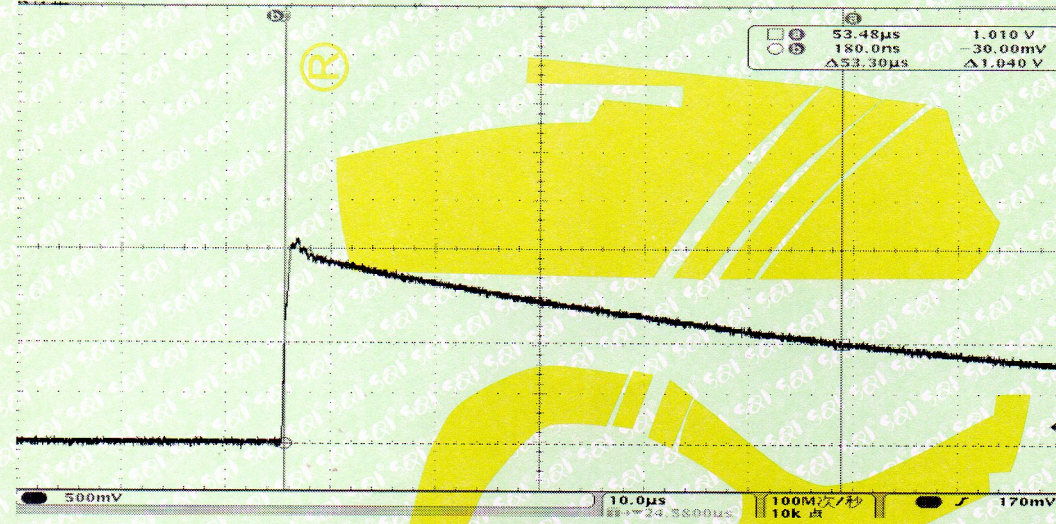
本次校准扩展不确定度 $U_{rel} = 3.3\% (k=2)$

The expanded uncertainty of the calibration $U_{rel} = 3.3\% (k = 2)$

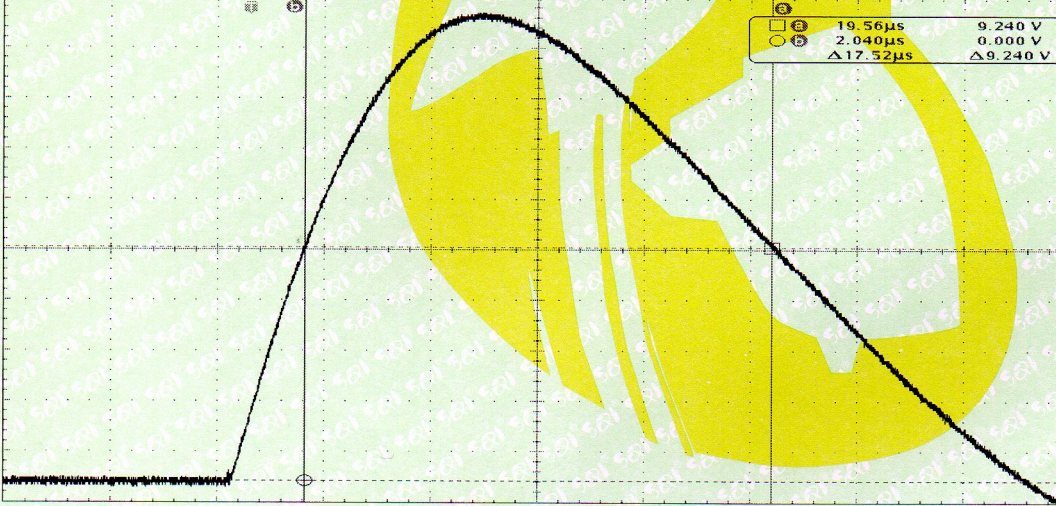
电压波前波形 (OUT) Voltage wavefront waveform



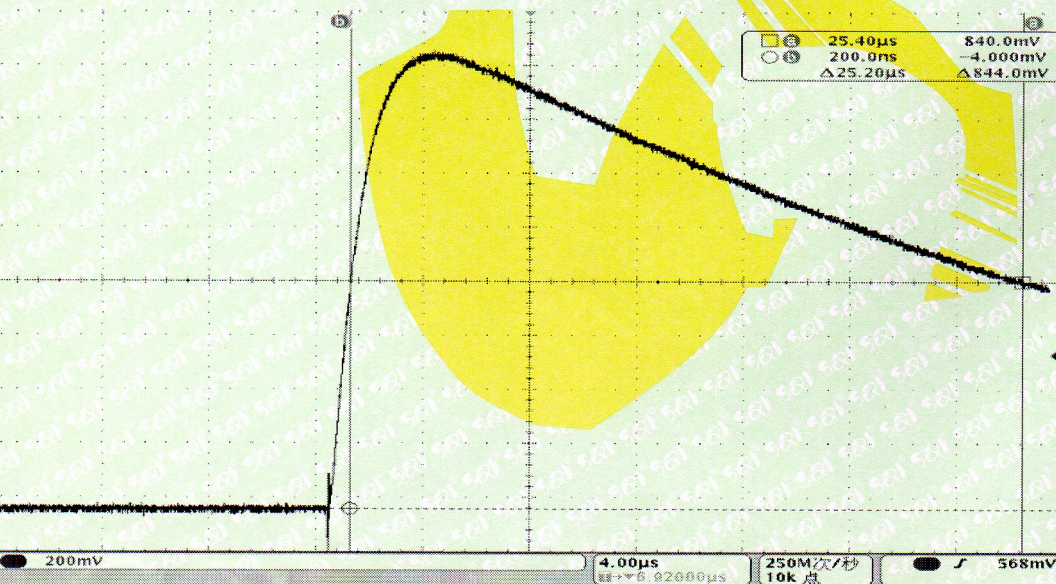
电压波形 (OUT) Voltage Waveform



电流波形 (OUT) Current Waveform



电流波形 (L-PE) Current Waveform



以下空白