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UL&EMC LABORATORY

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BrightKing has advanced experimental platforms that meets series of international standards. We have surge generator and other related reliability testing equipments of KeyTek which is the world famous brand in America.

- Has a complete set of GR1089、ITU-K20、IEC61000-4-5、FCC Part 68 surge test platform
- Has U.S UL1449-3 reliability test platform
- Has IEC61000-4-2 ESD test platform

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A picture of EMC Lab.

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ITU/IEC/UL1449 SURGE DEVICE

GR1089-CORE SURGE DEVICE

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1、 KeyTek ITU/IEC Model

ITU/IEC 10/700μs Model(1.1)

IEC 1.2/50μs&8/20μs Model(1.2)

1.1、KeyTek Model E502B :

a、Apply to standard of ITU-T K21(formely CCITT)、ITU-T K45、 YD/T 950、 YD/T 933、IEC61000-4-5，completely compatible FCC Part 68；

b、surge test waveform：10/700μs and 0.5/700μs compatible 9/720μs

c、open-circuit voltage MAX6.6KV

d、 two types of matching impedance with 15Ω and 40Ω

1.2、 KeyTek Model E521（IEC61000-4-5）：

a、 apply to the standard of IEC61000-4-5 and GB/T17626.5

b、 Combination waveform of 1.2/50μs&8/20μs

c、open-circuit voltage Max 20KV

d、short-circuit current Max 10KA

e、2Ω and 12Ω impedance

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2.1 KeyTek GR1089-CORE Model

2/10μs MODEL(2.1.1)

10/360μs MODEL(2.1.2)

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2.2 KeyTek GR1089-CORE Model

10/1000μs MODEL (2.2.1)

10/250μs MODEL(2.2.2)

2.1.1、KeyTek Model E506-4W（GR1089-CORE)

a、 Specifically for GR1089 2/10μs surge test waveform

- open-circuit voltage Max 5000V
- short-circuit current Max 500A

2.1.2、 KeyTek Model E508（GR1089-CORE）：

a、 Specifically for GR1089 10/360μs surge test waveform

- open-circuit voltage Max 1000V
- short-circuit current Max 100A

2.2.1、 KeyTek Model E518（GR1089-CORE）：

a、 Specifically for GR1089 10/1000μs surge test waveform

- open-circuit voltage Max 2000V
- short-circuit current Max 200A

2.2.2、 KeyTek Model E515（GR1089-CORE）：

a、 Specifically for GR1089 10/250μs surge test waveform

- open-circuit voltage Max 4000V
- short-circuit current Max 2000A

3、 KeyTek MZ/15 ESD Device（IEC61000-4-2）

a 、 apply to standard IEC61000-4-2,GB/T1762.2 etc ESD
b 、 contact discharge 8KV
c 、 air discharge 15KV

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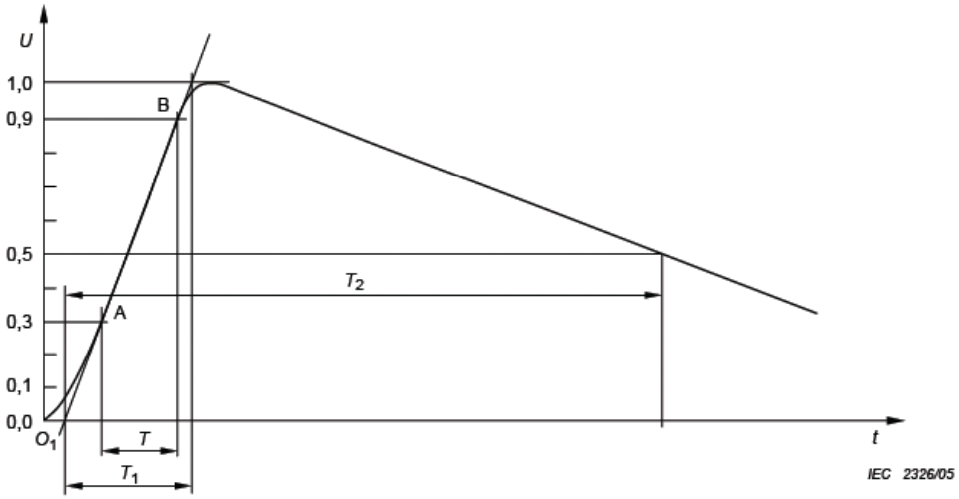
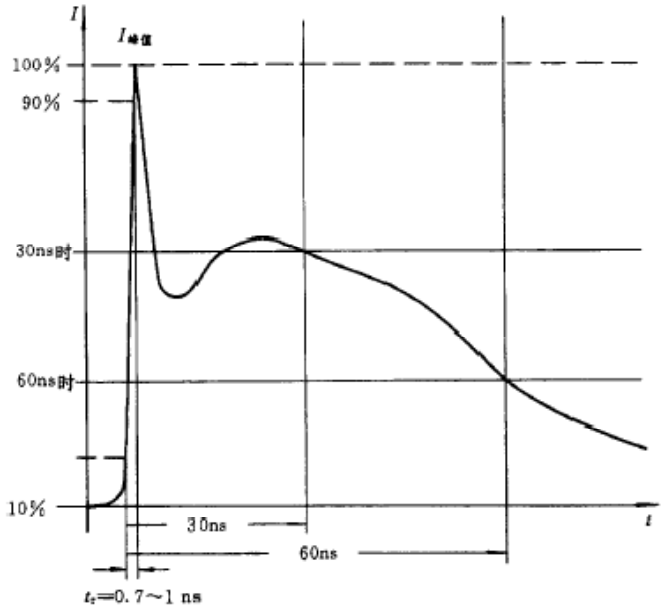
STANDARD SURGE AND ESD WAVE:



Front time: $T_1 = 1{,}67 \times T = 10\ \mu s \pm 30\ \%$
Time to half-value: $T_2 = 700\ \mu s \pm 20\ \%$.



4、UL1449 -3 TEST Lab.

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A picture of bracket bench with special equipment

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KeyTek **test equipment**

A picture of surge test with UL1449 3rd 6KV 3KA
The first inhibition of voltage and the Twentieth inhibition of voltage offset not allowed to exceed±10%

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Surge Absorber (Piezoresistance) Testing Power Supply

After 5 times surge test and 15 IN test:
1. Overvoltage Test :(overvoltage test) ×110 %rated voltage through 7hssurge absorber testing ,All products required leakage current not exceeding 0.5mA
2.Operational Voltage Test :(operational voltage test)×115 %rated voltage through 30minutes

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High And Low Temperature Reliability Testing Equipment

Leakage Current Test(LCT)：
1)During the test of sample leakage current is not allowed to exceed 0.5mA
2) At 32 ± 2 ℃ (90 ± 4 ℉) Humidity 88 ± 2%,in constant temperature and humidity device with the ventilation function to baking 48 hours
3) The test samples are required to test within one minute when leave the constant temperature and humidity device.

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Load and pulling test device

1.Use power line to loading
2.Insert and pull out pulling test
1) Insert and pull out 10 times, Insertion force not more than 18kg
2)Use standard plug without earth-pole jack, vertical lifting 3lb 1 minute, not more than 2mm displacement
3) Use standard plug with earth-pole jack, vertical lifting 15lb, must immediately falls off

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UL1449 FAULT CURRENT TEST EQUIPMENT

FAULT SHORT CURRENT TEST:
In 50A, 100A, 150A, 1000A, never allowed to have fire burning phenomenon prior to protection device main circuit is disconnected , Requirements of leakage current controlled in 0.5m after test

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Temperature test device

Temperature test:

1)Temperature measuring effective value identification methods were separated by 5 minutes record a reading, when three consecutive readings are the same, namely temperature reaches a steady value

2)Test environment at room temperature 25 ℃ as the benchmark ,if the room temperature is not 25 ℃,can be modified to 25℃

3)When tested using real power load resistance

4) Use the temperature sensing line 28AWG~32AWG(0.08~0.32mm2) General use 30AWG(0.05mm2)

5) Usually the test temperature measurement point, specified by UL engineers

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BRIGHTKING with a professional platform dedicated to providing customers professional and comprehensive service