

## Handheld Electrostatic Discharge Simulator

## EDS 20H

### Datasheet



#### In Compliance with

- > IEC / EN 61000-4-2
- > IEC / EN 61000-6-1
- > IEC / EN 61000-6-2
- > IEC / EN 61326
- > IEC 61340-3-1
- > GB / T 17626.2
- > ISO 14304
- > Bellcore GR-1089-Core
- > ITU-T K.20

#### Introduction

Electrostatic discharge between human body and a metal object or between metal objects can reach up to thousands of volts, which may cause malfunctions or damages to connected electrical equipment and devices.

The EDS 20H is the state-of-art handheld ESD generator, and the first of its kind independently researched and developed in China. It is designed according to IEC/EN 61000-4-2 with ergonomic design, integration design, battery powered and mains powered via an adaptor. It boasts easy touch screen operation, safe operation with temperature and humidity monitoring, and stable operation suitable from different testing occasions

#### Features

- > Ergonomic design
- > LCD touch screen
- > All-in-one design (no base unit)
- > Changeable R / C networks
- > Automatic polarity switching
- > Long battery life for continuous tests
- > Temperature and humidity monitoring
- > Built-in standards library
- > Intelligent detection of air discharge failure

#### Application Areas

- > IT
- > Telecom
- > Medical
- > TV Broadcasting
- > Railway, & rail transit
- > Military
- > Avionics
- > New energy power

| Technical Parameters     |  |
|--------------------------|--|
| Contact Discharge        | 1 kV – 20 kV (±5%)   |
| Air Discharge            | 1 kV – 20 kV (±5%)   |
| Voltage Step             | 100 V  |
| Hold Time                | > 5 s  |
| Polarity                 | Positive, negative   |
| RC Module                | LCD display  |
| Humidity & Temperature   | Built-in hygrothermograph, for recording and protection          |
| Repetition Frequency     | Single / 0.1 / 0.2 / 0.5 / 1 / 2 / 5 / 10 / 20 Hz                |
| Trigger Mode             | Manual / automatic   |
| Pulse                    | 1 – 9,999  |
| Contact Discharge        | 150 pF / 330 Ω   |
| Summary Procedure        | Test according to different standard levels                      |
| Rise Time                | 0.8 ns ± 25%   |
| Quick Start Test Program | Simple and easy to reset data online                             |
| Evaluation Procedure     | Contact discharge test at 20 Hz, evaluate the test points of DUT |
| Standard Test Procedure  | According to IEC / EN 61000-4-2                                  |

| General Parameters     |  |
|------------------------|--|
| Operating Temperature  | 15 °C-35 °C  |
| Operating Humidity     | 30%-60%  |
| Operating Air Pressure | 86 kPa-106 kPa   |
| Operating Power        | 100 V / 240 V (±10%); 50 / 60Hz;<br>Default configuration: 220 V, 50 Hz (for Mainland China) |
| Weight                 | Approx. 8.5 kg   |
| Weight (EDS gun)       | Approx. 1.8 kg   |

| Standard Accessories |                              |                 |     |  |  |
|----------------------|------------------------------|-----------------|-----|--|--|
| No.                  | Item                         | Model           | Qty | Specification  | Remarks  |
| 1                    | RC Module<br>(Replaceable)   | EDS<br>20H-RC   | 1   | 150 pF / 330Ω,   |   |
| 2                    | Discharge Tip                | EDS<br>20H-CONT | 1   | Contact discharge tip,   |   |
| 3                    | Discharge Tip                | EDS<br>20H-AIR  | 1   | Air discharge tip,   |   |
| 4                    | Battery Charging<br>Module   | EDS<br>20H-BATC | 1   | Containing 6 pcs of 2,600 mAh Ni-MH batteries                  |   |
| 5                    | Power Adaptor                | EDS<br>20H-ACDC | 1   | Used as a substitute of battery pack during<br>long-time tests |  |
| 6                    | Grounding Cable              | /               | 1   | 2 m  | /  |
| 7                    | Suitcase                     | /               | 1   | /  | /  |
| 8                    | Quality Guarantee            | /               | 1   | /  | /  |
| 9                    | Factory Inspection<br>Report | /               | 1   | /  | /  |
| 10                   | User Manual                  | /               | 1   | /  | /  |

| Optional Accessories |  |                                    |  |   |
|----------------------|--|------------------------------------|--|---|
| No.                  | Item   | Model                              | Specification  | Remarks   |
| 1                    | RC module<br>(resistance-capacitance module) | (same as respective specification) | 100 pF / 1500 Ω (EDS)<br>150 pF / 150 Ω (EDS)<br>150 pF / 2000 Ω (EDS)<br>200 pF / 0 Ω (EDS)<br>330 pF / 330 Ω (EDS)<br>330 pF / 2000 Ω (EDS)<br>500 pF / 0 Ω (EDS)<br>500 pF / 100 Ω (EDS)<br>500 pF / 500 Ω (EDS)<br>500 pF / 5000 Ω (EDS)<br>DMX: as customized |    |
| 2                    | Discharge tip                                | EDS 20H-CONT                       | 150 pF / 330 Ω<br>fast relay discharge module<br>rise time: 200 ps – 300 ps  |    |
| 3                    | Testing table                                | ESDD                               | As per IEC 61000-4-2:<br>Grounded HV resistance: 2 x 470 k Ω<br>Vertical coupling plane: 500 x 500 mm<br>Horizontal coupling plane: 1600 x 800 mm<br>Reference ground plane: 2700 x 1800 mm<br>Testing table: 1600 x 800 x 800 mm, solid wood                      |  |
| 4                    | ESD calibration kits                         | ESD CALA                           | Used for waveform calibration as per IEC / EN61000-4-2, including 2 Ω target / 4 GHz, coaxial cable, user manual   |  |
| 5                    | Attenuator                                   | JZ 602                             | Resistance: 50 Ω, attenuation: 20 db   |  |
| 6                    | Attenuator                                   | JZ 603                             | Resistance: 50 Ω, attenuation: 30 db   |  |
| 7                    | Communication Module                         | EDS 20H-REMOTE                     | Enabling PC control  | /   |
| 8                    | Control Software                             | CoreLab                            | Graphical UI, superior human-machine interactions<br>Enriched standards library, easy parameters setting<br>Powerful test sequencing and scheduling;<br>Easy test report generating  | /   |



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