



■ Features

- Uni-directional ESD protection of two lines
- 50Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Low capacitance: 0.6pF(Max)
- Low leakage current
- Low reverse clamping voltage
- IEC 61000-4-2 ±15kV contact ±20kV air
- IEC 61000-4-5 (Lightning) 4A (8/20μs)

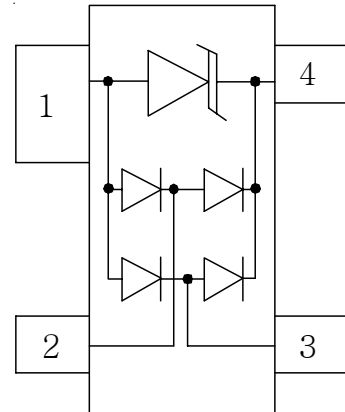
■ Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Personal Digital Assistants
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players, Keypads, Side Keys, LCD
- USB 2.0

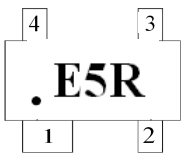
■ Mechanical Data

- Package:SOT-143
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

■ Schematic & PIN Configuration



■ Ordering Information

| Part Number | Package | Marking   | Packing          | Reel Size |
|-------------|---------|---|------------------|-----------|
| ESD05V14T   | SOT-143 |  | 3000 Tape & Reel | 7 inches  |

**■ Absolute Maximum Rating( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**

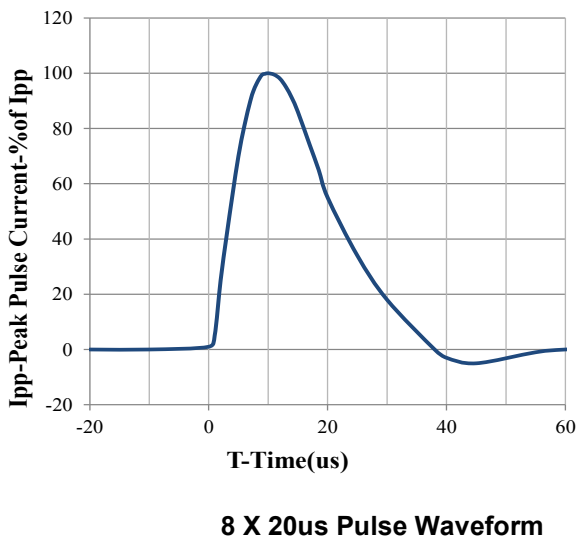
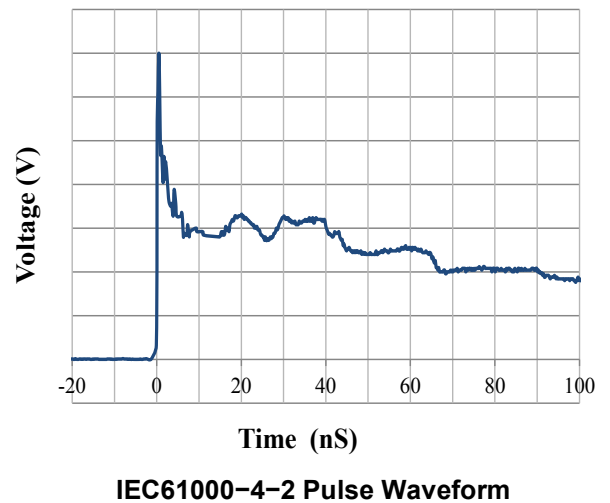
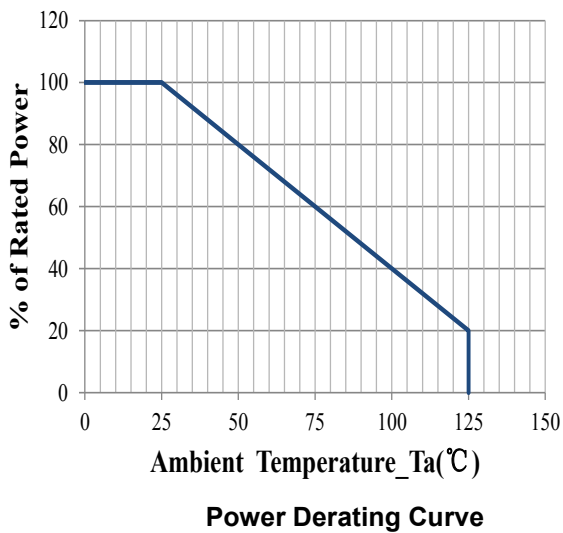
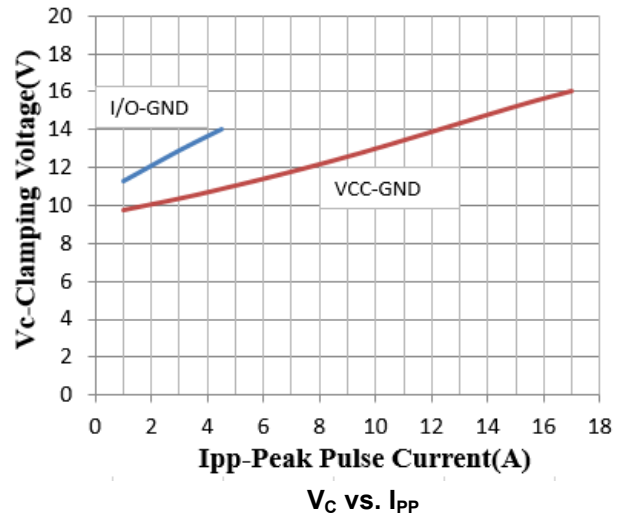
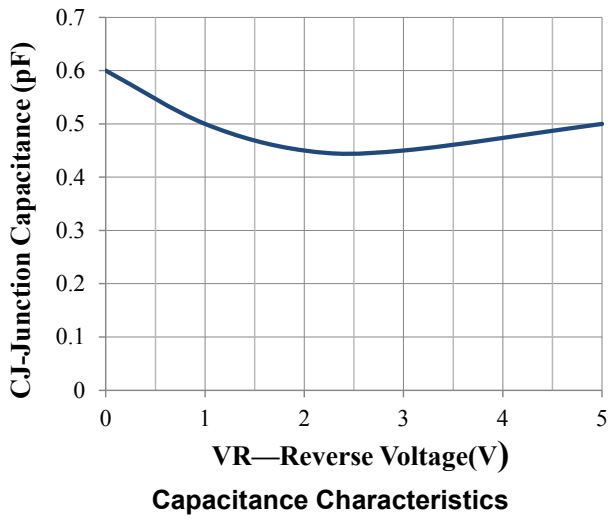
| Parameter   | Symbol                       | Value       | Unit               |
|---|------------------------------|-------------|--------------------|
| Peak Pulse Power (8/20 $\mu\text{s}$ , I/O-GND)             | Ppk                          | 50          | W                  |
| Peak Pulse Power (8/20 $\mu\text{s}$ , Vcc-GND)             | Ppk                          | 240         | W                  |
| Peak Pulse Current (8/20 $\mu\text{s}$ , I/O-GND)           | IPP                          | 4           | A                  |
| Peak Pulse Current (8/20 $\mu\text{s}$ , Vcc-GND)           | IPP                          | 15          | A                  |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | $V_{\text{ESD}, \text{VDD}}$ | $\pm 20$    | kV                 |
|   | $V_{\text{ESD}, \text{I/O}}$ | $\pm 15$    |                    |
| Operating Temperature Range                                 | TJ                           | 150         | $^{\circ}\text{C}$ |
| Storage Temperature Range                                   | Tstg                         | -55 to +150 | $^{\circ}\text{C}$ |

**■ Electrical Characteristics( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**

| Parameter               | Symbol           | Test Condition   | Min | Typ  | Max  | Unit          |
|-------------------------|------------------|--|-----|------|------|---------------|
| Reverse Working Voltage | $V_{\text{RWM}}$ | I/O-GND  |     |      | 5    | V             |
| Breakdown Voltage       | $V_{\text{BR}}$  | $I_{\text{T}} = 1\text{mA}$ , I/O-GND                    | 6   | 7.0  | 9    | V             |
| Breakdown Voltage       | $V_{\text{BR}}$  | $I_{\text{T}} = 1\text{mA}$ , VCC-GND                    | 6   | 7.2  | 9    |               |
| Reverse Leakage Current | $I_{\text{R}}$   | $V_{\text{RWM}} = 5\text{V}$                             |     |      | 1    | $\mu\text{A}$ |
| Clamping Voltage        | $V_{\text{C}}$   | IPP = 4A (8 x 20 $\mu\text{s}$ pulse), I/O-GND           |     | 14.0 | 16.0 | V             |
| Clamping Voltage        | $V_{\text{C}}$   | IPP = 15A (8 x 20 $\mu\text{s}$ pulse), VCC-GND          |     | 15.0 | 17.0 | V             |
| Junction Capacitance    | $C_{\text{J}}$   | $V_{\text{R}} = 0\text{V}$ , $f = 1\text{MHz}$ , I/O-I/O |     | 0.3  | 0.5  | pF            |
| Junction Capacitance    | $C_{\text{J}}$   | $V_{\text{R}} = 0\text{V}$ , $f = 1\text{MHz}$ , I/O-GND |     | 0.6  | 0.9  | pF            |

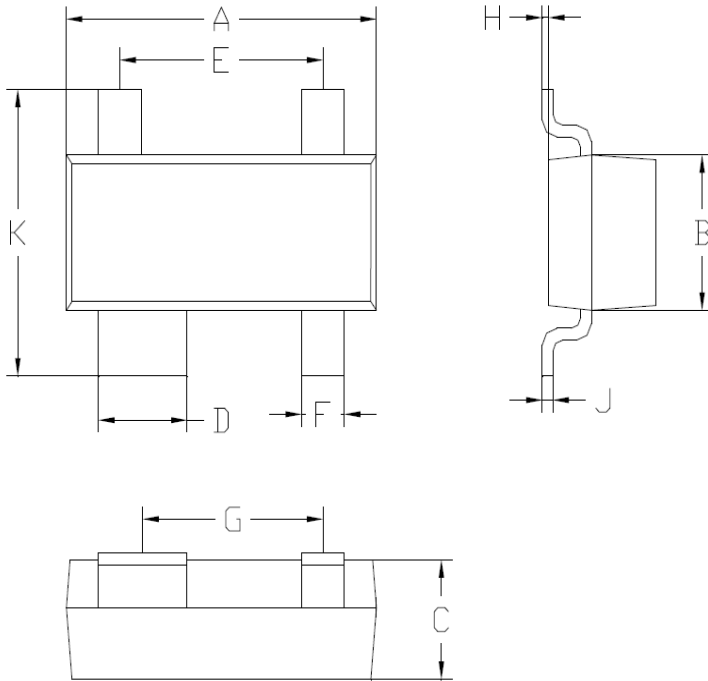


■ Typical Characteristics( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)





■ Outline Drawing – SOT-143



| SOT-143              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.70 | 3.10 |
| B                    | 1.10 | 1.50 |
| C                    | 0.9  | 1.1  |
| D                    | 0.78 | 0.88 |
| E                    | 1.80 | 2.00 |
| F                    | 0.37 | 0.43 |
| G                    | 1.59 | 1.79 |
| H                    | 0.02 | 0.1  |
| J                    | 0.05 | 0.15 |
| K                    | 2.20 | 2.60 |
| ALL Dimensions in mm |      |      |

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