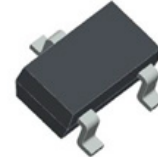


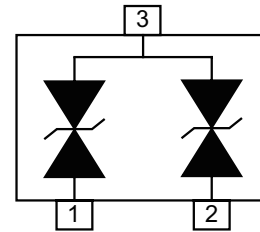
## 1. General description

The ESDAHDxxBE2 series is designed for applications requiring transient overvoltage protection capability. This series is available in bidirectional configurations and is rated at 350 Watts for an 8/20 $\mu$ s waveshape, designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).



## 2. Features and benefits

- Peak pulse power 350W @ 8/20us waveform
- IEC 61000-4-2 (ESD)  $\pm$ 30kV(air),  $\pm$ 30kV(contact)
- Protect one bidirectional line or two unidirectional lines
- Low clamping voltage
- Low leakage current
- Meet MSL level1
- Halogen free and RoHS compliant



## 3. Applications

- Mobile phones & accessories
- Portable Electronics
- Computers and peripherals
- Microprocessor based equipment
- Personal Digital Assistants (PDA)
- Networking and Telecom
- Serial and Parallel Ports



## 4. Ordering information

Type number	Package Name	Orderable part number	Packing method	Small packing quantity	Package issue date
ESDAHDXBE2	SOT23	ESDAHDXBE2X	Tape and reel	3000	13-Oct-2020
ESDAH05BE2	SOT23	ESDAH05BE2X	Tape and reel	3000	13-Oct-2020

## 5. Absolute maximum ratings

In accordance with the Absolute Maximum Rating System (IEC 60134).

$T_j = 25\text{ }^\circ\text{C}$  unless otherwise specified.

Symbol	Parameter	Conditions	Values	Unit
<b>Absolute maximum rating</b>				
$P_{PPM}$	peak pulse power	$t_p = 8/20\ \mu\text{s}$	350	W
$V_{ESD}$	ESD per IEC 61000-4-2 (air) ESD per IEC61000-4-2 (contact)		$\pm$ 30 $\pm$ 30	kV kV
$T_{stg}$	storage temperature range		-55 to 150	$^\circ\text{C}$
$T_j$	operating temperature range		-55 to 150	$^\circ\text{C}$
$T_L$	lead soldering temperature	10 sec	260	$^\circ\text{C}$

## 6. Characteristics

$T_j = 25\text{ }^\circ\text{C}$  unless otherwise specified.

Product type	Max. Reverse Working Voltage $V_{RWM}$ (V)	Min. Breakdown Voltage $V_{BR}$ @ $I_T = 1\text{ mA}$ (V)	Max. Clamping Voltage $V_C$ @ $I_{pp} = 1\text{ A}$ (V)	Max. Clamping Voltage $V_C$ @ Max $I_{pp}$ (V)	Max. Peak Pulse current $I_{pp}$ @ 8/20 $\mu\text{s}$ (A)	Maximum Reverse Leakage $I_R$ @ $V_R$ ( $\mu\text{A}$ )	Max. $C_j$ (pF) @ 0 V, 1 MHz	Marking
ESDAHD05BE2	5	6.5	9.5	22	22	1	120	C05
ESDAHD12BE2	12	13.3	20	30	16	1	70	C12
ESDAHD15BE2	15	17.1	18	25	15	1	24	C15
ESDAHD18BE2	18	19.1	21	30	10	1	16	C18
ESDAHD24BE2	24	26	35	48	8	1	30	CB2

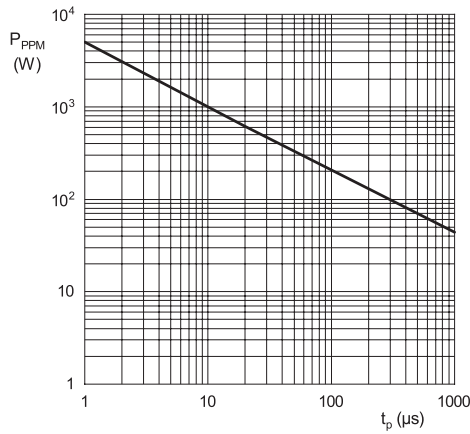


Fig. 1. Pulse rating curve

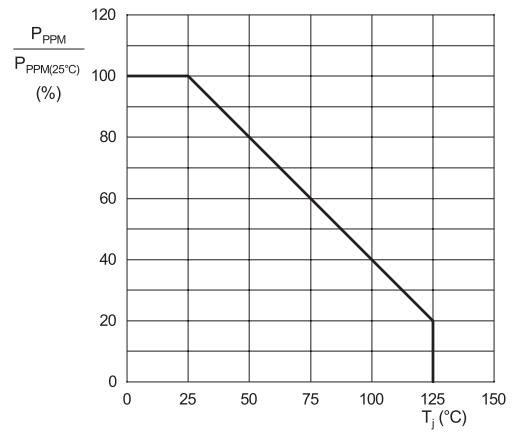


Fig. 2. Peak pulse power derating curve

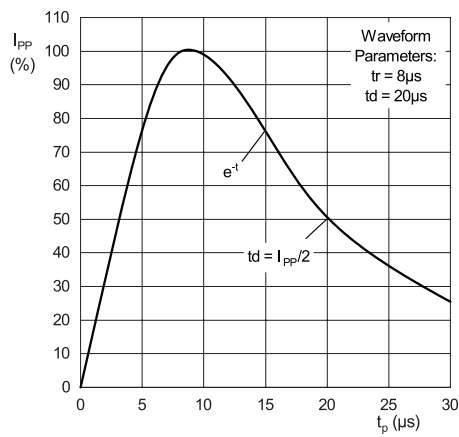


Fig. 3. Pulse waveform

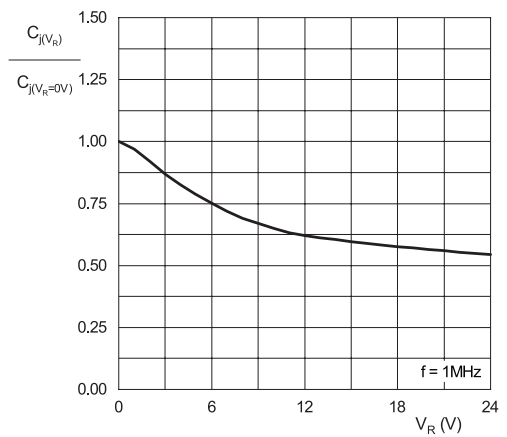
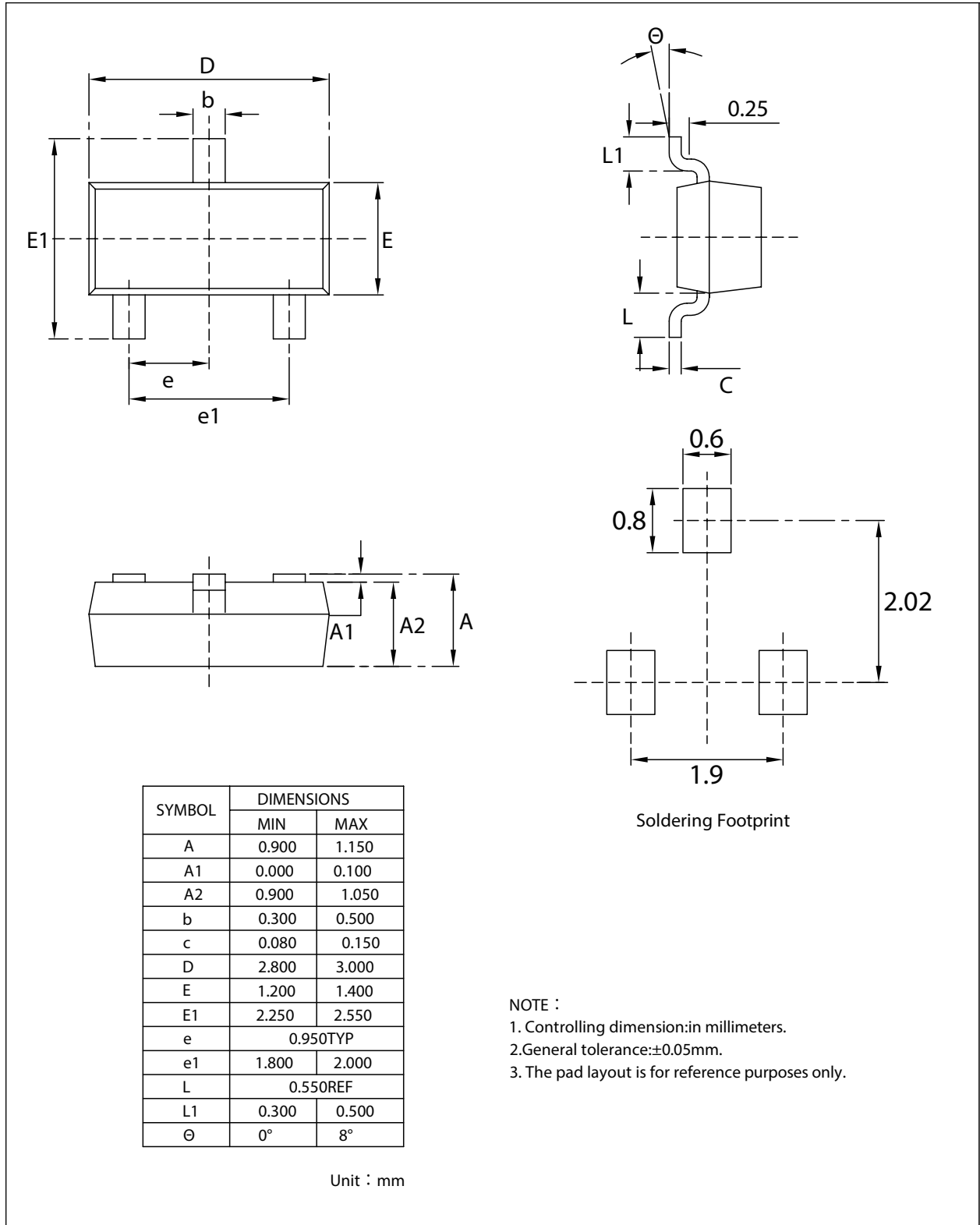


Fig. 4. Capacitance vs Reverse voltage

7. Package outline

SOT23



## 8. Legal information

### Data sheet status

Document status [1][2]	Product status [3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

- [1] Please consult the most recently issued document before initiating or completing a design.
- [2] The term 'short data sheet' is explained in section "Definitions".
- [3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.ween-semi.com>.

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