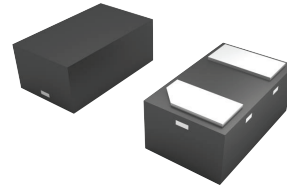


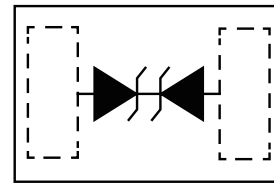
## 1. General description

The ESDUDS05BF is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and low capacitance. The ESDUDS05BF is suited for using in cellular phones, portable device, digital cameras, power supplies and many other portable applications.



## 2. Features and benefits

- DFN1006 package
- Bidirectional ESD protection of one line
- Extremely low diode capacitance
- Extremely low clamping voltage to protect sensitive I/Os
- Extremely low inductance protection path to ground
- IEC 61000-4-2 (ESD)  $\pm 20\text{kV}$ (air),  $\pm 12\text{kV}$ (contact)
- Halogen free and RoHS compliant



## 3. Applications

- Cell Phone Handsets and Accessories
- Personal Digital Assistants
- Notebooks / Desktops / Servers
- Digital Visual Interfaces (DVI)
- Display Ports (DP)
- HDMI1.3/1.4/2.0
- USB2.0/3.0/3.1



## 4. Absolute maximum ratings

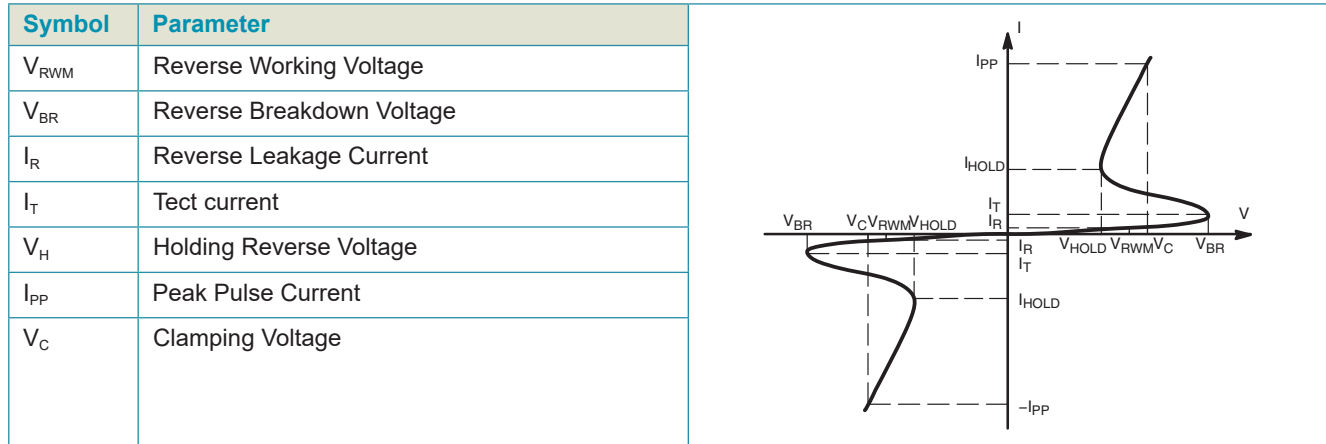
In accordance with the Absolute Maximum Rating System (IEC 60134).

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

Symbol	Parameter	Conditions	Values	Unit
<b>Absolute maximum rating</b>				
$I_{PP}$	peak pulse current	$t_p = 8/20\ \mu\text{s}$	5	A
$V_{ESD}$	ESD per IEC 61000-4-2 (air) ESD per IEC 61000-4-2 (contact)		$\pm 20$ $\pm 12$	kV kV
$T_{stg}$	storage temperature range		-55 to 150	$^\circ\text{C}$
$T_j$	operating temperature range		-55 to 150	$^\circ\text{C}$

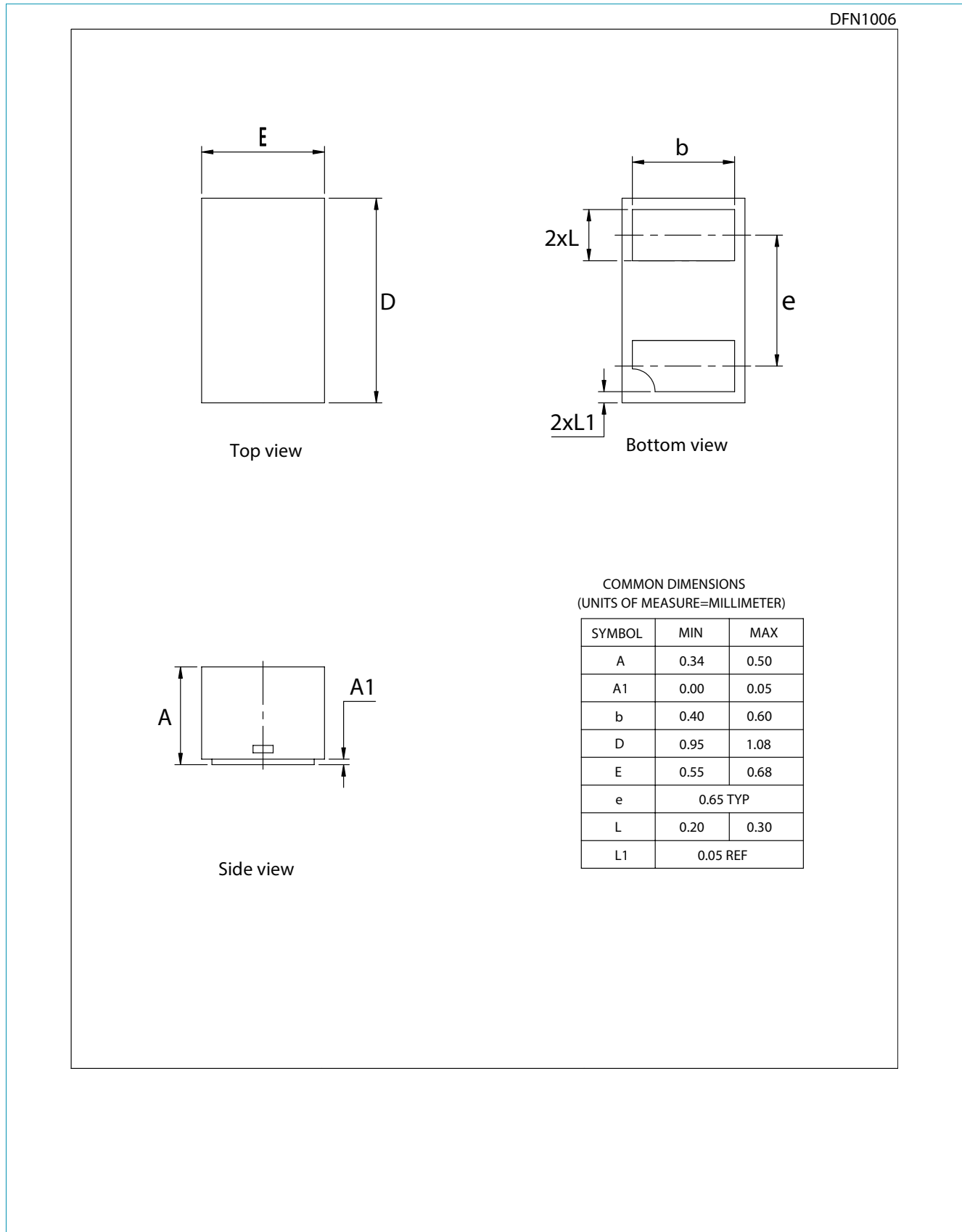
### 5. Characteristics

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



Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{RWM}$	Reverse Working Voltage		-	-	5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{ mA}$	5.6	-	-	V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5\text{ V}$	-	-	1	$\mu\text{A}$
$V_H$	Holding Reverse Voltage		2	-	-	V
$V_C$	Clamping Voltage	$I_{PP} = 5\text{ A}; t_p = 8/20\text{ }\mu\text{s}$	-	-	10	V
$C_J$	Junction Capacitance	$V_R = 0\text{ V}; f = 1\text{ MHz}$	-	-	0.4	pF

### 6. Package outline



COMMON DIMENSIONS  
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	MAX
A	0.34	0.50
A1	0.00	0.05
b	0.40	0.60
D	0.95	1.08
E	0.55	0.68
e	0.65 TYP	
L	0.20	0.30
L1	0.05 REF	

## 7. 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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