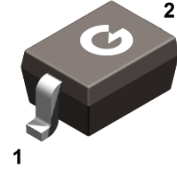
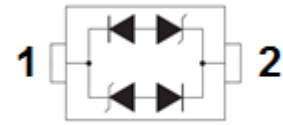


### Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD):  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact)
- Low reverse stand-off voltage:  $V_{RWM} = 12\text{V}$
- Low clamping voltage
- Unidirectional & Bidirectional Configurations
- Protects One Power or I/O Port
- RoHS compliant with Halogen-free



SOD-323

### Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin-Plated Leads, Solderability-per MIL-STD-202, Method 208

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
DLC12C	SOD-323	3000 pcs / Tape & Reel	2C

### Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{ESD-A}$	$\pm 30$	kV
IEC 61000-4-2; ESD (Contact)	$V_{ESD-C}$	$\pm 30$	kV
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	350	W
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ )	$I_{PP}$	11	A

### Thermal Characteristics

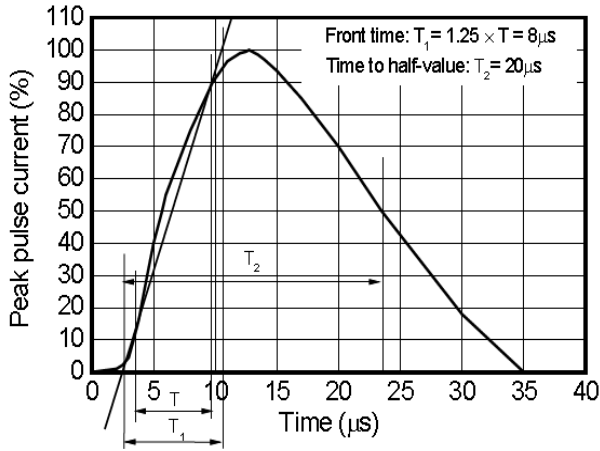
Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air <sup>*1</sup>	$R_{\theta JA}$	286	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case <sup>*1</sup>	$R_{\theta JC}$	174	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead <sup>*1</sup>	$R_{\theta JL}$	220	$^\circ\text{C/W}$
Junction Temperature	$T_J$	-55 ~ +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper

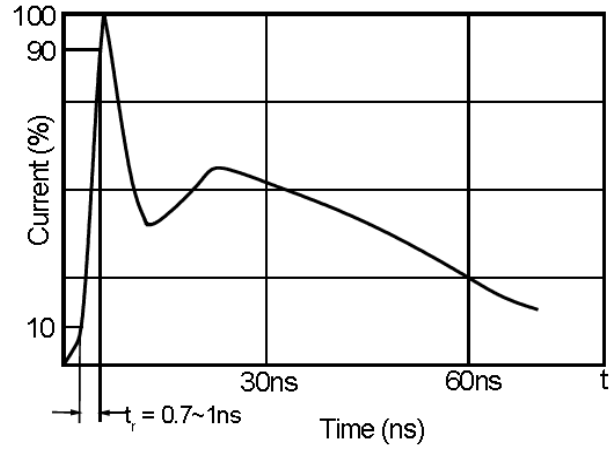
### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	$V_{RWM}$		-	-	12	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	13.3	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 12\text{V}$	-	-	1	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	19	V
		$I_{PP} = 11\text{A}, t_p = 8/20\mu\text{s}$	-	-	28.6	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	1	-	pF

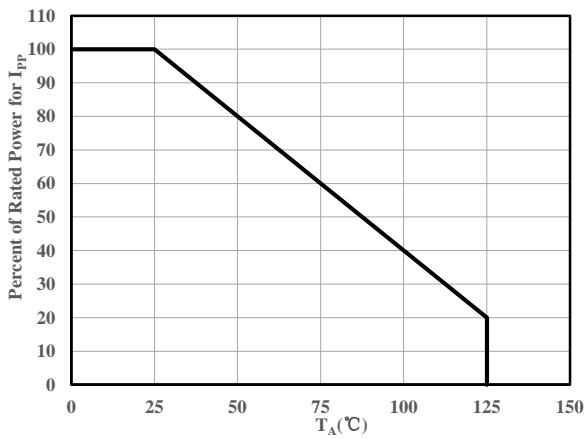
**Ratings and Characteristic Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



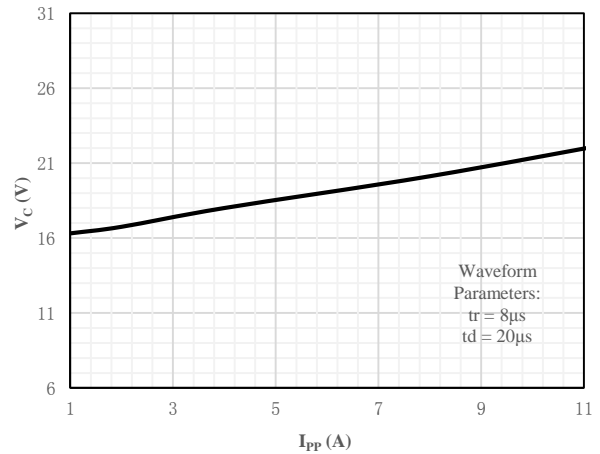
**Fig 1** 8/20µs waveform per IEC61000-4-5



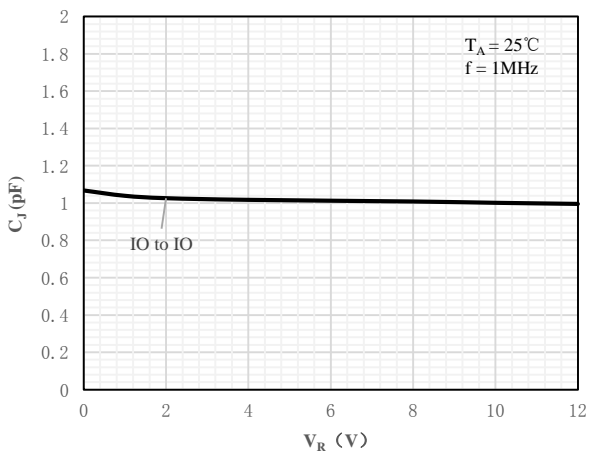
**Fig 2** ESD pulse waveform according to IEC61000-4-2



**Fig 3** Pulse Derating Curve

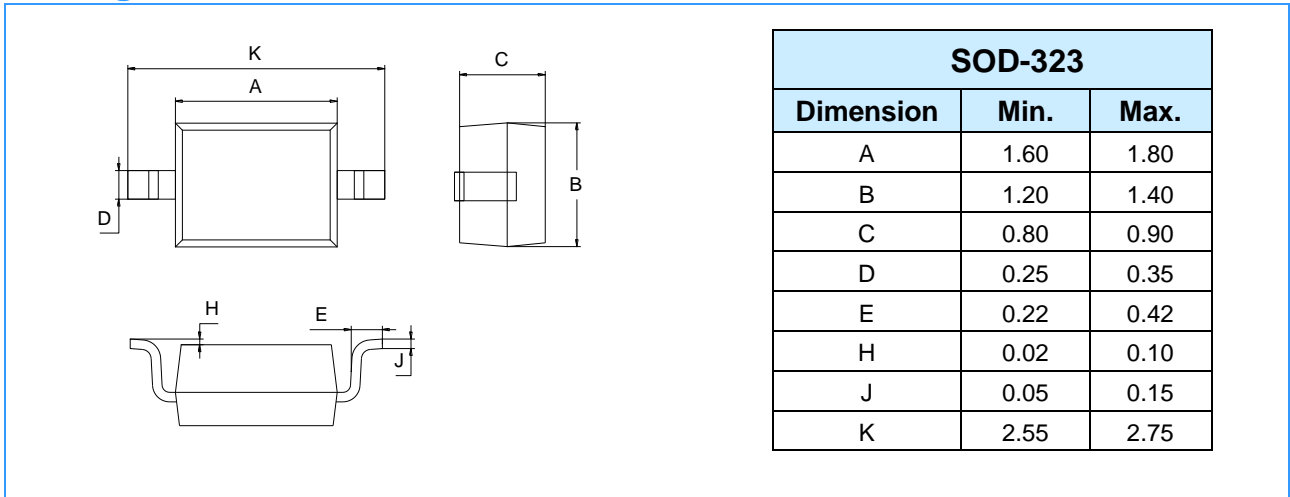


**Fig 4** Clamping Voltage vs. Peak Pulse Current



**Fig 5** Junction Capacitance vs. Breakdown Voltage

**Package Outline Dimensions** (Unit: mm)



**Package Outline Dimensions** (Unit: mm)

