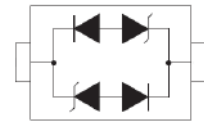


## Features

- 350 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Low clamping voltage
- Working voltage:  $V_{RWM} = 3V, 5V, 8V, 12V, 15V, 24V, 36V$
- Low reverse clamping voltage

HF



## Typical Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Portable instrumentation



## Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

SOD-123

## Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
DLC03CW	SOD-123	3000pcs / Tape & Reel	03C
DLC05CW	SOD-123	3000pcs / Tape & Reel	C05C
DLC08CW	SOD-123	3000pcs / Tape & Reel	8C
DLC12CW	SOD-123	3000pcs / Tape & Reel	2C
DLC15CW	SOD-123	3000pcs / Tape & Reel	6C
DLC24CW	SOD-123	3000pcs / Tape & Reel	4C
DLC36CW	SOD-123	3000pcs / Tape & Reel	36C

## Maximum Ratings (@ $T_A = 25^\circ C$ 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 ( $t_p = 8/20\mu s$ )	$P_{PP}$	350	W

## Thermal Characteristics

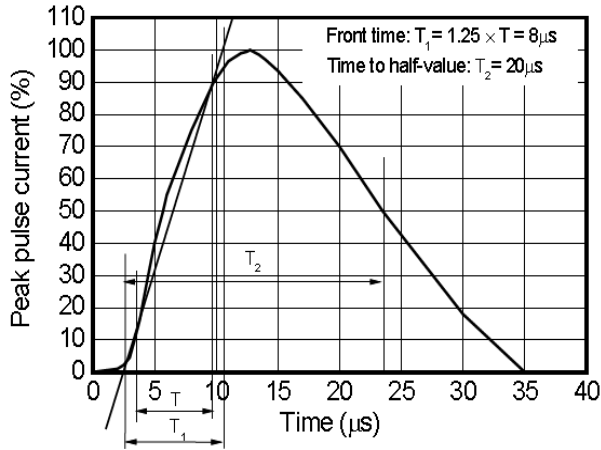
Parameter	Symbol	Value	Unit
Junction Temperature	$T_J$	125	$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to+150	$^\circ C$

**Electrical Characteristics** (@ T<sub>A</sub> = 25°C unless otherwise specified)

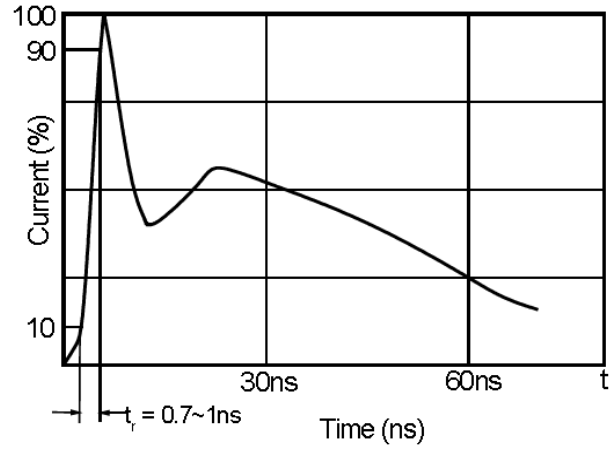
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
<b>DLC03CW TVS for 3V Lines</b>						
Reverse Stand-off Voltage	V <sub>RWM</sub>		-	-	3	V
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>T</sub> = 1mA	4	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 3V	-	-	5	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	-	7	V
		I <sub>PP</sub> = 20A, t <sub>p</sub> = 8/20μs	-	-	19	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHZ	-	1	-	pF
<b>DLC05CW TVS for 5V Lines</b>						
Reverse Stand-off Voltage	V <sub>RWM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>T</sub> = 1mA	6	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 5V	-	-	5	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	-	9.8	V
		I <sub>PP</sub> = 20A, t <sub>p</sub> = 8/20μs	-	-	20	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHZ	-	1	-	pF
<b>DLC08CW TVS for 8V Lines</b>						
Reverse Stand-off Voltage	V <sub>RWM</sub>		-	-	8	V
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>T</sub> = 1mA	8.5	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 8V	-	-	2	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	-	13.4	V
		I <sub>PP</sub> = 17A, t <sub>p</sub> = 8/20μs	-	-	18.5	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHZ	-	1	-	pF
<b>DLC12CW TVS for 12V Lines</b>						
Reverse Stand-off Voltage	V <sub>RWM</sub>		-	-	12	V
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>T</sub> = 1mA	13.3	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 12V	-	-	1	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	-	19	V
		I <sub>PP</sub> = 11A, t <sub>p</sub> = 8/20μs	-	-	28.6	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHZ	-	1	-	pF
<b>DLC15CW TVS for 15V Lines</b>						
Reverse Stand-off Voltage	V <sub>RWM</sub>		-	-	15	V
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>T</sub> = 1mA	16.7	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 15V	-	-	1	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	-	24	V
		I <sub>PP</sub> = 10A, t <sub>p</sub> = 8/20μs	-	-	31.8	V

Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$	-	1	-	pF
<b>DLC24CW TVS for 24V Lines</b>						
Reverse Stand-off Voltage	$V_{RWM}$		-	-	24	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1mA$	26.7	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 24V$	-	-	1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$	-	-	43	V
		$I_{PP} = 6A, t_p = 8/20\mu s$	-	-	56	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$	-	1	-	pF
<b>DLC36CW TVS for 36V Lines</b>						
Reverse Stand-off Voltage	$V_{RWM}$		-	-	36	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1mA$	40	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 36V$	-	-	1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$	-	-	48	V
		$I_{PP} = 4A, t_p = 8/20\mu s$	-	-	90	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$	-	1.5	-	pF

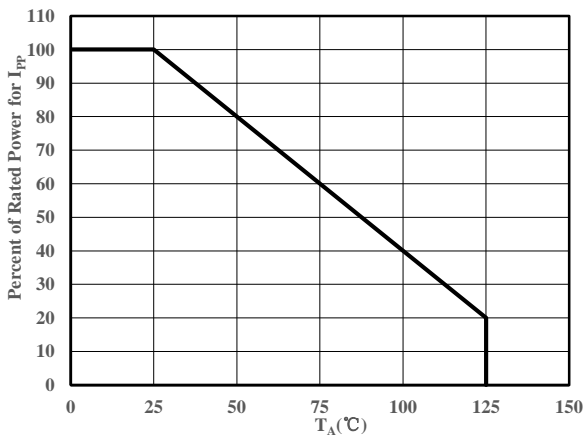
**Ratings and Characteristic Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



**Fig 1** 8/20  $\mu\text{s}$  waveform per IEC61000-4-5

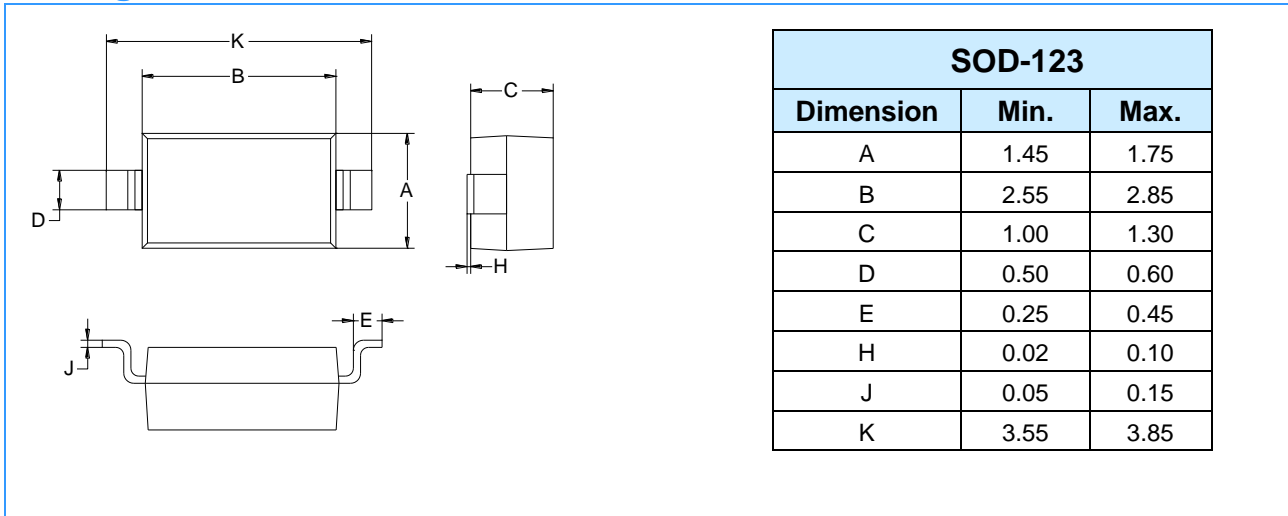


**Fig 2** ESD pulse waveform according to IEC61000-4-2

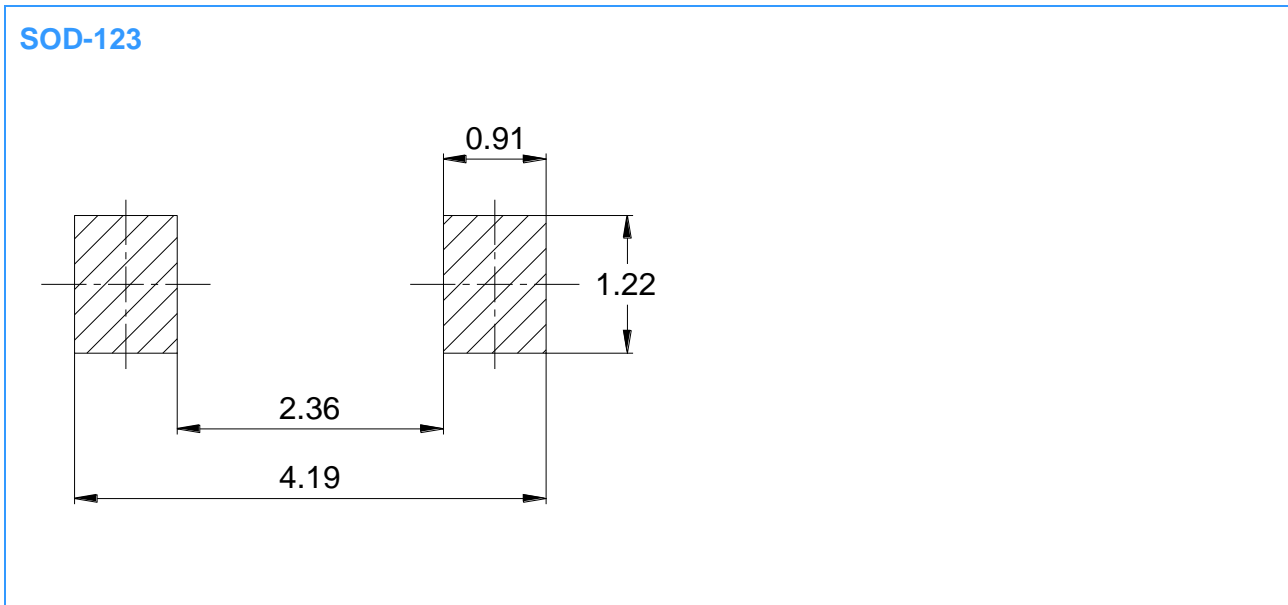


**Fig 3** Power Derating Curve

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



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



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