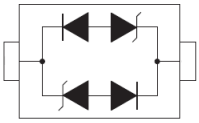
DLC03CW-DLC36CW

Features

HF

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



Typical Applications

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

SOD-123

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

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℃ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	±30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	±30	kV
Peak Pulse Power (t_p = 8/20μs)	P_{PP}	350	W

Thermal Characteristics

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

Electrical Characteristics (@ T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
DLC03CW TVS for 3V Lines						
Reverse Stand-off Voltage	V_{RWM}		-	-	3	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	4	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 3V	-	-	5	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	7	V
		I_{PP} = 20A, tp = 8/20μs	-	-	19	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC05CW TVS for 5V Lines						
Reverse Stand-off Voltage	V_{RWM}		-	-	5	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	6	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 5V	-	-	5	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	9.8	V
		I_{PP} = 20A, tp = 8/20μs	-	-	20	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC08CW TVS for 8V Lines						
Reverse Stand-off Voltage	V_{RWM}		-	-	8	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	8.5	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 8V	-	-	2	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	13.4	V
		I_{PP} = 17A, tp = 8/20μs	-	-	18.5	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC12CW TVS for 12V Lines						
Reverse Stand-off Voltage	V_{RWM}		-	-	12	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	13.3	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 12V	-	-	1	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	19	V
		I_{PP} = 11A, tp = 8/20μs	-	-	28.6	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC15CW TVS for 15V Lines						
Reverse Stand-off Voltage	V_{RWM}		-	-	15	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	16.7	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 15V	-	-	1	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	24	V
		I_{PP} = 10A, tp = 8/20μs	-	-	31.8	V

Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC24CW TVS for 24V Lines						
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	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	43	V
		I_{PP} = 6A, tp = 8/20μs	-	-	56	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1	-	pF
DLC36CW TVS for 36V Lines						
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	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	48	V
		I_{PP} = 4A, tp = 8/20μs	-	-	90	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	1.5	-	pF

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

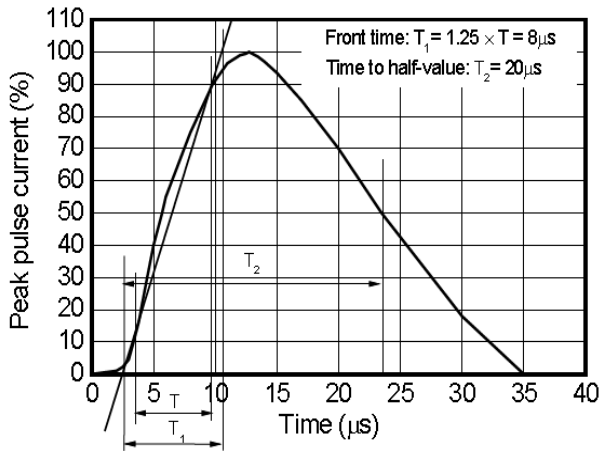


Fig 1 8/2 0μs waveform per IEC61000-4-5

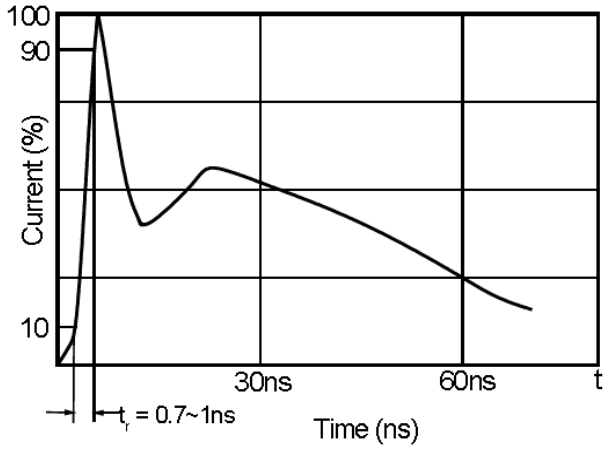


Fig 2 ESD pulse waveform according to IEC61000-4-2

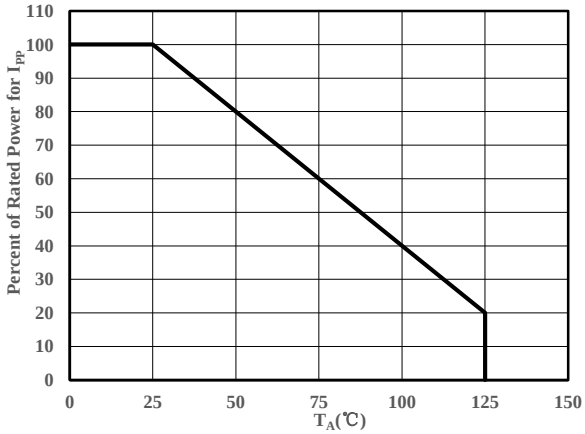
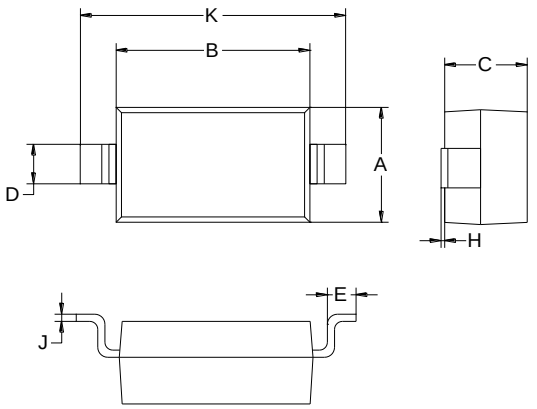


Fig 3 Power Derating Curve

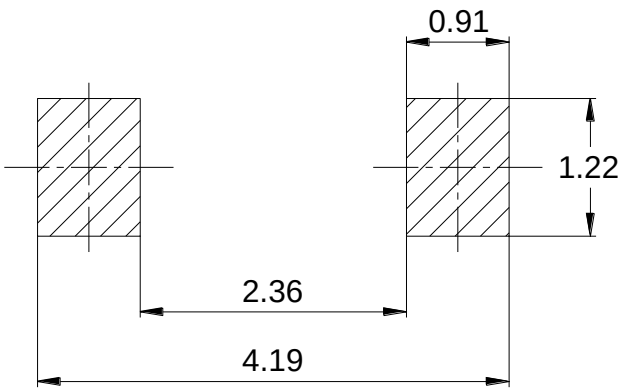
Package Outline Dimensions (Unit: mm)



SOD-123		
Dimension	**Min.**	**Max.**
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Package Outline Dimensions (Unit: mm)

SOD-123



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