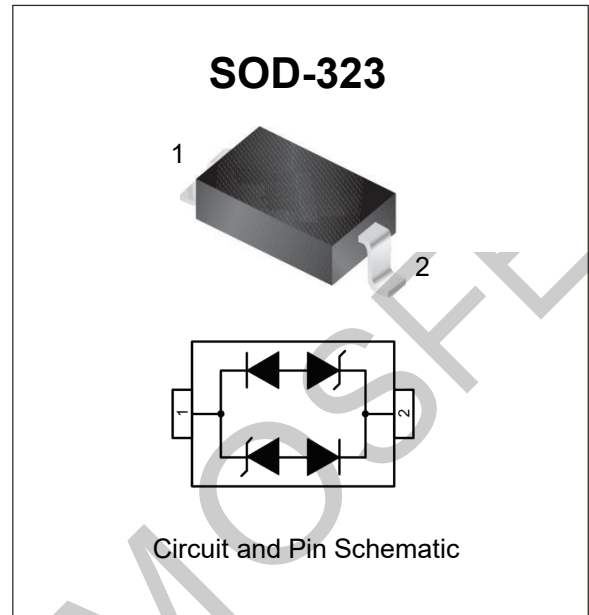


Features

- Ultra low capacitance: 1.0pF typical
- Ultra low leakage: nA level
- Low clamping voltage, protects one power/data line
- IEC 61000-4-2 ESD: Air $\pm 30\text{kV}$, Contact $\pm 30\text{kV}$
- RoHS Compliant

Mechanical Data

- Package: SOD-323
- Lead Finish: Matte Tin
- Case Material: Green Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020



Applications

- USB Ports
- Smart Phones
- Wireless Systems
- Ethernet 10/100/1000 Base T

Ordering information

Ordercode	Marking	Package	Packaging option	Basequantity	Packaging specification
DCLC12CI	DC	SOD-323	Tape and reel	10000pcs / reel	EIA STD RS-481

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

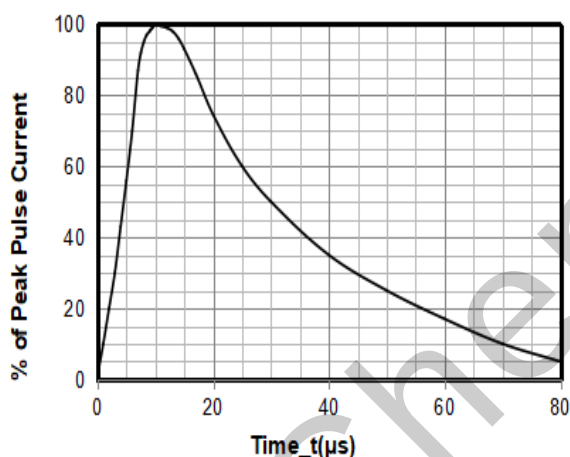
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu\text{s}$)	P_{PP}	220	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	$\pm 30/\pm 30$	kV
Peak Pulse Current ($T_P = 8/20\mu\text{s}$)	I_{PP}	8	A
Junction Temperature	T_J	-40 to +85	°C
Operation temperature	T_{OP}	-40 to +85	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

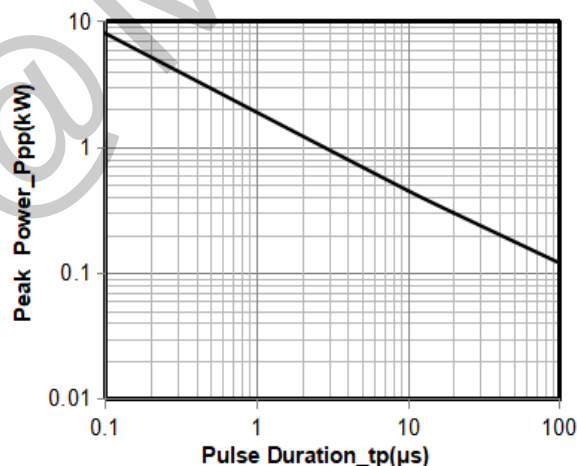
($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}		-	-	12	V
Holding Voltage	V_{BR}	$I_T = 1\text{mA}$	13.3	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$	-	<1	100	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	18	V
Clamping Voltage	V_C	$I_{PP} = 8\text{A}, t_p = 8/20\mu\text{s}$	-	-	27	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	1.0	-	pF

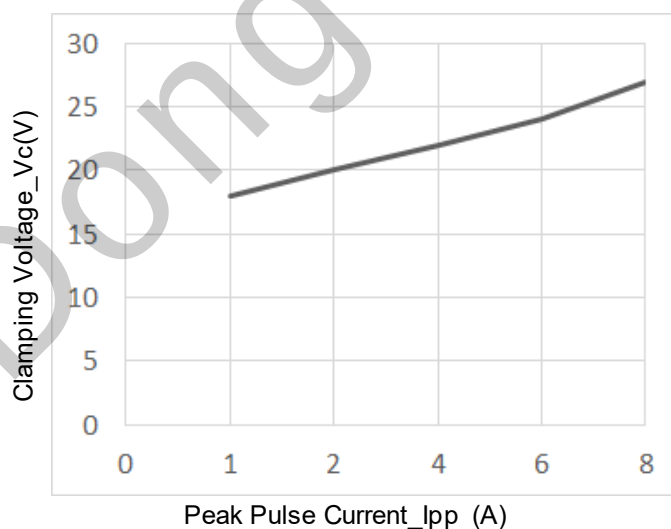
Typical Performance Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise Specified)



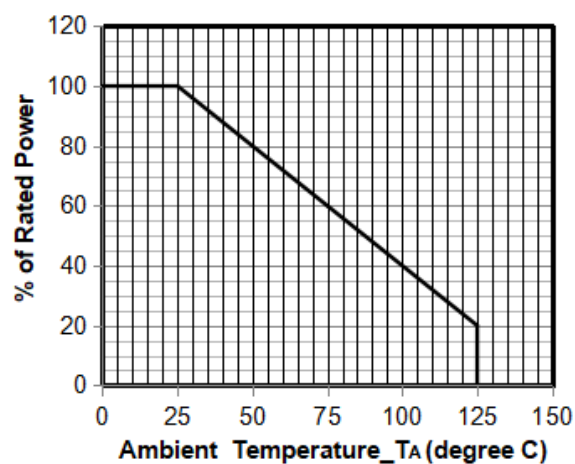
8 X 20 μs Pulse Waveform



Peak Pulse Power vs. Pulse Time

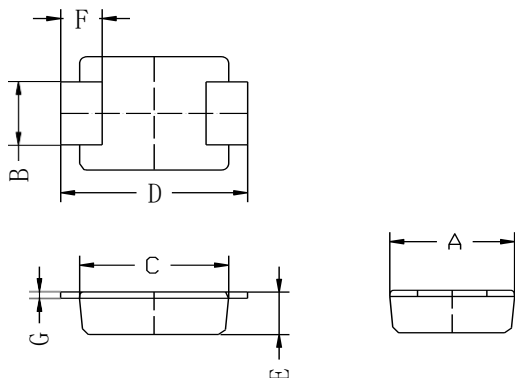


Clamping Voltage vs. Peak Pulse Current



Power Derating Curve

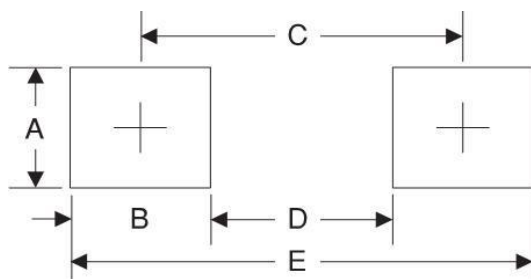
Package Dimensions



SMBF		
Dim	Min	Max
A	3.45	3.75
B	1.90	2.10
C	4.15	4.35
D	5.10	5.50
E	1.05	1.55
F	0.70	1.35
G	0.15	0.25

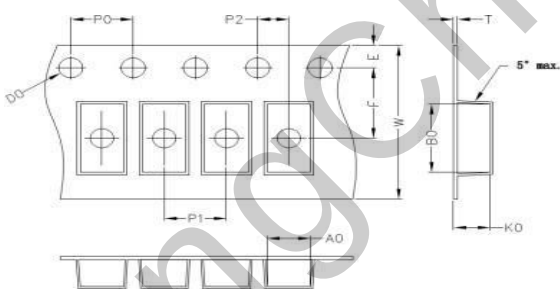
Dimensions in millimeters

Pad Dimensions



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	2.00	0.078
C	4.10	0.161
D	2.10	0.083
E	6.10	0.240

Tape and Reel Specification



A0	B0	K0	D0	E	F
3.80 ±0.2	5.75 ±0.2	1.40 ±0.2	1.50 ±0.1	1.75 ±0.2	5.50 ±0.2
P0	P1	P2	T	W	
4.0 ±0.1	8.0 ±0.1	2.0 ±0.1	0.25 ±0.05	12 ±0.5	
Trailer Tape		50 Empty Pockets			
Leader Tape		100 Empty Pockets			

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