

Features

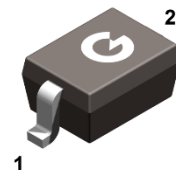
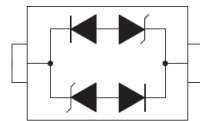
- 350 watts peak pulse power per line ($t_p = 8/20\mu s$)
- Unidirectional & bidirectional configurations
- Replacement for MLV (0805)
- Protects one power or I/O port
- ESD protection > 40 kilovolts
- Low clamping voltage
- RoHS compliant with Halogen-free

Applications

- Ethernet - 10/100/1000 base T
- Cellular phones
- Handheld - wireless systems
- Personal digital assistant (PDA)
- USB interface

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



SOD-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
DLC05C	SOD-323	3000 pcs / Tape & Reel	C05C

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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8 / 20\mu s$)	P_{PP}	350	W
Reverse Working Voltage	V_{RWM}	5	V

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	460	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	290	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	310	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$	-	-	5	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	9.8	V
		$I_{PP} = 20\text{A}, t_p = 8/20\mu\text{s}$	-	-	20	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	1	-	pF

Note 1: The data tested by surface mounted on a minimum recommended FR-4 board

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

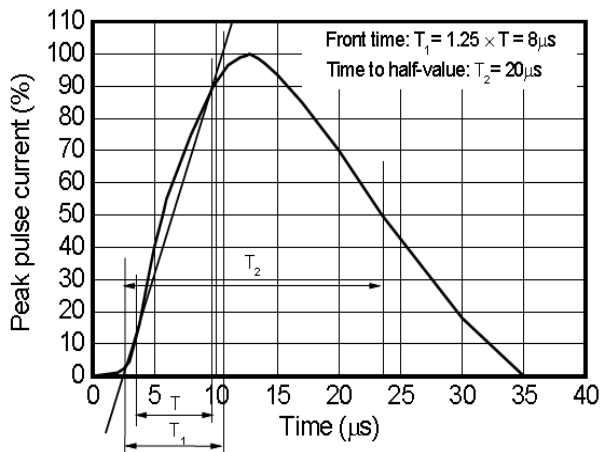


Fig 1 8/20 μs waveform per IEC61000-4-5

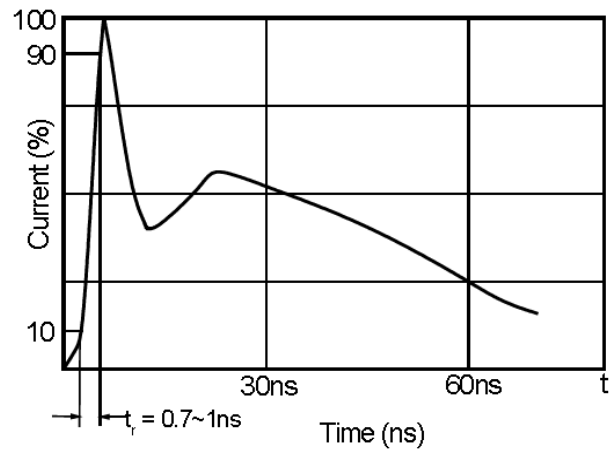


Fig 2 ESD pulse waveform according to IEC61000-4-2

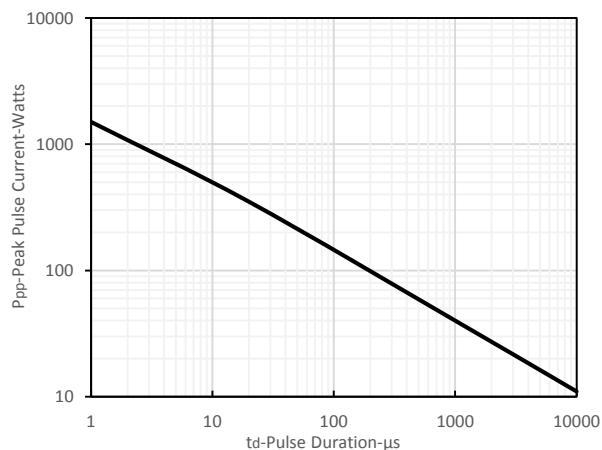


Fig 3 Peak Pulse Power vs. Pulse Time

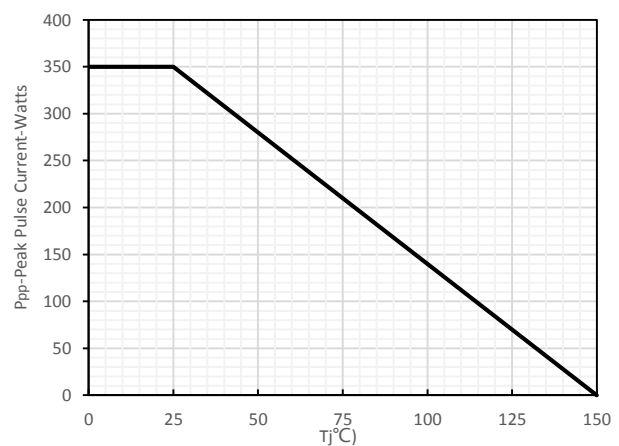


Fig 4 Pulse Derating Curve

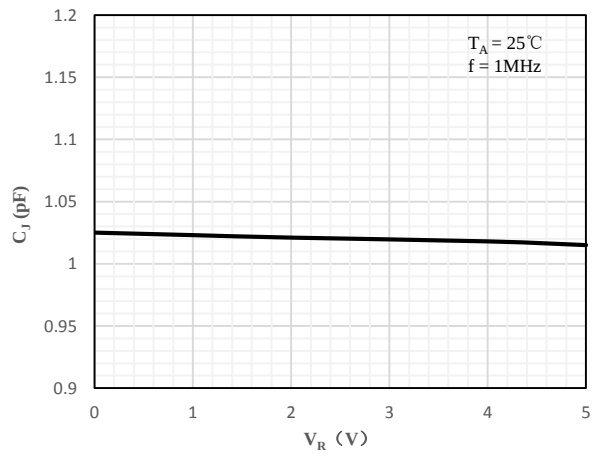


Fig 5 Junction Capacitance vs. Breakdown Voltage

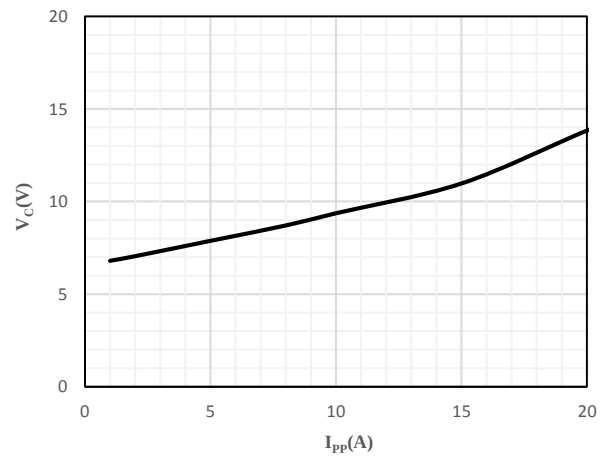
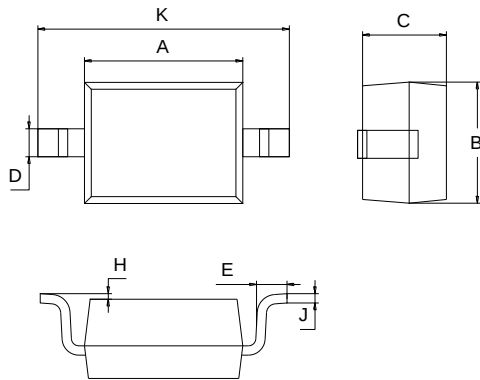


Fig 6 Clamping Voltage vs. Peak Pulse Current

Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (Unit: mm)

SOD-323

