



SE03Q1BDD5H

ESD PROTECTION DIODE

FEATURES

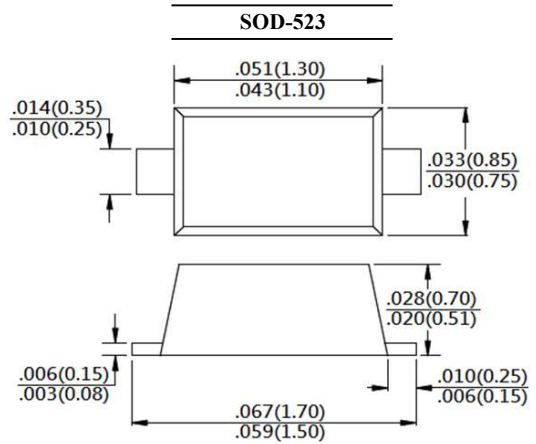
- 90W Peak Pulse Power per Line (tp=8/20μs)
- IEC61000-4-2(ESD) 30kV(air), 30kV(Contact)
- Low Clamping Voltage
- Bi-directional Configurations
- Suffix " H " indicated Halogen-free part, ex.SE03Q1BDD5H

APPLICATIONS

- Cellular handsets and accessories
- Portable instrumentation
- Peripherals
- Serial and Parallel Ports
- Notebooks, Desktops, Servers

MECHANICAL DATA

Case : SOD-523



Dimensions in inches and (millimeters)

PIN CONFIGURATION



Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Units
Peak Pulse Power (tp = 8/20μs)	P _{PP}	90	W
Peak Pulse Current (tp = 8/20μs)	I _{PP}	6.5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Junction Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C



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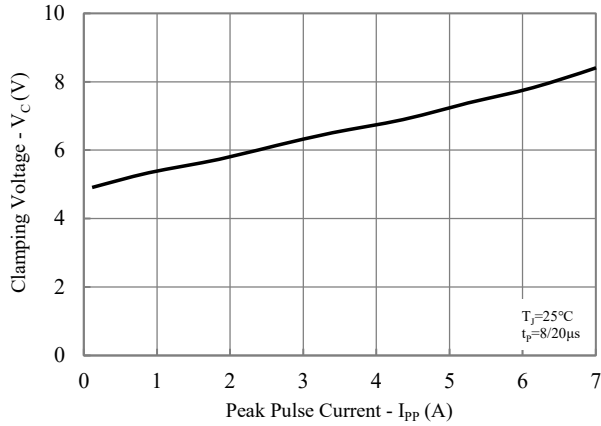
Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Test Condition	Symbol	Min	Typ	Max	Units
Reverse Stand-Off Voltage	-	V_{RWM}	-	-	3.3	V
Punch-Through Voltage	$I_{PT}=2\mu A$	V_{PT}	3.5	-	-	V
Snap-Back Voltage	$I_{SB}=50mA$	V_{SB}	2.8	-	-	V
Reverse Leakage Current	$V_{RWM}=3.3V$	I_R	-	-	0.5	μA
Clamping Voltage	$I_{PP}=1A, t_p=8/20\mu s$ $I_{PP}=6.5A, t_p=8/20\mu s$	V_C	-	-	8 14	V
Clamping Voltage	$I_{TLP}=4A, t_p=0.2/100ns$ $I_{TLP}=16A, t_p=0.2/100ns$	V_C	-	6.6 10.3	-	V
Dynamic Resistance (Note 1)	-	R_{dyn}	-	0.31	-	Ω
Junction Capacitance	$V_R=0V, f=1MHz$	C_J	-	11	15	pF

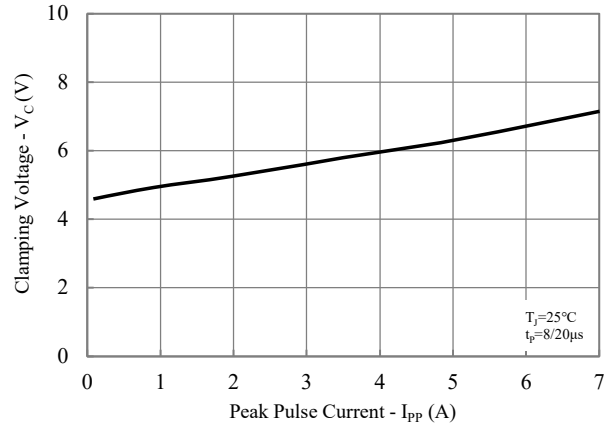
Note:

1. Dynamic Resistance calculated from $I_{TLP}=4A$ to $I_{TLP}=16A$.

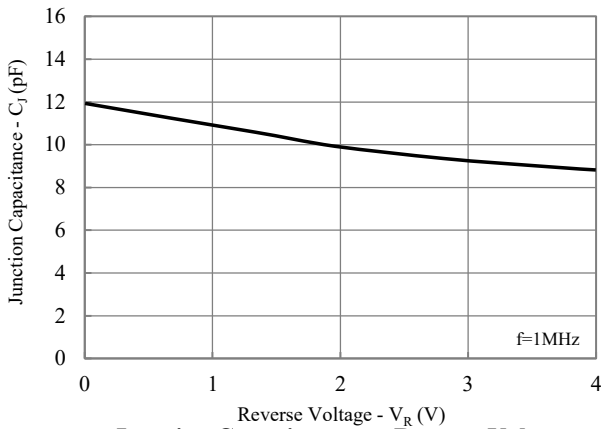
RATINGS AND CHARACTERISTIC CURVES



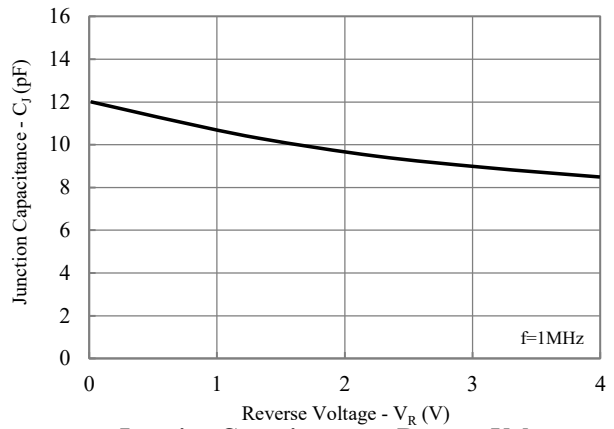
**Clamping Voltage vs. Peak Pulse Current
(Pin 1 to Pin 2)**



**Clamping Voltage vs. Peak Pulse Current
(Pin 2 to Pin 1)**



**Junction Capacitance vs. Reverse Voltage
(Pin 1 to Pin 2)**



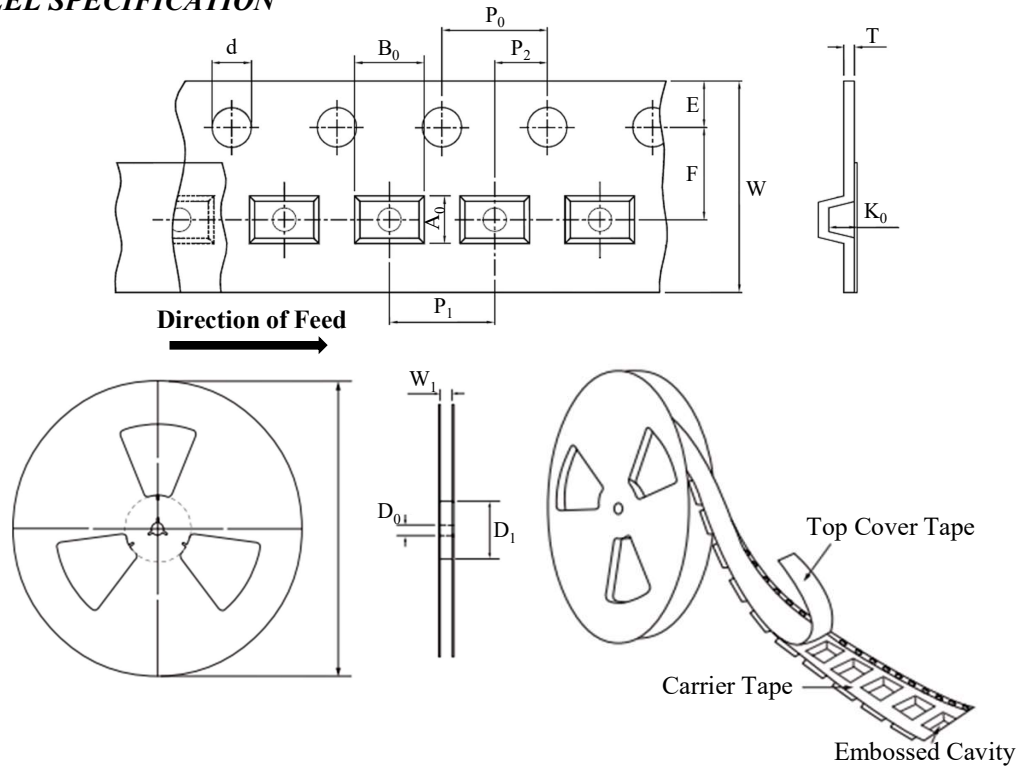
**Junction Capacitance vs. Reverse Voltage
(Pin 2 to Pin 1)**



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TAPE & REEL SPECIFICATION

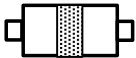


Item	Symbol	SOD-523
Carrier width	A_0	1.05 ± 0.10
Carrier length	B_0	1.90 ± 0.10
Carrier depth	K_0	0.90 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.20
Reel inner diameter	D_1	MIN. 54.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	0.25 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W_1	MAX. 13.50

ORDER INFORMATION

Package	Reel Size	Quantity
SOD-523	7"	4,000

MARKING CODE

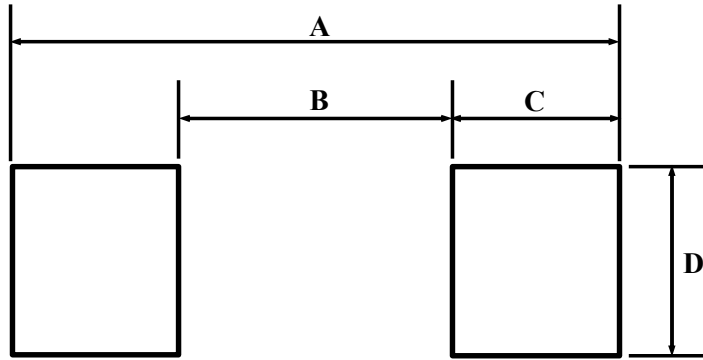




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SUGGESTED SOLDER PAD LAYOUT



PACKAGE	A	B	C	D
SOD-523	2.30	1.10	0.60	0.80