



Bi-directional ESD Protection Diode

Peak Pulse Power - 60 Watts
Reverse Working Voltage - 3.3V

Description

The H05D53V3B is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time.

Features

- 1 Channel of ESD Protection (Bi-directional)
- Peak Pulse Power : $P_{PP} = 60W$ (tp=8/20 us)
- Reverse Working Voltage : 3.3V
- Low Leakage Current
- Low Clamping Voltage
- Junction Capacitance : 15pF (Max)
- IEC 61000-4-2 (ESD) : $\pm 27kV$ (Contact) / $\pm 30kV$ (Air)

Applications

- Computers and peripherals
- Communication system
- Audio & video equipment
- Portable Instrumentation

Mechanical Data

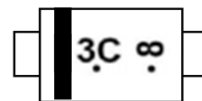
- Case: SOD523 Package
- Case Material: "Green" Molding Compound UL Flammability Classification Rating 94V-0
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026
- Component in accordance to RoHS
- Halogen Free

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

Ordering Information

- Package :SOD523
- Reel Size :7 (inches)
- Quantity Per Reel :3,000/Tape & Reel
- Quantity One Box :45,000/Tape & Reel
- Quantity One Carton :180,000/Tape & Reel

Marking Information



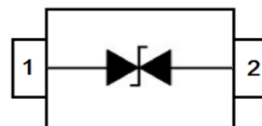
Product Type Marking Code

Package Outline



SOD523 Top View

Device Schematic & PIN Configuration



Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Absolute Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P_{PP}	60	W
Peak Pulse Current (8/20 us)	I_{PP}	5	A
ESD Protection- Contact (Standard IEC 61000-4-2)	V_{ESD}	± 27	k V
ESD Protection- Air (Standard IEC 61000-4-2)		± 30	
Operating Temperature Range	T_J	-55 to +125	° C
Storage Temperature Range	T_{STG}	-55 to +150	° C
Soldering Temperature, t max =10s	T_L	260	° C

Electrical Characteristics

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	---	V_{RWM}	-	-	3.3	V
Reverse Breakdown Voltage	$I_T = 1mA$	V_B	3.6	-	-	V
Reverse Current	$V_R = 3.3V$	I_R	-	-	1	uA
Reverse Clamping Voltage	$I_{PP} = 1A$ (8/20 μs)	V_C	-	-	8	V
	$I_{PP} = 5A$ (8/20 μs)		-	-	12	
Junction Capacitance	$V_R = 0V$, $F = 1MHz$	C_j	-	-	15	p F



Rating and Characteristic Curves

FIG.1 - 8/20us Pulse Waveform According to IEC 61000-4-5

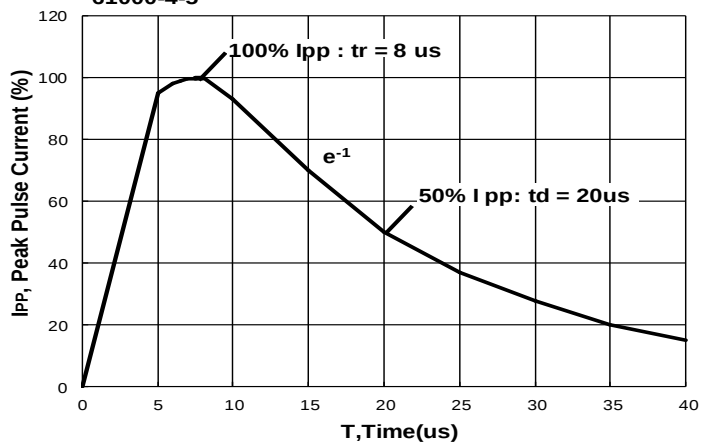


FIG.2 - Power Dissipation Versus Pulse Time

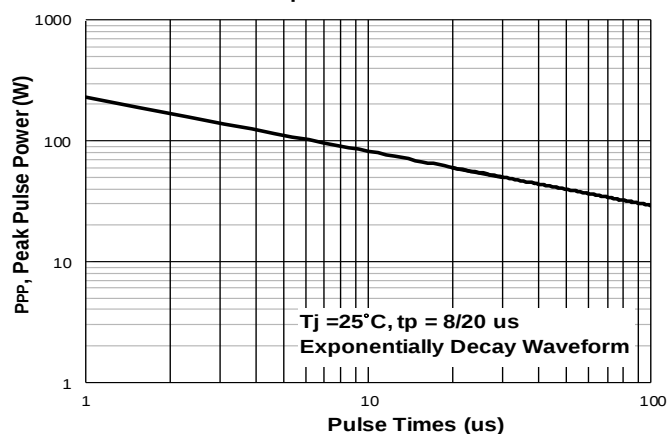


FIG.3 - Peak Pulse Power Versus T_j

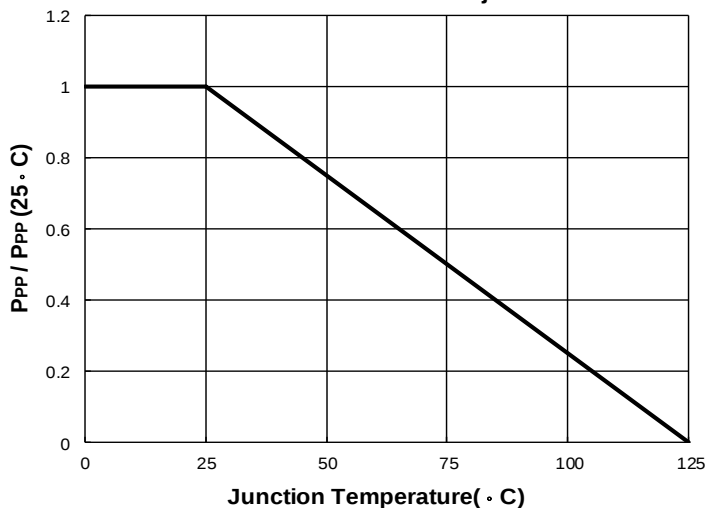
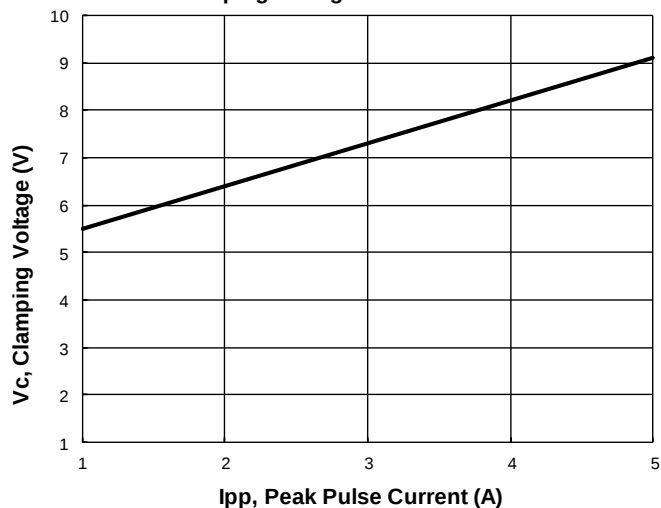
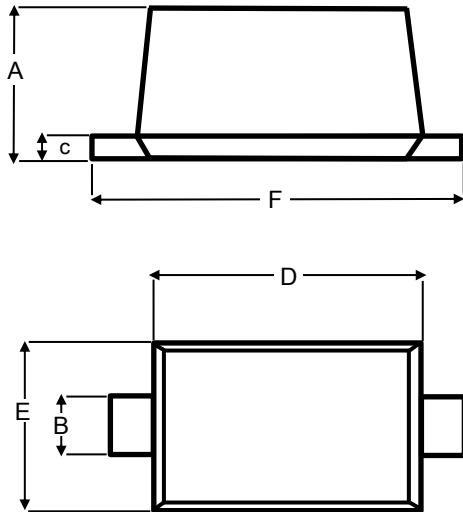


FIG.4 - Clamping Voltage Characteristic



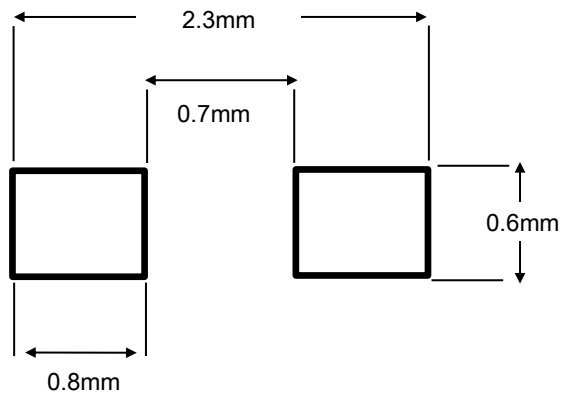


Package Outline Dimensions



SOD523 Package		
Dim	Min	Max
A	0.5	0.7
B	0.25	0.35
c	-	0.2
D	1.1	1.3
E	0.7	0.9
F	1.5	1.7
All Dimensions in mm		

Suggested Soldering Pad Layout





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