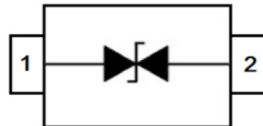


Device Schematic & PIN Configuration



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.

Applications

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

Features

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

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

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	
Soldering Temperature, t max =10s	T _L	260	

Electrical Characteristics

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

Rating and Characteristic Curves

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

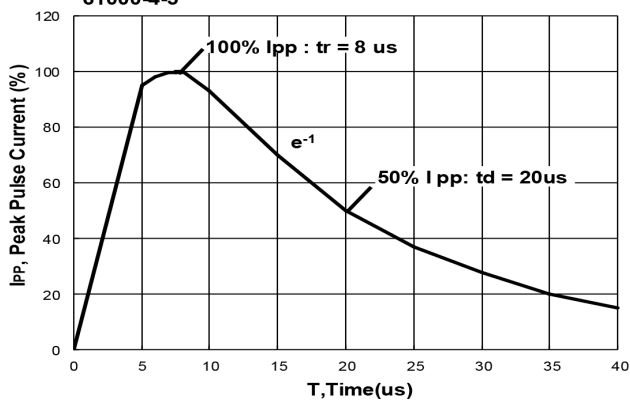


FIG.2 - Power Dissipation Versus Pulse Time

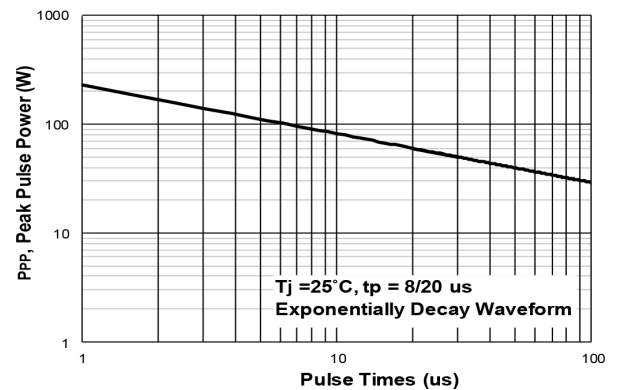


FIG.3 - Peak Pulse Power Versus T_j

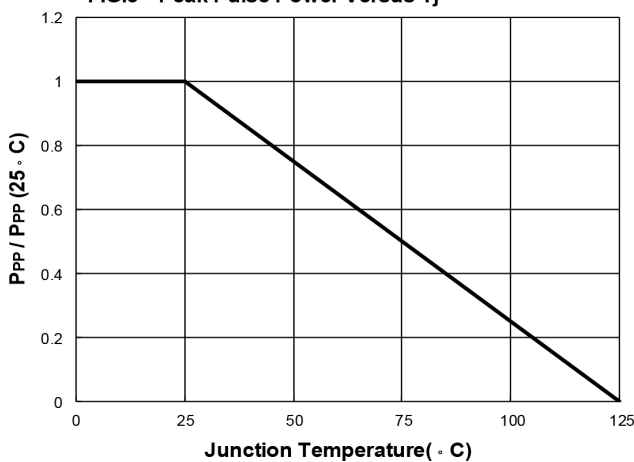
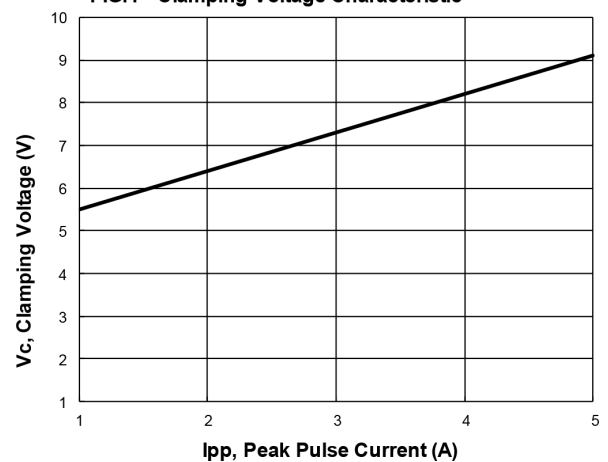
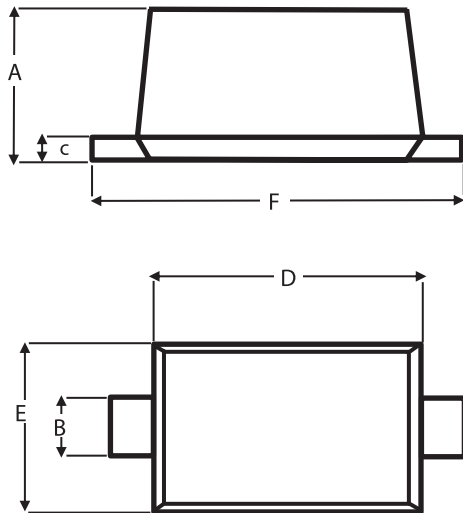


FIG.4 - Clamping Voltage Characteristic

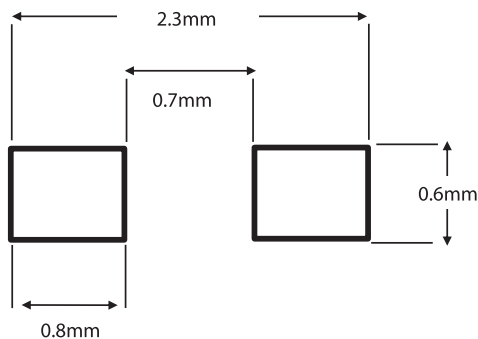


Package Outline Dimensions



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

Suggested Soldering Pad Layout



Part Number Table

Description	Part Number
ESD Protection Diode, Bi-Directional, 8A, 16V, SOD-523	H05D53V3B

Dimensions : Millimetres

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