## Description

Prisemi's PELB5VB1 protects central office access and customer premise equipment against ESD and lightning on the telecom line and others. DO-214AA solid state protection devices protect telecommunications equipment such as modems, line cards, fax machines, and other CPE. The device is used to enable equipment to meet various regulatory requirements including IEC61000-4-2, IEC62000-4-5, GR 1089, ITU K.20, K.21 and K.45, IEC 60950, UL 60950, and TIA-968 (formerly known as FCC Part 68).
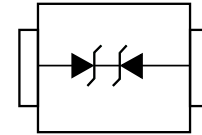
Feature

Compared to surge suppression using other technologies, PELB5VB1 offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). PELB5VB1:

➢ Cannot be damaged by ESD and lightning

➢ Eliminate hysteresis and heat dissipation typically found with clamping devices

➢ Eliminate voltage overshoot caused by fast-rising transients

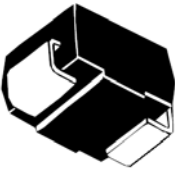➢ Have low capacitance, making them ideal for high-speed transmission equipment
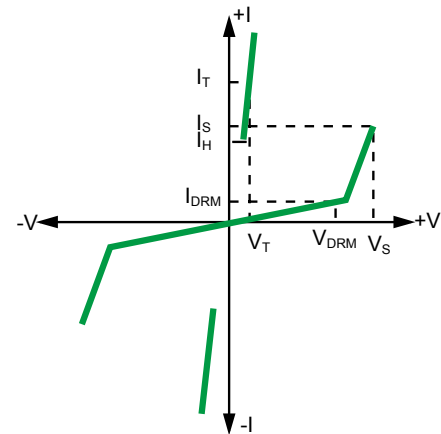
Electrical Parameters

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_t = 1mA$	6.2			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$ $T=25℃$			1	µA
Junction Capacitance	C_j	$V_R=2V$ $f = 1MHz$		80		pF
Hold Current	I_H			30	50	mA

Surge Ratings

Series	I_{PP} 2x10 µs Amps	I_{PP} 8x20 µs Amps	I_{PP} 10x160 µs Amps	I_{PP} 10x560 µs Amps	I_{PP} 10x1000 µs Amps	I_{TSM} 60 Hz Amps	di/dt Amps/µs
B	250	250	150	100	80	30	500

Thermal Considerations

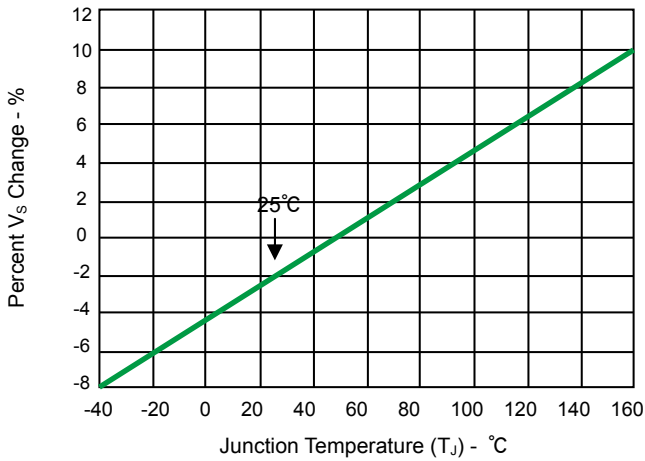| Package DO-214AA	Symbol	Parameter	Value	Unit
	T_J	Operating Junction Temperature	- 40 to +150	°C
	T_S	Storage Temperature Range	- 65 to +150	°C
	R_BJ_A	Thermal Resistance: Junction to Ambient	90	°C/W

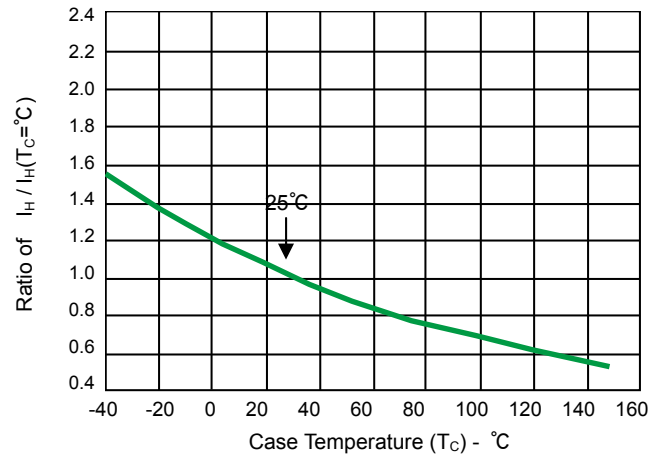Fig 1.Normalized V_S Change vs. Junction Temperature

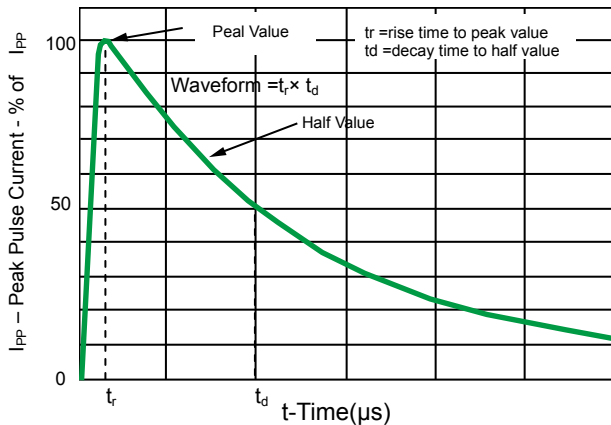Fig 2. Normalized DC Holding Current versus Case Temperature
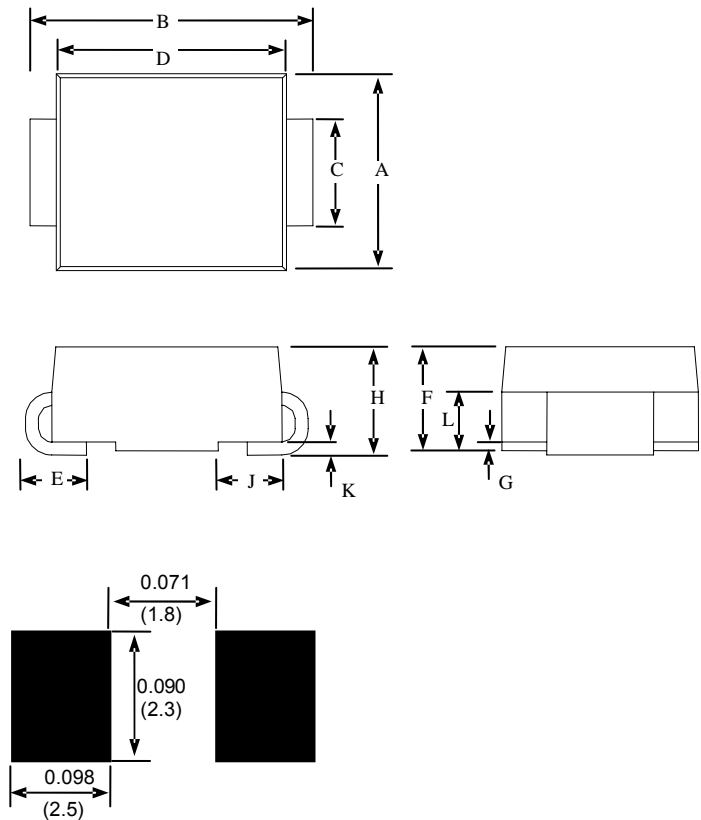
Fig 3. $t_r \times t_d$ Pulse Wave-form

Product dimension(DO-214AA/SMB)

DIMENSIONS ARE : $\dfrac{\text{INCHES}}{(\text{Millimeters})}$

Dimension	Inches		Millimeters	
	MIN	**MAX**	**MIN**	**MAX**
A	0.134	0.155	3.40	3.94
B	0.205	0.220	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.10
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24

Ordering information

Device	Package	Shipping
PELB5VB1	SMB(Pb-Free)	3000 / Tape & Reel

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