

160W LIN-bus ESD Protection Diode**FEATURES**

- Low clamping voltage
- Ultra low leakage current
- Working voltages : 15V , 24V

APPLICATIONS

- LIN-bus protection

MECHANICAL DATA

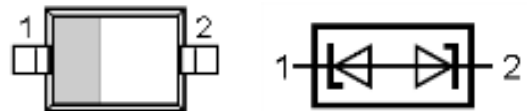
- Case : Molded, plastic SOD-323
- Polarity : Shown follows
- Epoxy : UL94-V0 rated flame retardant

IEC COMPATIBILITY

- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air),
 $\pm 8\text{kV}$ (contact)

SOD-323 PACKAGE

Marking : 24

**SCHEMATIC & PIN CONFIGURATION****DESCRIPTION**

SESD1524 in a very small SOD323 Surface Mounted Device (SMD) plastic package designed to protect one automotive Local Interconnect Network (LIN) bus line from the damage caused by Electro Static Discharge (ESD) and other transients.


160W LIN-bus ESD Protection Diode
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 15	kV
	ESD per IEC 61000-4-2 (Contact)	± 8	
P_{PP}	Peak Pulse Power (8/20 μ s)	160	W
I_{PP}	peak pulse current (8/20 μ s)	3	A
T_j	junction temperature	150	°C
T_{OPT}	ambient temperature	-65~150	°C
T_{STG}	Storage Temperature	-65~150	°C

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage (PIN 1 to PIN 2)				15	V
	Reverse Working Voltage (PIN 2 to PIN 1)				24	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 5mA$ (PIN 1 to PIN 2)	17.1		20.5	V
		$I_T = 5mA$ (PIN 2 to PIN 1)	25.4		30.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 15V$ (PIN 1 to PIN 2)			50	nA
		$V_{RWM} = 24V$ (PIN 2 to PIN 1)			50	nA
V_C	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$ (PIN 1 to PIN 2)			25	V
		$I_{PP} = 5A, t_p = 8/20\mu s$ (PIN 1 to PIN 2)			44	V
		$I_{PP} = 1A, t_p = 8/20\mu s$ (PIN 2 to PIN 1)			40	V
		$I_{PP} = 3A, t_p = 8/20\mu s$ (PIN 2 to PIN 1)			70	V
C_J	Junction Capacitance	$V_R = 0V, f = 1MHz$			17	pF
r_{dif}	Differential Resistance	$I_T = 5mA$ (PIN 1 to PIN 2)			225	Ω
		$I_T = 5mA$ (PIN 2 to PIN 1)			300	Ω

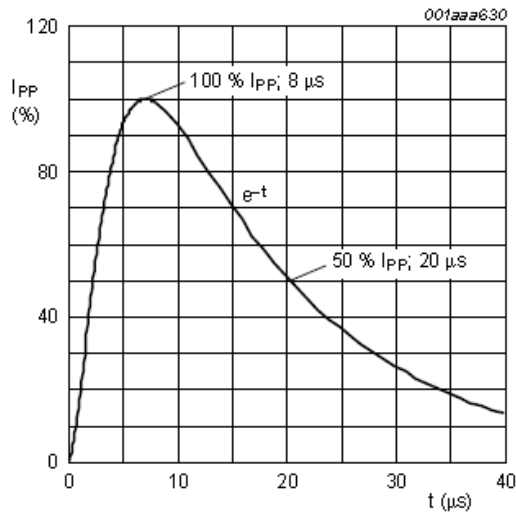
ELECTRICAL CHARACTERISTICS CURVE


Fig 1. 8/20 μ s pulse waveform according to IEC 61000-4-5

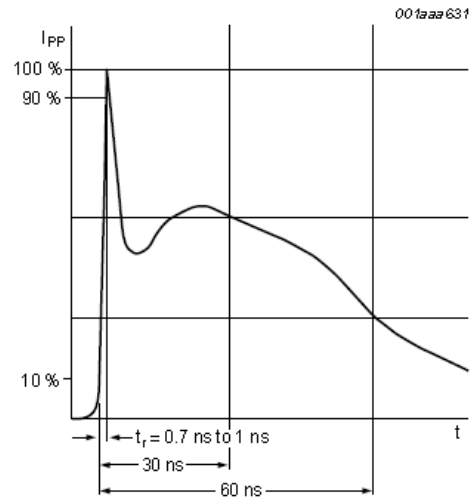
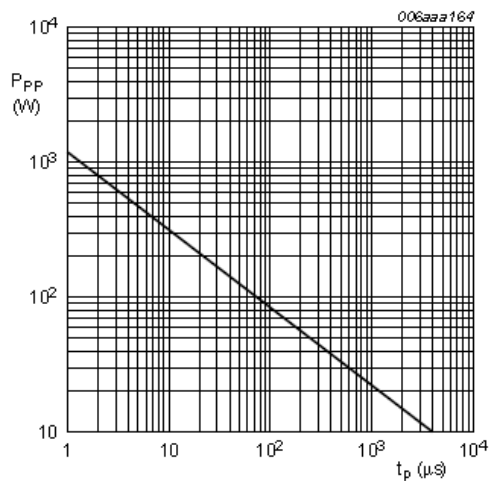


Fig 2. ESD pulse waveform according to IEC 61000-4-2



$T_{amb} = 25^\circ\text{C}$

Fig 3. Peak pulse power as a function of exponential pulse duration; typical values

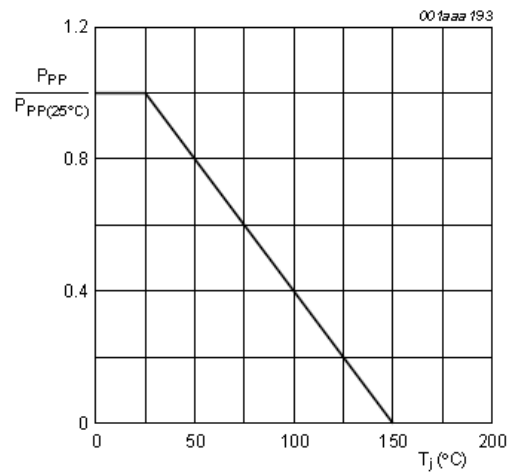
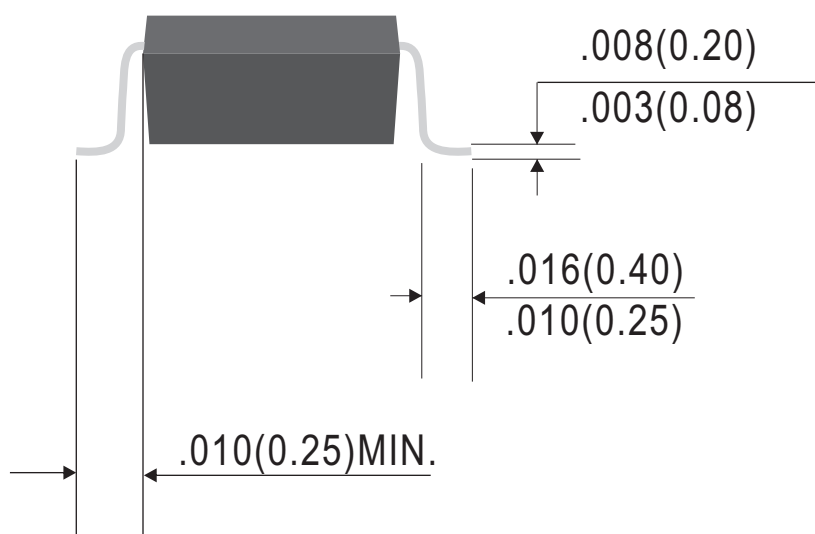
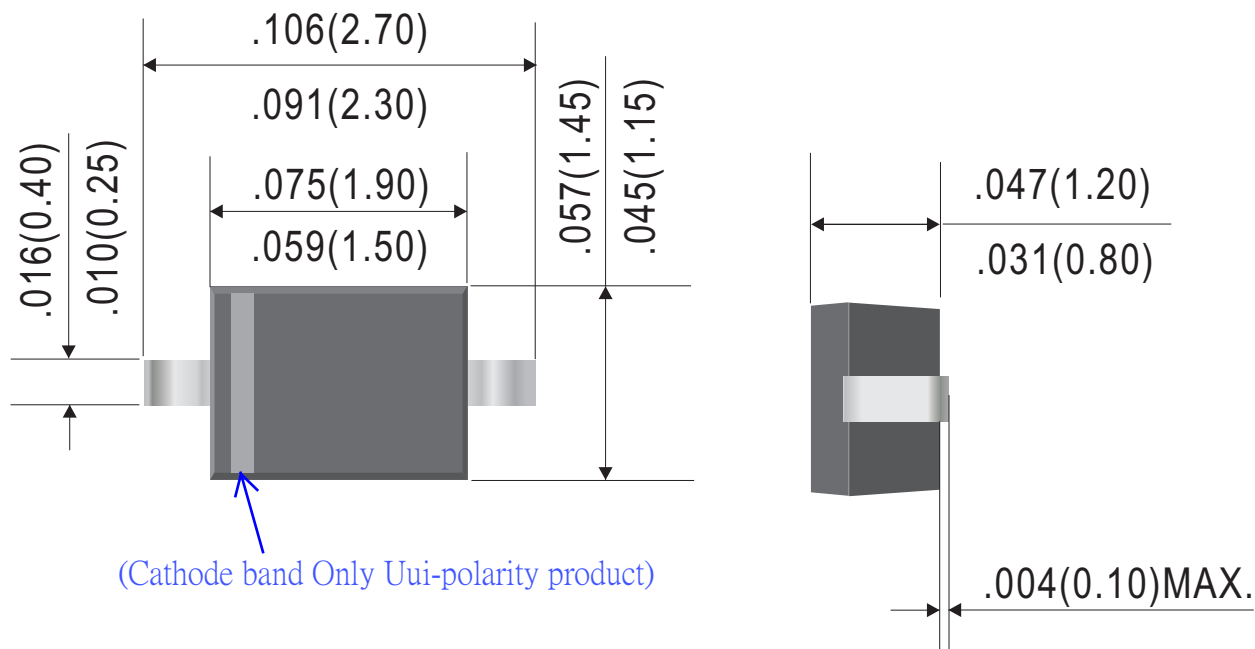


Fig 4. Relative variation of peak pulse power as a function of junction temperature; typical values

Outline Drawing

SOD-323



Dimensions in inches and (millimeters)

Rev.D

160W LIN-bus ESD Protection Diode**Ordering Information:**

Device PN	Packing
SESD1524 -T ⁽¹⁾ H ⁽²⁾ -WS ⁽³⁾	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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