



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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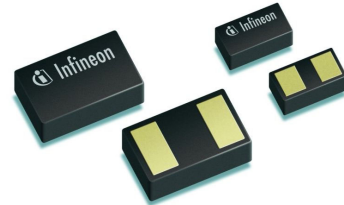
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Bi-directional Low Capacitance TVS Diode

- ESD / transient protection of high-speed data lines in 3.3 / 5 / 12 V applications according to:
IEC61000-4-2 (ESD): ±18 kV (air) ±15 kV (contact)
IEC61000-4-4 (EFT): 40 A (5 / 50 ns)
- Extremely small form factor down to 0.62 x 0.32 x 0.31 mm³ (0201)
- Max. working voltage: -8 / +14 V
- Very low reverse current < 1 nA typ.
- Very low series inductance down to 0.2 nH typ.
- Low capacitance of 4 pF typ.
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101

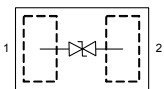


Applications

- USB 2.0, 10/100 Ethernet, Firewire, DVI
- Mobile communication
- Consumer products (STB, MP3, DVD, DSC...)
- LCD displays, camera
- Notebooks and desktop computers, peripherals



ESD8V0R1B-02LS
ESD8V0R1B-02LRH



Type	Package	Configuration	Marking
ESD8V0R1B-02LRH	TSLP-2-17	1 line, bi-directional	E
ESD8V0R1B-02LS	TSSLP-2-1	1 line, bi-directional	E

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
ESD discharge ¹⁾ air contact	V_{ESD}	18 15	kV
Peak pulse current ($t_p = 8 / 20 \mu\text{s}$) ²⁾	I_{pp}	1	A
Operating temperature range	T_{op}	-55...150	°C
Storage temperature	T_{stg}	-65...150	

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

Characteristics

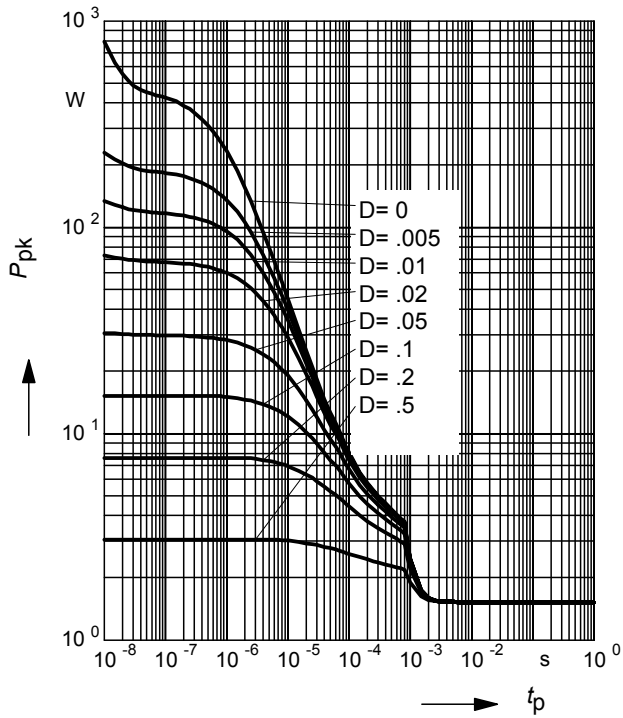
Reverse working voltage, from pin 2 to 1	V_{RWM}	-8	-	14	V
Breakdown voltage $I_{(\text{BR})} = 1 \text{ mA}$, from pin 2 to 1 $I_{(\text{BR})} = 1 \text{ mA}$, from pin 1 to 2	$V_{(\text{BR})}$	14.5 8.5	17 11	20 14	
Reverse current $V_R = 3.3 \text{ V}$	I_R	-	<1	50	nA
Clamping voltage $I_{\text{PP}} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$, from pin 2 to 1 ²⁾ $I_{\text{PP}} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$, from pin1 to 2 ²⁾	V_{CL}	- -	23 17	28 22	V
Line capacitance $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	4	7	
Series inductance ESD8V0R1B-02LS ESD8V0R1B-02LRH	L_S	- -	0.2 0.4	- -	nH

¹⁾ V_{ESD} according to IEC61000-4-2

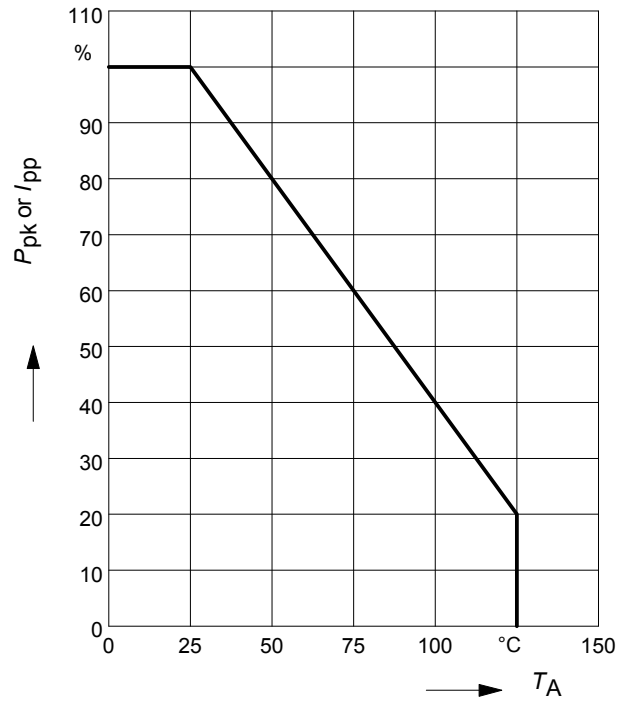
²⁾ I_{pp} according to IEC61000-4-5

Non-repetitive peak pulse power

$P_{pk} = f(t_p)$

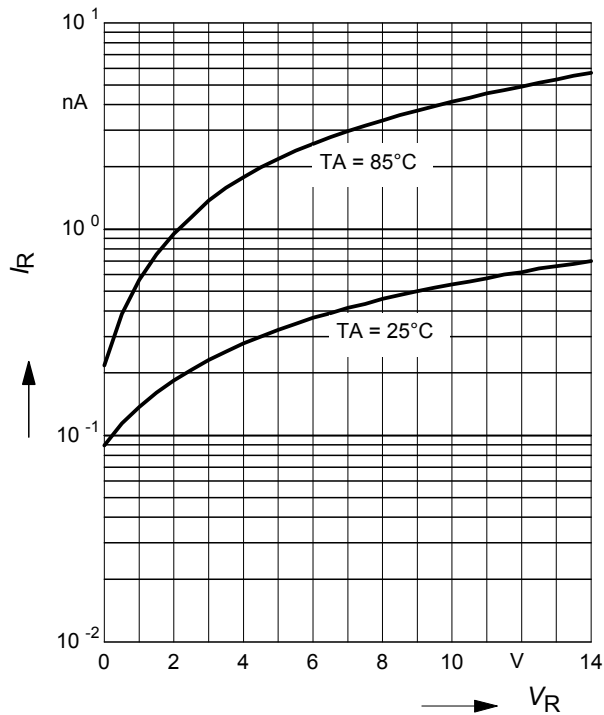


Power derating curve $P_{pk} = f(T_A)$



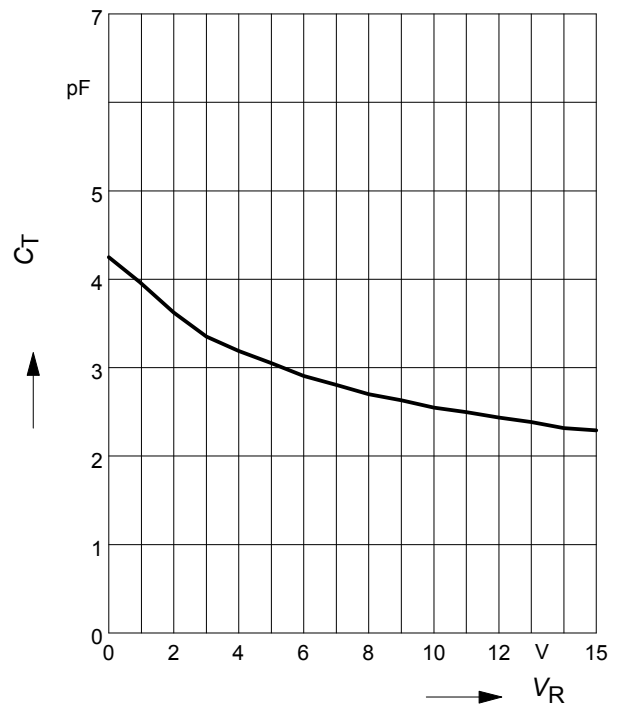
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



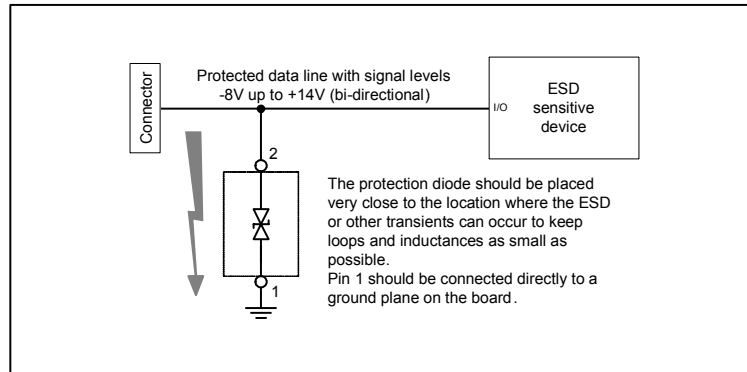
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

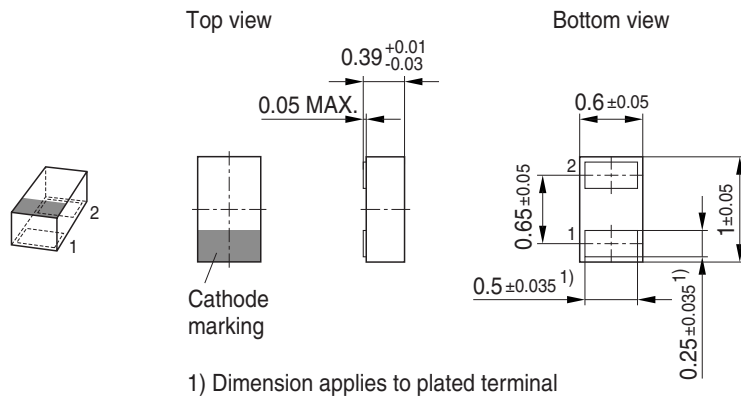


Application example ESD8V0R1B...

1 line, bi-directional

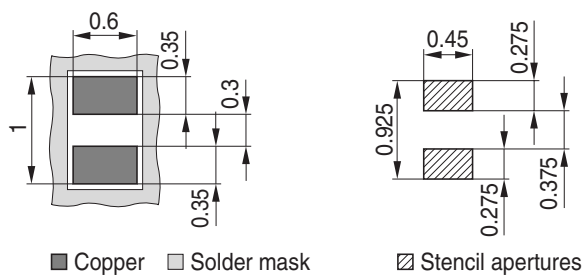


Package Outline

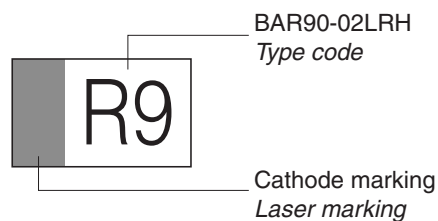


Foot Print

For board assembly information please refer to Infineon website "Packages"

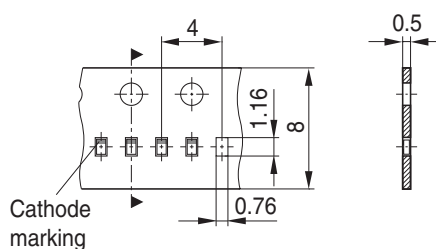


Marking Layout (Example)

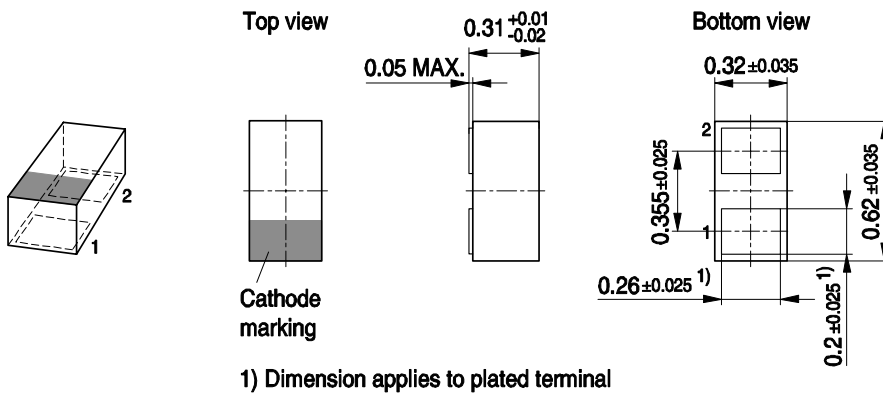


Standard Packing

Reel $\varnothing 180 \text{ mm} = 15.000 \text{ Pieces/Reel}$
 Reel $\varnothing 330 \text{ mm} = 50.000 \text{ Pieces/Reel (optional)}$

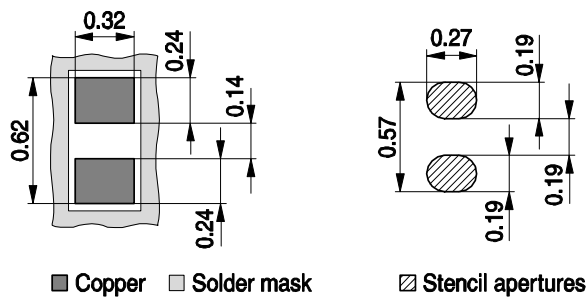


Package Outline

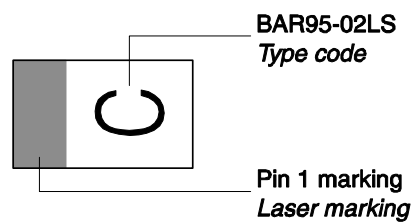


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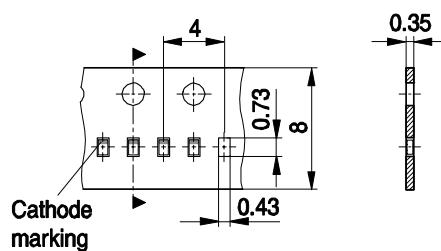


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



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