



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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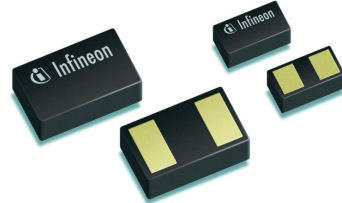
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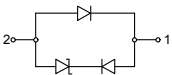


Low Capacitance TVS Diode

- ESD / transient protection of high-speed data lines up to:
IEC61000-4-2 (ESD): ± 30 kV (air / contact)
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)
IEC61000-4-5 (surge): 6 A (8/20 μ s)
- Reverse working voltage: 5.3 V max.
- Very low reverse current: < 1 nA typ.
- Low capacitance: < 2 pF .
- Very low clamping voltage: 10 V typ. at positive transients, 2.5 V typ. at negative transients
- Very low series inductance down to 0.4 nH typ.
- Pb-free (RoHS compliant) package


Applications

- Mobile communication
- FM antenna protection
- USB 2.0, 10/100/1000 Ethernet, Firewire, DVI,
- Consumer products (STB, MP3, DVD, DSC...)
- LCD displays, camera
- Notebooks and desktop computers, peripherals


ESD5V3L1U-02LRH


Type	Package	Configuration	Marking
ESD5V3L1U-02LRH	TSLP-2-17	1 line, uni-directional	E8

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

Parameter	Symbol	Value	Unit
ESD (air / contact) discharge ¹⁾	V_{ESD}	30	kV
Peak pulse current ($t_p = 8 / 20 \mu\text{s}$) ²⁾	I_{pp}	6	A
Operating temperature range	T_{op}	-55...125	°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 1 to 2	V_{RWM}	-	-	5.3	V
Breakdown voltage $I_{\text{(BR)}} = 1 \text{ mA}$, from pin 1 to 2	$V_{\text{(BR)}}$	6	-	-	
Reverse current $V_{\text{R}} = 5.3 \text{ V}$, from pin 1 to 2	I_{R}	-	< 1	100	nA
Clamping voltage $I_{\text{PP}} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}^2$, from pin 1 to 2 $I_{\text{PP}} = 3 \text{ A}$, $t_p = 8/20 \mu\text{s}^2$, from pin 1 to 2	V_{CL}	-	9 10	- -	V
Forward clamping voltage $I_{\text{PP}} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}^2$, from pin 2 to 1 $I_{\text{PP}} = 3 \text{ A}$, $t_p = 8/20 \mu\text{s}^2$, from pin 2 to 1	V_{FC}	-	1.5 2.5	- -	
Line capacitance ³⁾ $V_{\text{R}} = 0 \text{ V}$, $f = 1 \text{ MHz}$ $V_{\text{R}} = 5 \text{ V}$, $f = 1 \text{ MHz}$	C_{T}	-	1 1	2 2	
Series inductance	L_{S}	-	0.4	-	nH

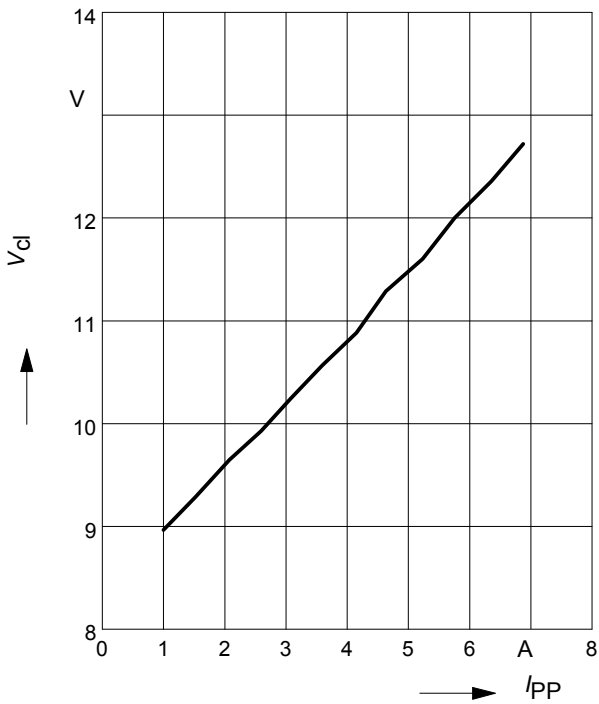
¹⁾ V_{ESD} according to IEC61000-4-2

²⁾ I_{pp} according to IEC61000-4-5

³⁾ Total capacitance line to ground

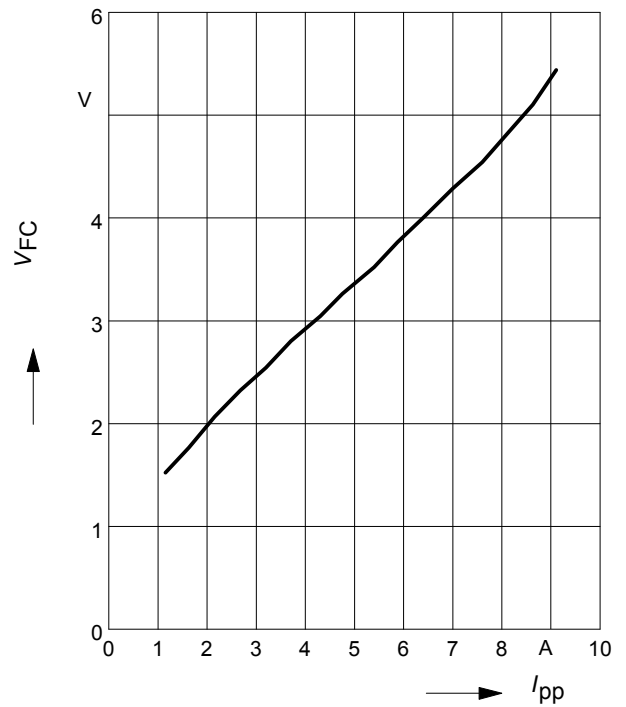
Clamping voltage, $V_{cl} = f(I_{pp})$

$t_p = 8 / 20 \mu s$, pin 1 to 2



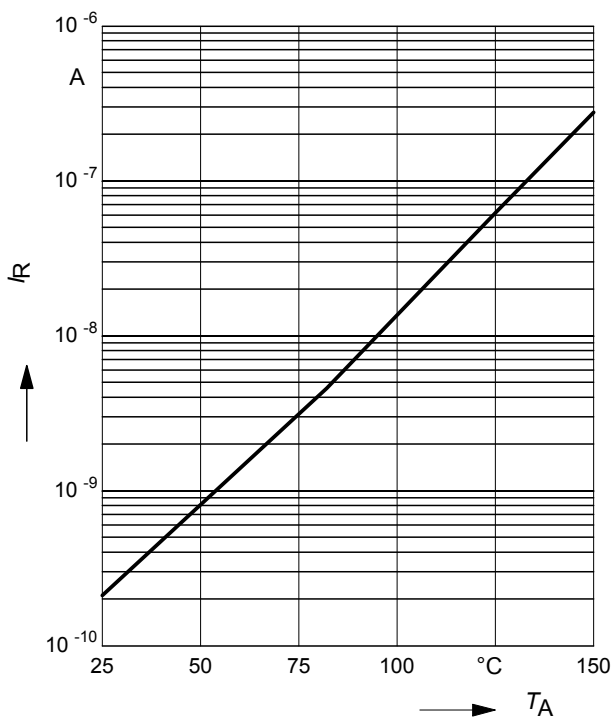
Forward clamping voltage $V_{FC} = f(I_{PP})$

$t_p = 8 / 20 \mu s$, pin 2 to 1



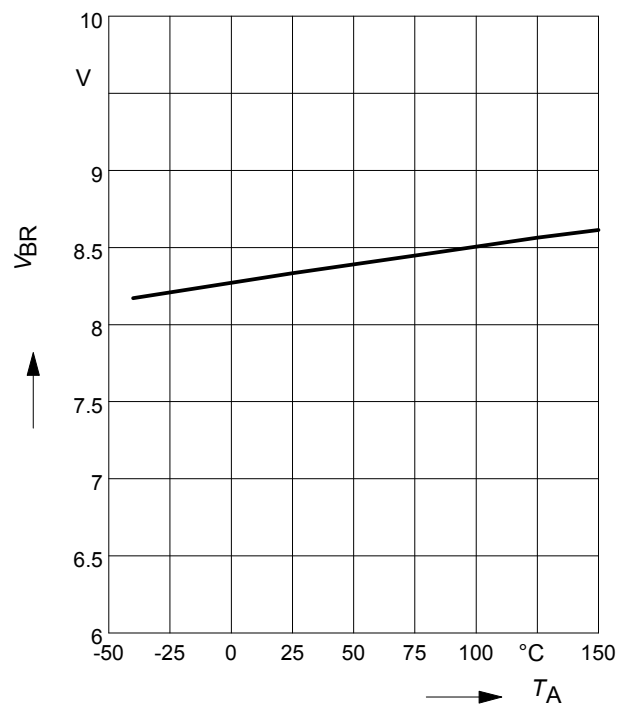
Reverse current $I_R = f(T_A)$

$V_R = 5.3V$, from pin 1 to 2

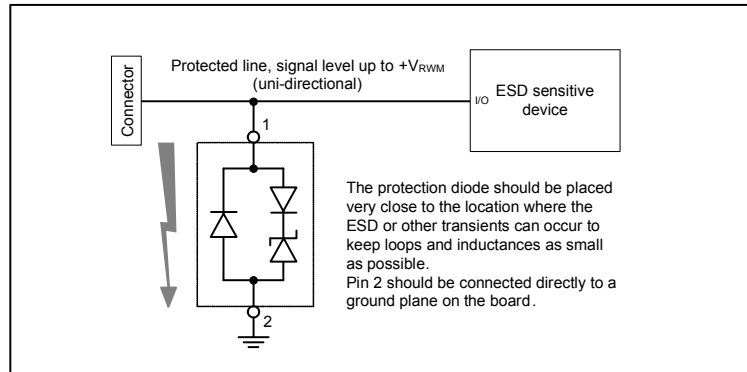


Breakdown voltage $V_{br} = f(T_A)$

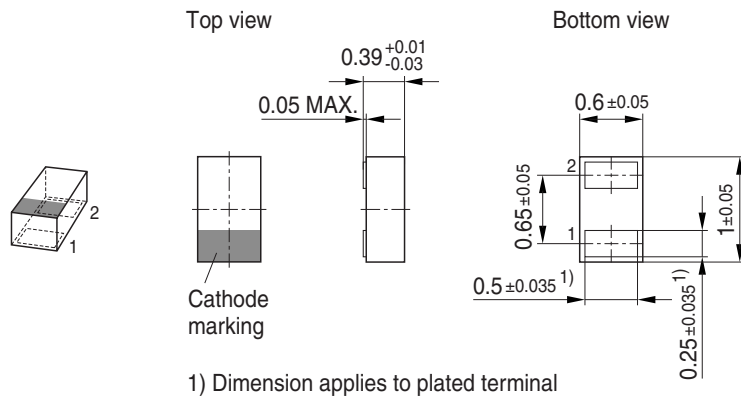
$I_F = 1mA$, from pin 1 to pin 2



Application example ESD5V3L1U-02LRH
 1-channel, uni-directional

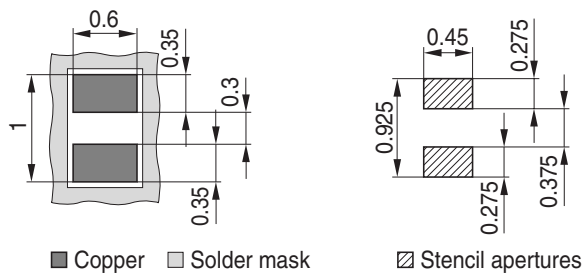


Package Outline

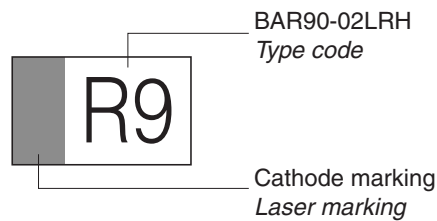


Foot Print

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

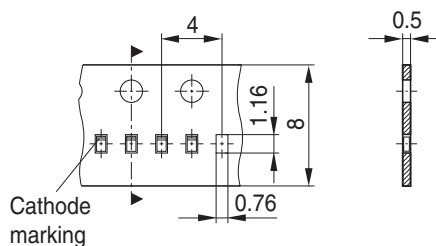


Marking Layout (Example)



Standard Packing

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



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