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Silicon TVS diodes Array

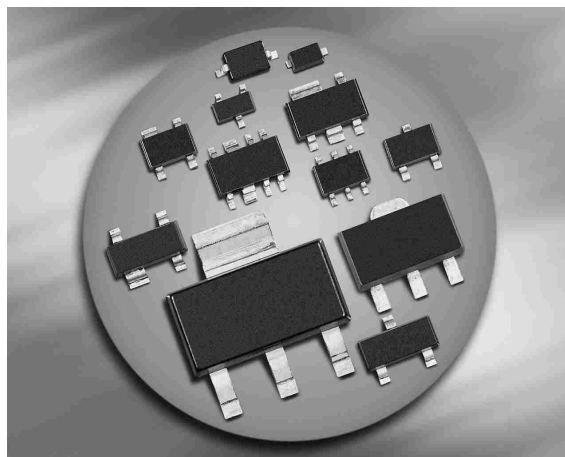
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I²C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

IEC61000-4-2 (ESD): ± 15 kV (Air / Contact)

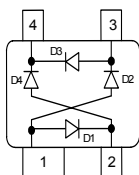
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)

IEC61000-4-5 (Lightning): 27 A (8/20 μ s)

- Very low capacitance
- Extremely low reverse current < 5 nA
- Pb-free (RoHS compliant) package



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Type	Package	Configuration	Marking
DSL70	SOT143	2 channel, rail to rail	E4s

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

Parameter	Symbol	Value	Unit
ESD contact discharge per diode ¹⁾	V_{ESD}	15	kV
Peak pulse current ($t_p = 8 / 20 \mu\text{s}$) ²⁾	I_{pp}	27	A
Peak pulse power ($t_p = 8 / 20 \mu\text{s}$)	P_{pk}	245	W
Operating temperature range	T_{op}	-55...125	$^\circ\text{C}$
Storage temperature	T_{stg}	-65...150	

¹⁾ V_{ESD} according to IEC61000-4-2

²⁾ I_{pp} according to IEC61000-4-5



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

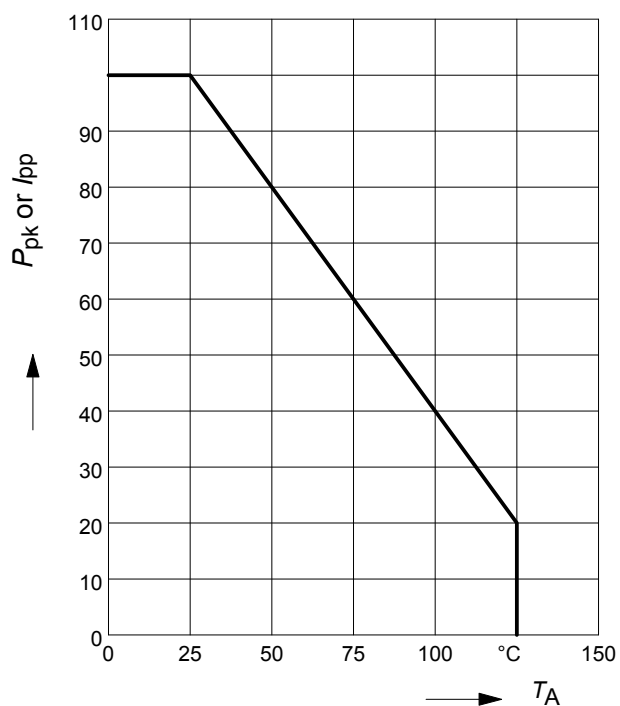
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Characteristics -					
Reverse working voltage	V_{RWM}	-	-	50	V
Reverse current $V_R = 50\text{ V}$	I_R	-	-	5	nA
Forward clamping voltage ¹⁾ $I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 10\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 24\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 27\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	V_{FC}	- - - -	1 2.5 5 6	1.5 3 6 9	V
Diode capacitance $V_R = 0\text{ V}$, $f = 1\text{ MHz}$, between I/O and GND $V_R = 0\text{ V}$, $f = 1\text{ MHz}$, between I/O pins	C_T	- -	2.5 1.25	5 2.5	pF

¹⁾ I_{PP} according to IEC61000-4-5



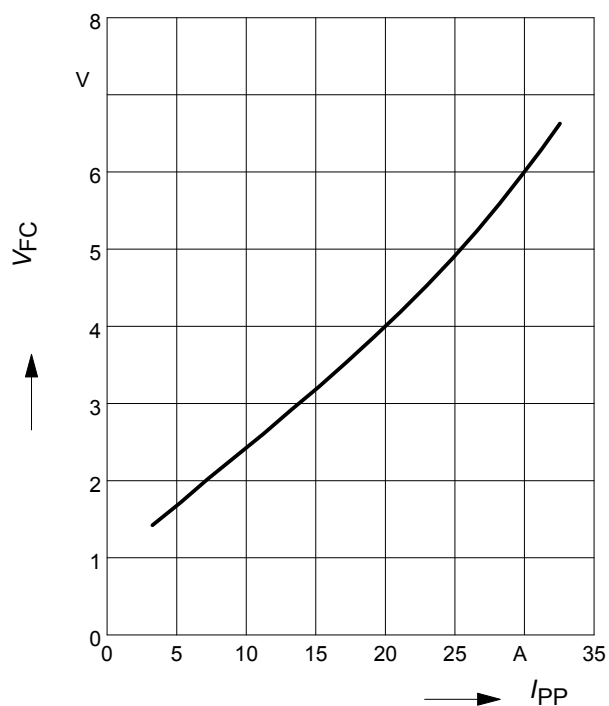
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Power derating curve $P_{pk} = f(T_A)$



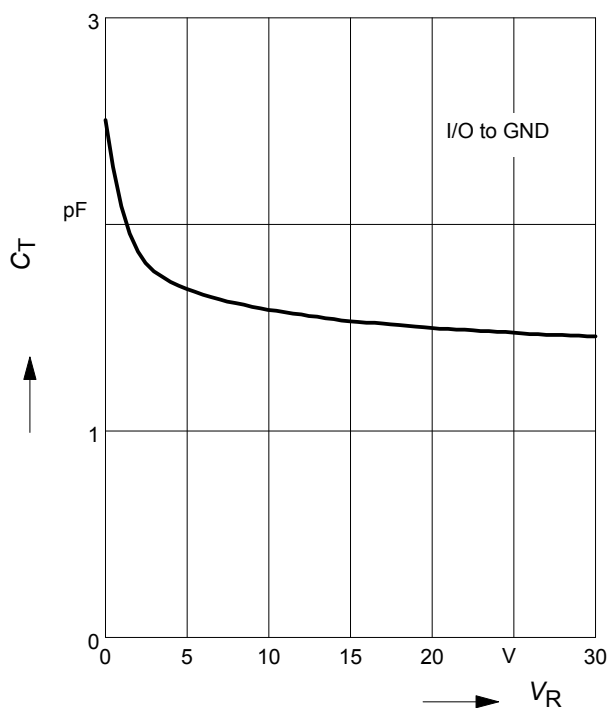
Forward clamping voltage $V_{FC} = f(I_{PP})$

$t_p = 8 / 20 \mu s$



Diode capacitance $C_T = f(V_R)$

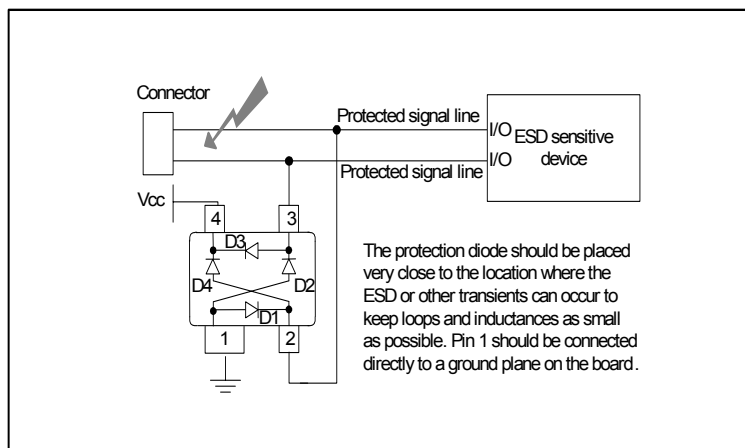
$f = 1MHz$



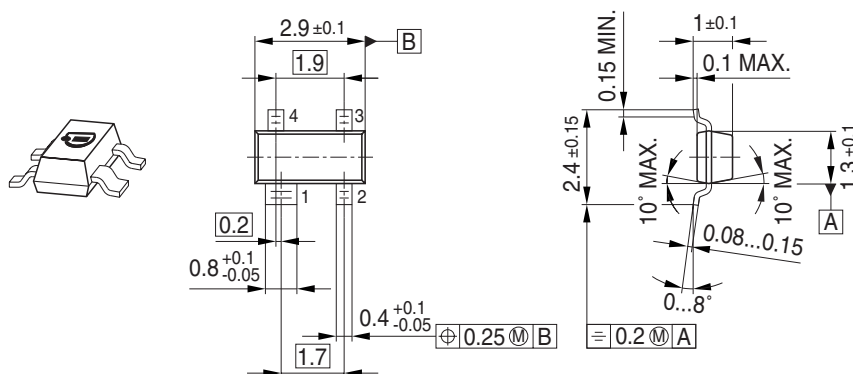


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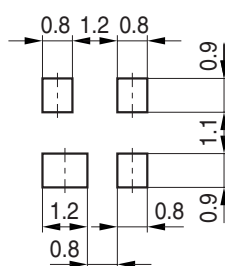
Application example DSL70 dual channel, rail to rail configuration



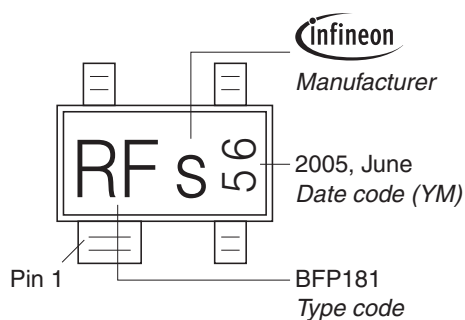
Package Outline



Foot Print

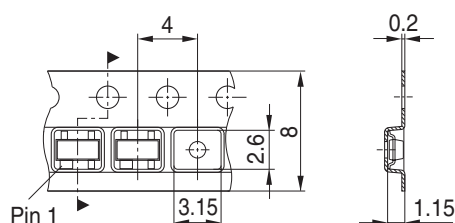


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel





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