

**Silicon TVS diodes Array**

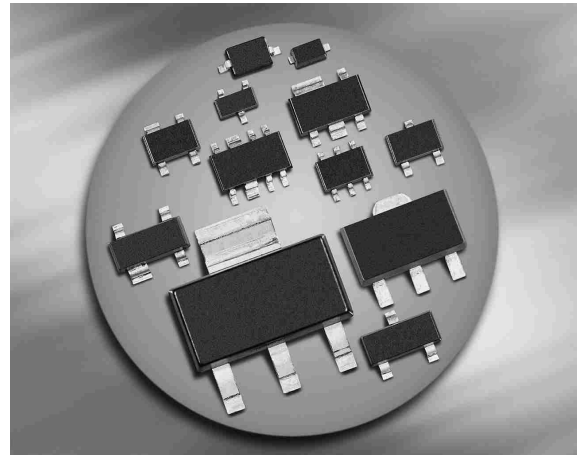
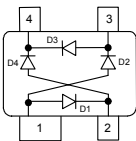
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I<sup>2</sup>C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

IEC61000-4-2 (ESD):  $\pm 15$  kV (Air / Contact)

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

IEC61000-4-5 (Lightning): 27 A (8/20  $\mu$ s)

- Very low capacitance
- Extremely low reverse current  $< 5$  nA
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101


**DSL70**


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 <sup>1)</sup>	$V_{\text{ESD}}$	15	kV
Peak pulse current ( $t_p = 8 / 20 \mu\text{s}$ ) <sup>2)</sup>	$I_{\text{pp}}$	27	A
Peak pulse power ( $t_p = 8 / 20 \mu\text{s}$ )	$P_{\text{pk}}$	245	W
Operating temperature range	$T_{\text{op}}$	-55...125	°C
Storage temperature	$T_{\text{stg}}$	-65...150	

<sup>1)</sup> $V_{\text{ESD}}$  according to IEC61000-4-2

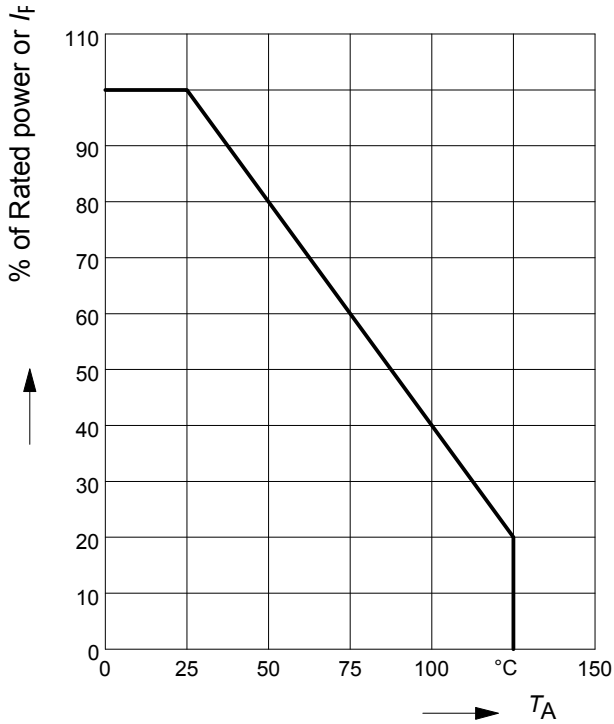
<sup>2)</sup> $I_{\text{pp}}$  according to IEC61000-4-5

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>Characteristics -</b>					
Reverse working voltage	$V_{RWM}$	-	-	50	V
Reverse current $V_R = 50\text{ V}$	$I_R$	-	-	5	nA
Forward clamping voltage <sup>1)</sup> $I_{PP} = 1\text{ A}, t_p = 8/20\ \mu\text{s}$ $I_{PP} = 10\text{ A}, t_p = 8/20\ \mu\text{s}$ $I_{PP} = 24\text{ A}, t_p = 8/20\ \mu\text{s}$ $I_{PP} = 27\text{ A}, t_p = 8/20\ \mu\text{s}$	$V_{FC}$	-	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

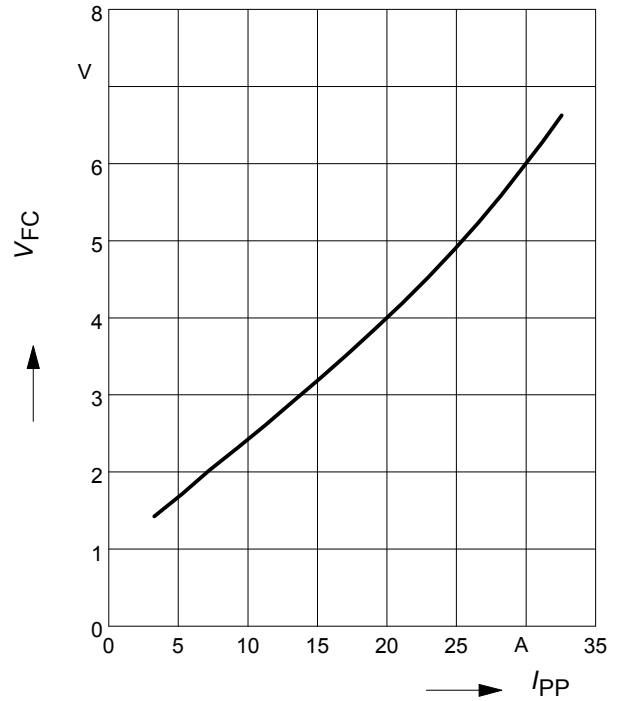
<sup>1)</sup> $I_{PP}$  according to IEC61000-4-5

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



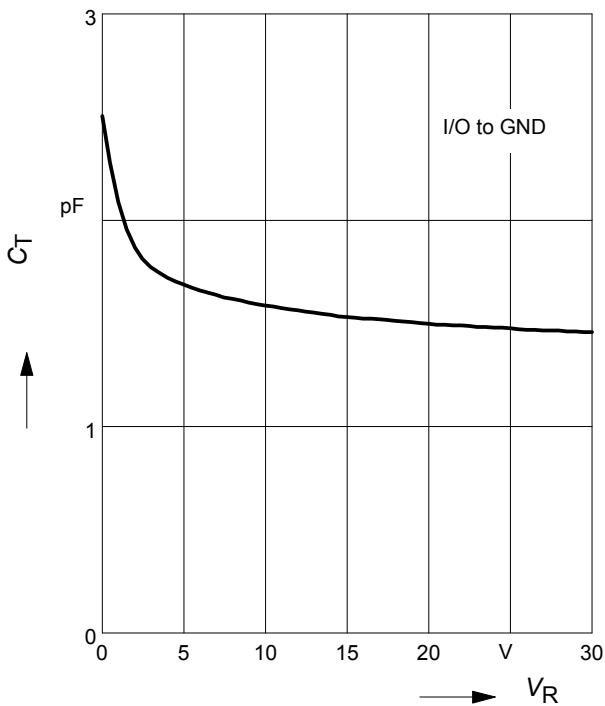
**Forward clamping voltage  $V_{FC} = f(I_{PP})$**

$t_p = 8 / 20 \mu s$

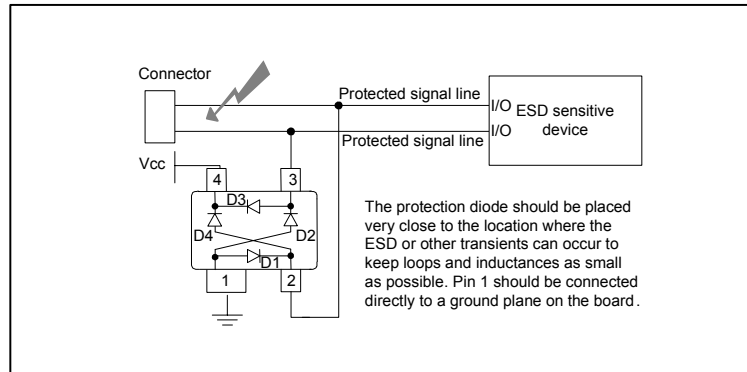


**Diode capacitance  $C_T = f(V_R)$**

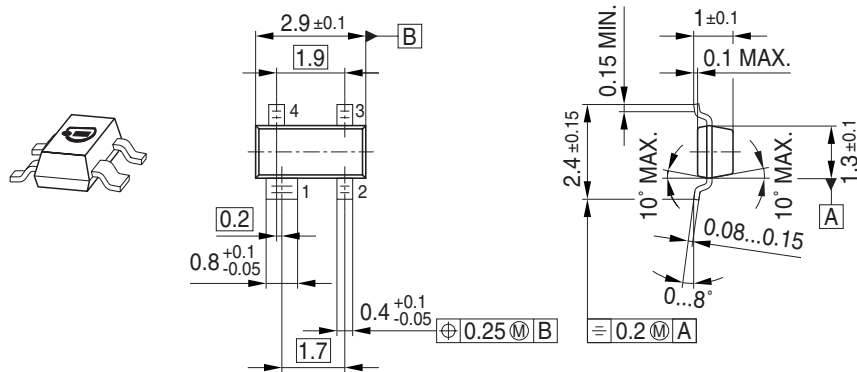
$f = 1MHz$



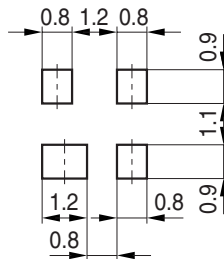
**Application example DSL70**  
 dual channel, rail to rail configuration



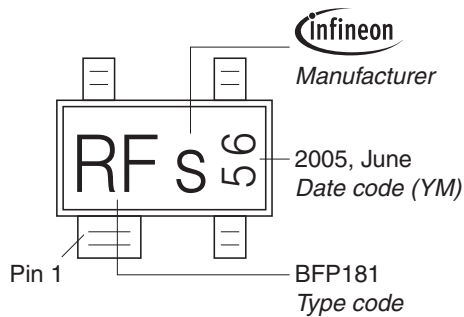
Package Outline



Foot Print

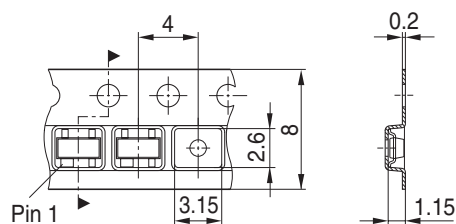


Marking Layout (Example)



Standard Packing

Reel  $\phi 180$  mm = 3.000 Pieces/Reel  
 Reel  $\phi 330$  mm = 10.000 Pieces/Reel



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