

### Silicon TVS diodes Array

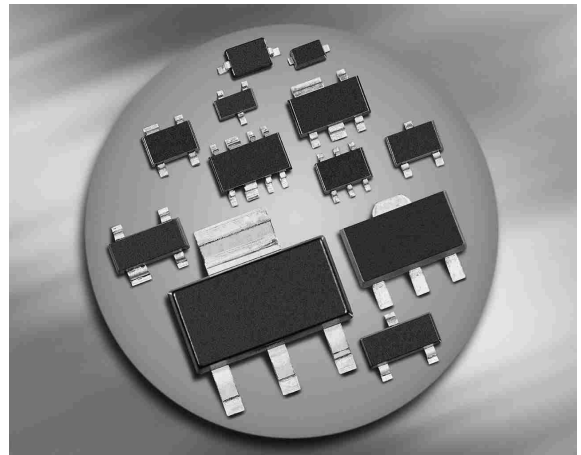
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I<sup>2</sup>C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

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

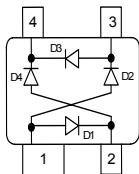
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)

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

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



### 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	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-65...150	

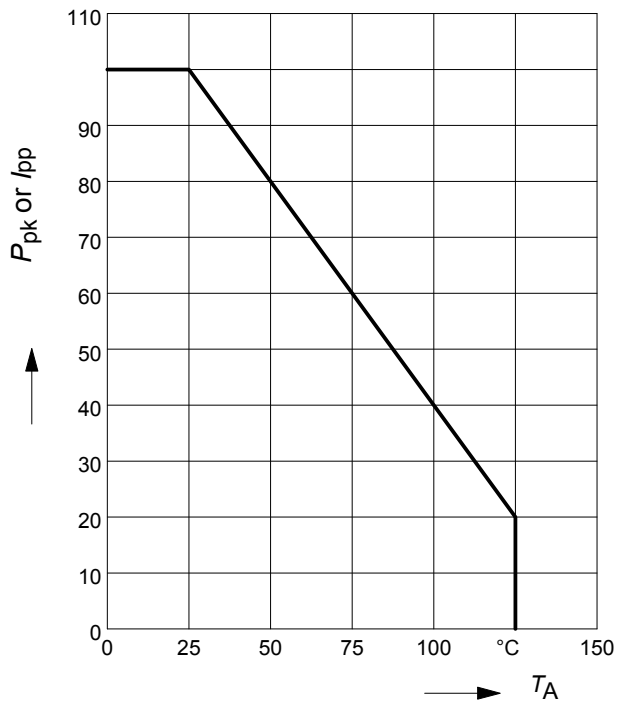
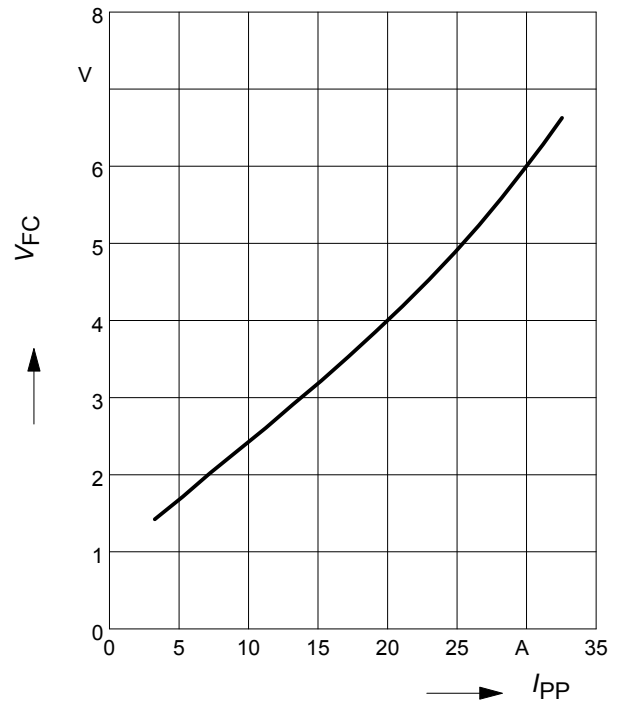
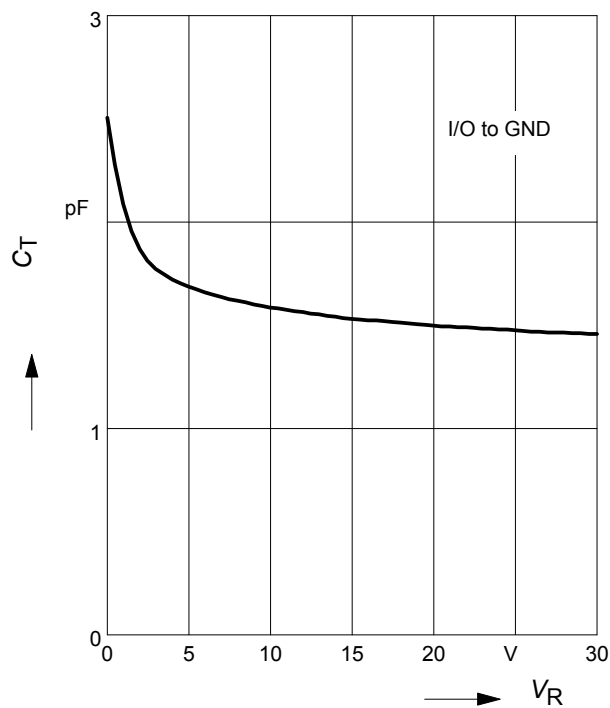
<sup>1)</sup>  $V_{\text{ESD}}$  according to IEC61000-4-2

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

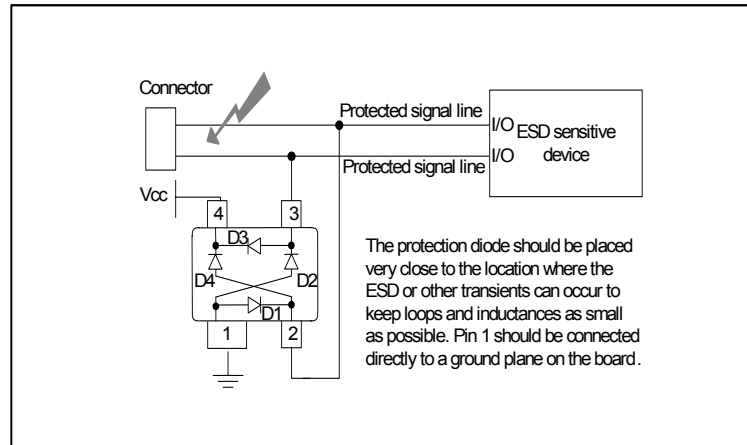
**Electrical Characteristics** at  $T_A = 25^\circ\text{C}$ , unless otherwise specified

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

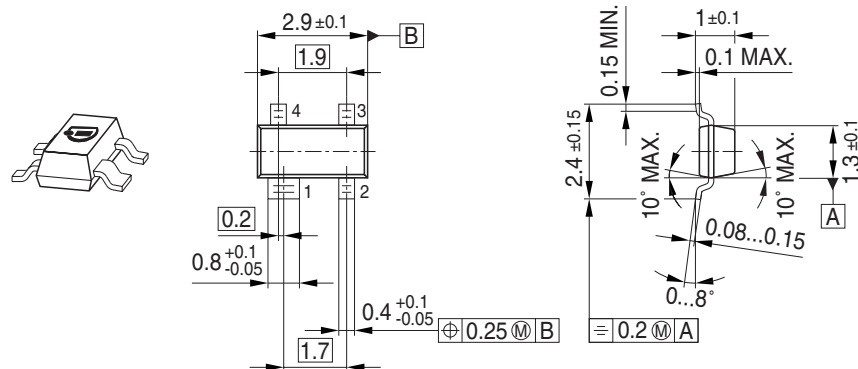
<sup>1)</sup> $I_{PP}$  according to IEC61000-4-5

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

**Forward clamping voltage  $V_{FC} = f(I_{PP})$** 
 $t_p = 8 / 20 \mu s$ 

**Diode capacitance  $C_T = f(V_R)$** 
 $f = 1 MHz$ 


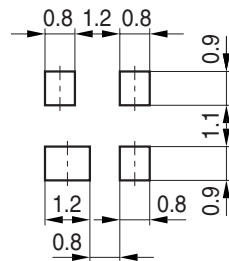
# **Application example DSL70** dual channel, rail to rail configuration



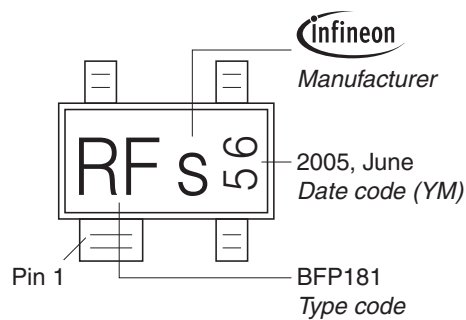
## Package Outline



## Foot Print

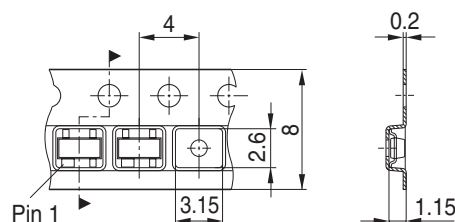


## Marking Layout (Example)



## Standard Packing

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



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