

Silicon TVS diodes Array

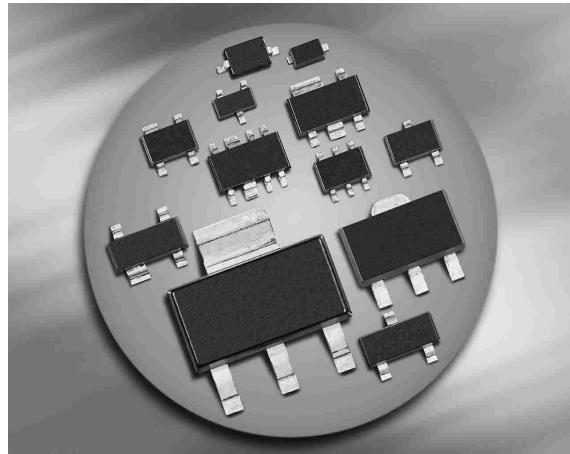
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I²C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

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

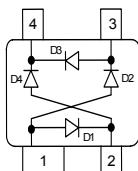
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)

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

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



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 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

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

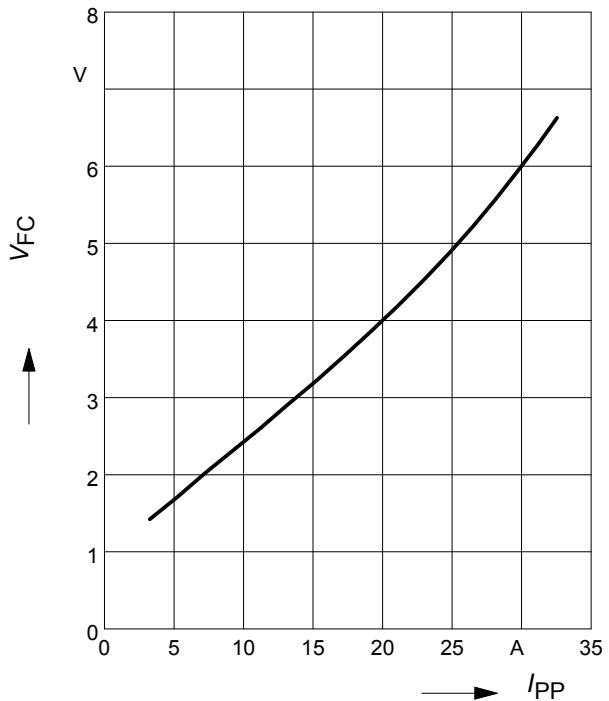
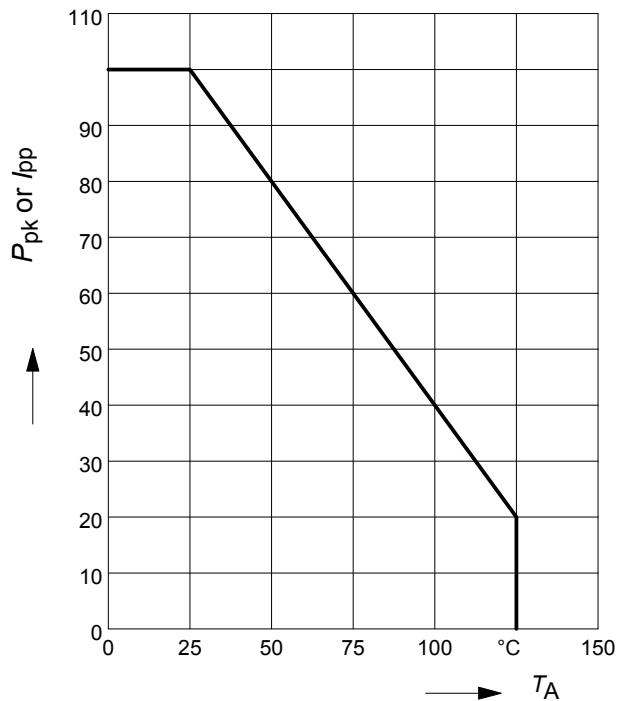
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Characteristics -					
Reverse working voltage	V_{RWM}	-	-	50	V
Reverse current $V_R = 50 \text{ V}$	I_R	-	-	5	nA
Forward clamping voltage ¹⁾ $I_{PP} = 1 \text{ A}, t_P = 8/20 \mu\text{s}$ $I_{PP} = 10 \text{ A}, t_P = 8/20 \mu\text{s}$ $I_{PP} = 24 \text{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

¹ I_{PP} according to IEC61000-4-5

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

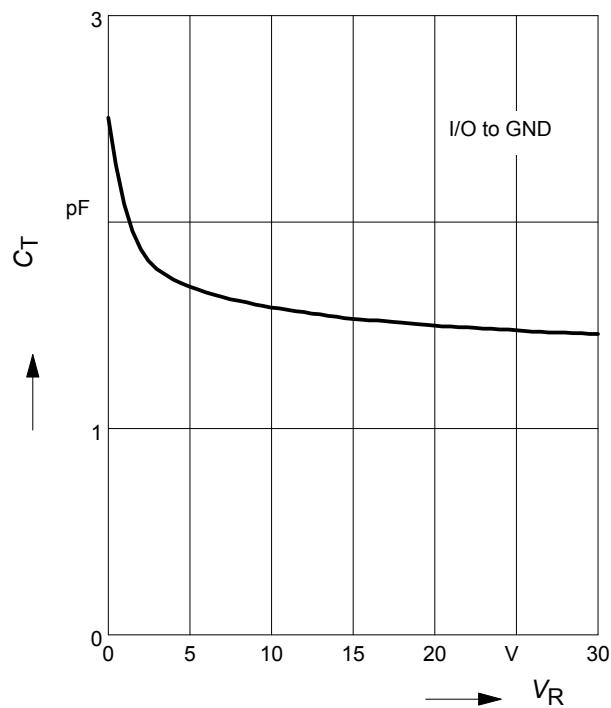
Forward clamping voltage $V_{FC} = f(I_{PP})$

$$t_p = 8 / 20 \mu\text{s}$$



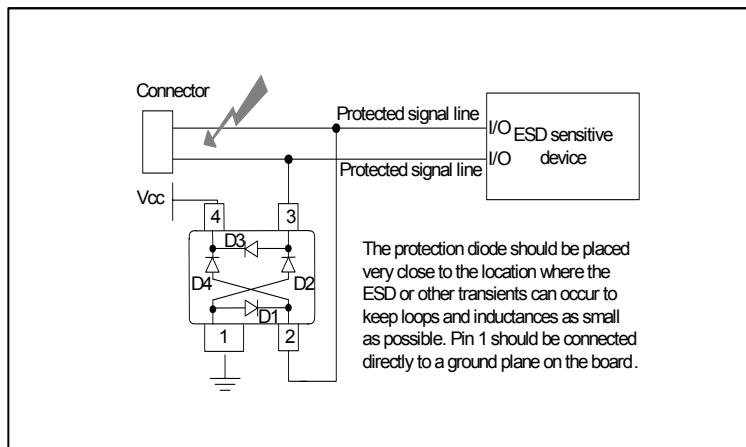
Diode capacitance $C_T = f(V_R)$

$$f = 1\text{MHz}$$

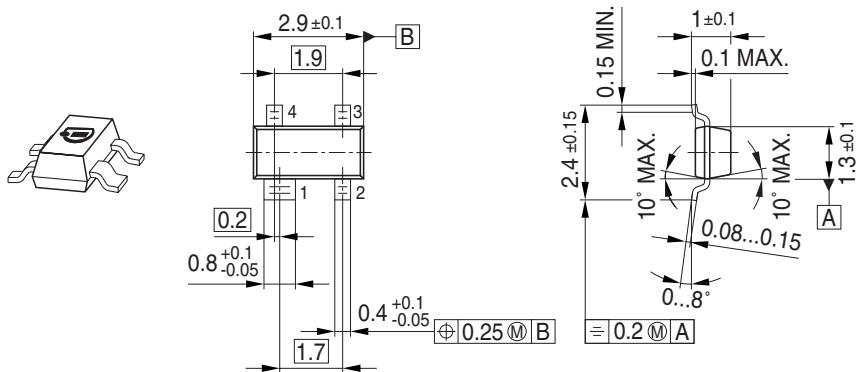


Application example DSL70

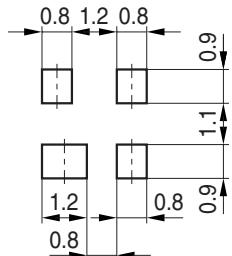
dual channel, rail to rail configuration



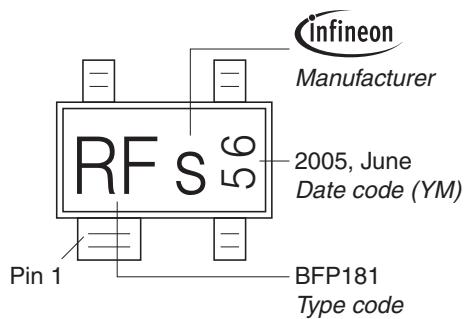
Package Outline



Foot Print

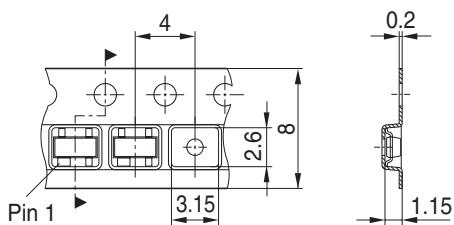


Marking Layout (Example)



Standard Packing

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



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