

Silicon TVS diodes Array

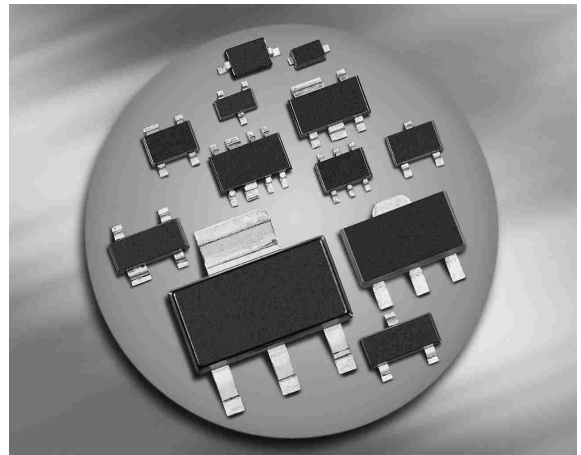
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I²C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

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

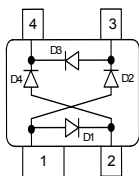
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)

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

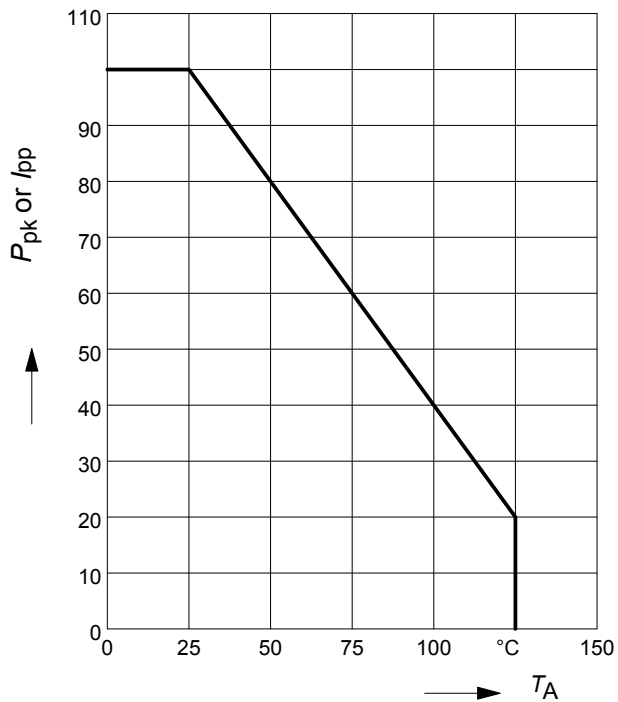
²⁾ I_{pp} according to IEC61000-4-5

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⁾ $I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 10\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 24\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$ $I_{PP} = 27\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	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

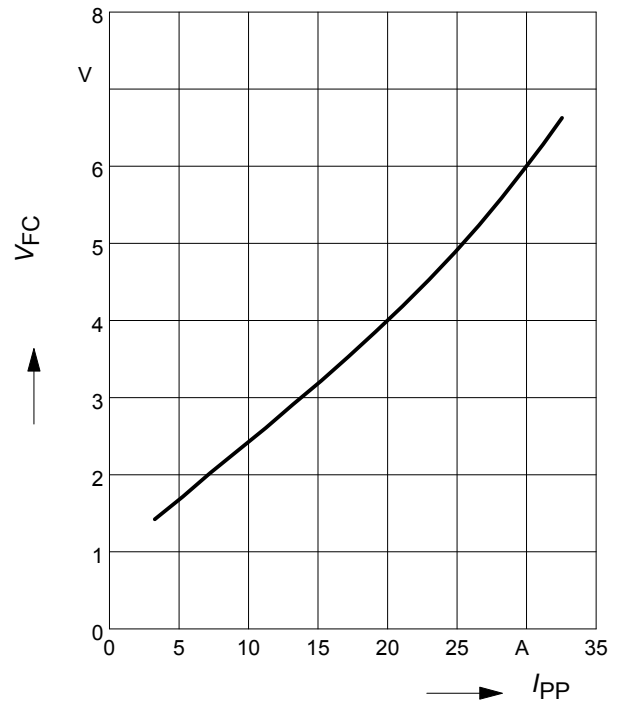
¹⁾ I_{PP} according to IEC61000-4-5

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



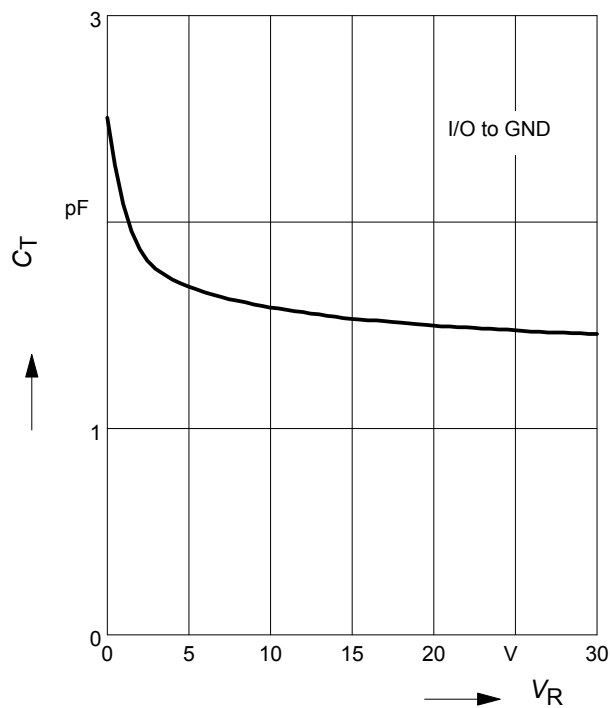
Forward clamping voltage $V_{FC} = f(I_{PP})$

$t_p = 8 / 20 \mu s$



Diode capacitance $C_T = f(V_R)$

$f = 1 MHz$



Application example DSL70 dual channel, rail to rail configuration

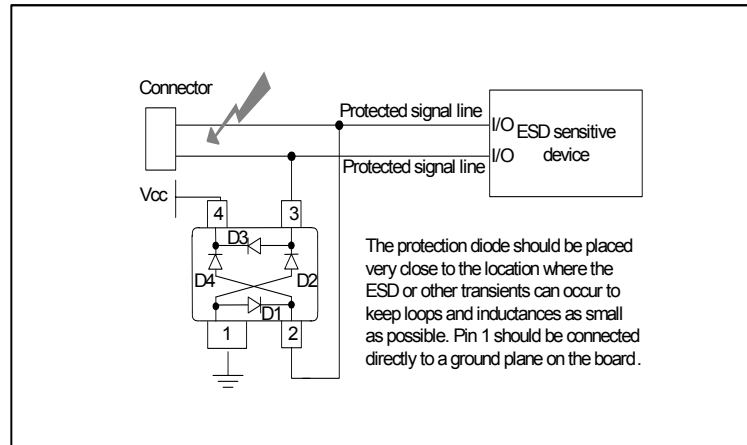


Diagram illustrating the marking on the BFP181 package:

- Manufacturer:** infineon
- Date code (YM):** 2005, June
- Pin 1:** Indicated by an arrow pointing to the first pin on the left.
- Type code:** BFP181

Technical drawing of a mechanical part showing top and side views with dimensions:

- Top View Dimensions:**
 - Overall width: 4
 - Overall height: 8
 - Distance from left edge to center of first hole: 3.15
 - Distance between centers of first and second holes: 2.6
 - Distance between centers of second and third holes: 2.6
 - Distance from center of third hole to right edge: 2.6
 - Radius of the rightmost corner: 4
- Side View Dimensions:**
 - Overall thickness: 0.2
 - Radius of the bottom corner: 1.15
- Other Features:**
 - Three circular holes are shown in the top view.
 - A rectangular feature is labeled "Pin 1" with an arrow pointing to it.
 - Section lines are present in the side view.

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