

Silicon TVS diodes Array

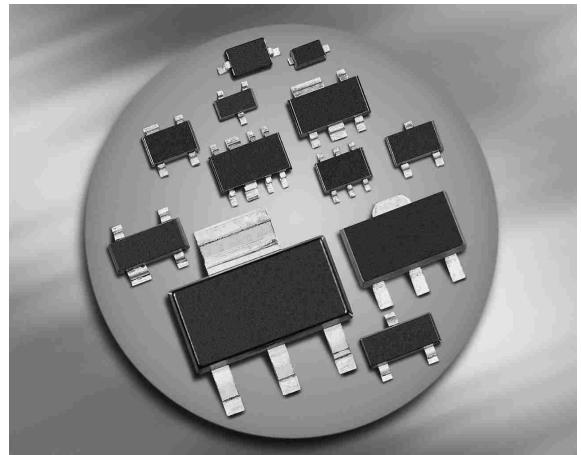
- ESD / transient protection of e.g. ADSL, VDSL, ISDN, WAN, LAN, I²C Bus, Microcontroller Inputs, Video and other high-speed data lines in telecom applications:

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

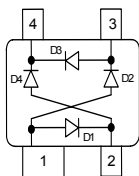
IEC61000-4-4 (EFT): 4 kV / 80 A (5/50 ns)

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

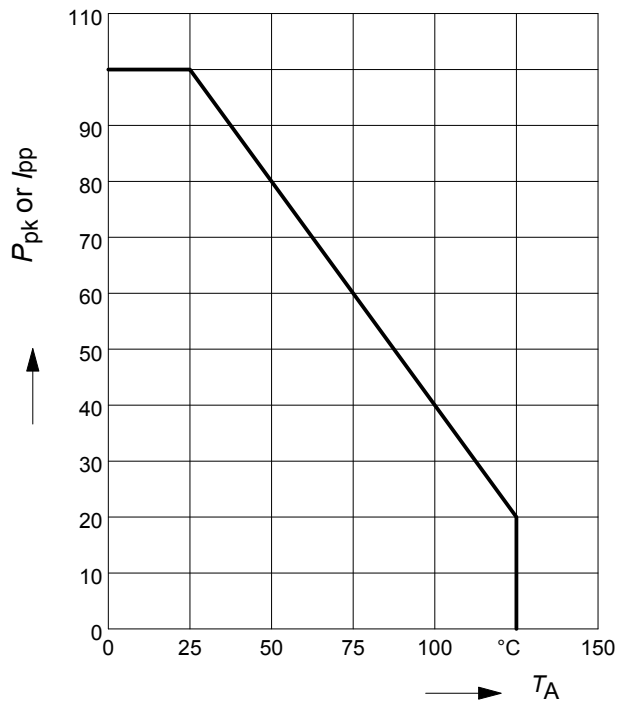
²⁾ I_{pp} according to IEC61000-4-5

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

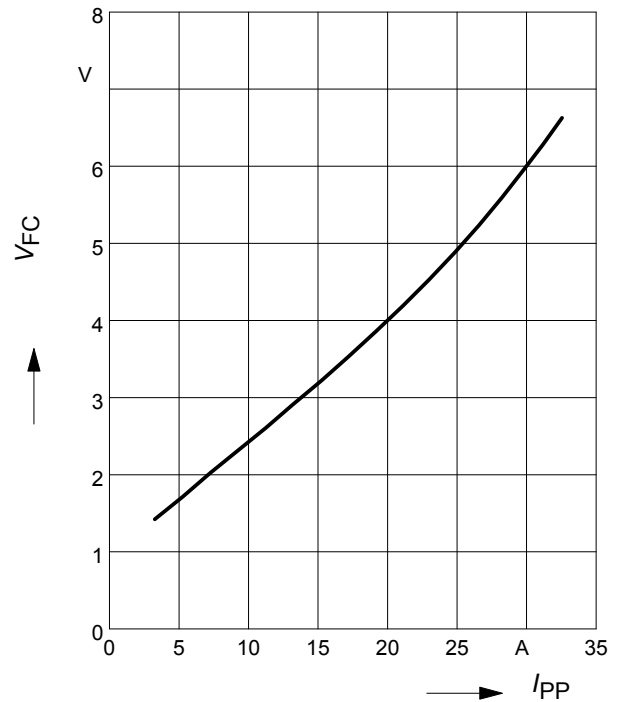
¹⁾ I_{PP} according to IEC61000-4-5

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



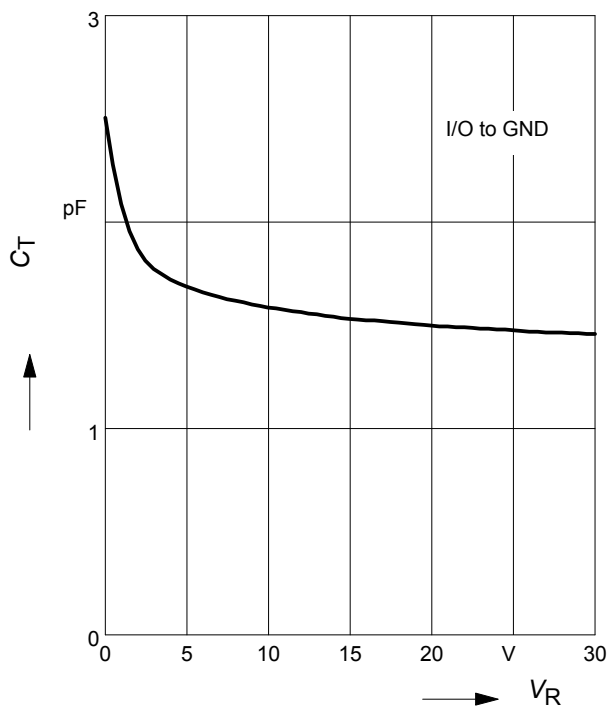
Forward clamping voltage $V_{FC} = f(I_{PP})$

$t_p = 8 / 20 \mu s$



Diode capacitance $C_T = f(V_R)$

$f = 1 MHz$



Application example DSL70 dual channel, rail to rail configuration

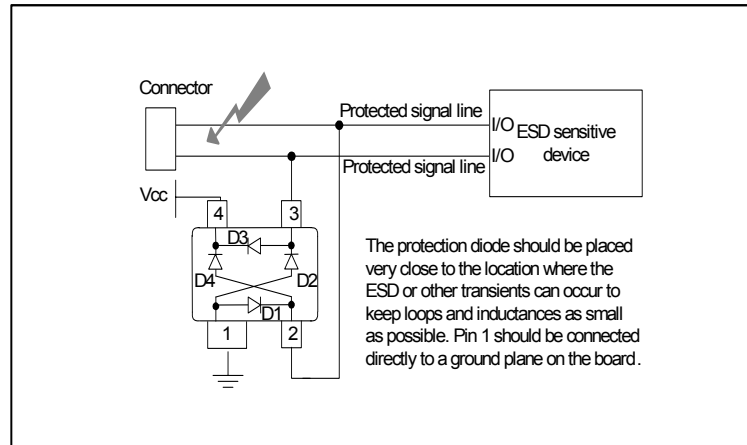


Diagram illustrating the marking on the BFP181 package:

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

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 first hole center: 3.15
 - Distance between hole centers: 2.6
 - Distance from last hole center to right edge: 0.2
- Side View Dimensions:**
 - Overall height: 1.15
 - Distance from bottom edge to hole center: 0.2
- Other Features:**
 - Three circular holes are shown in the top view.
 - A rectangular feature labeled "Pin 1" is located on the left side.
 - Section lines (hatching) are present in the side view.

Edition 2009-11-16

**Published by
Infineon Technologies AG
81726 Munich, Germany**

**© 2009 Infineon Technologies AG
All Rights Reserved.**

Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office ([<www.infineon.com>](http://www.infineon.com)).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Infineon:](#)

[DSL70E6327HTSA1](#)