

Transient Voltage Suppressor Arrays

Features

- 2, 3, 4, 5, or 6 transient voltage suppressors in a single surface-mount package
- Compact SMT packages save board space and ease layout in space critical applications compared to discrete solutions
- In-system ESD protection to 20kV contact discharge per IEC 61000-4-2 International Standard

Applications

- ESD protection of PC ports, e.g. USB port.
- Protection of interface ports or IC pins which are exposed to high levels of ESD.

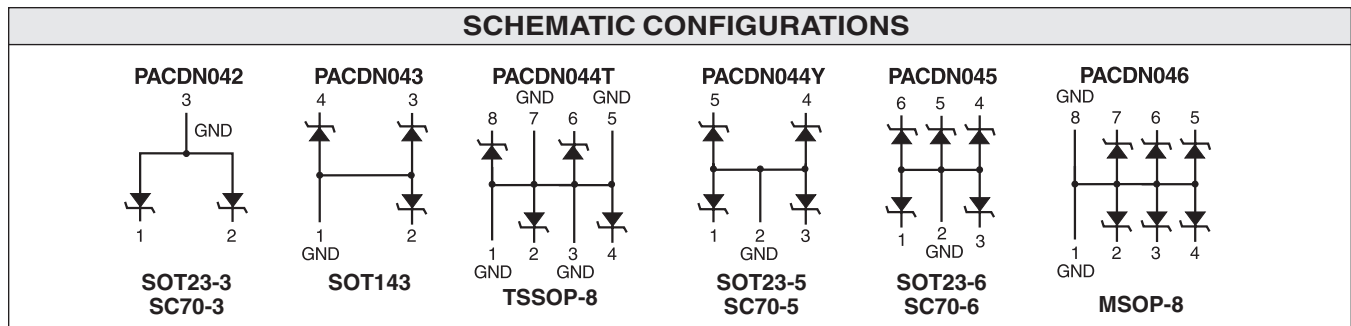
Product Description

The PACDN042, PACDN043, PACDN044, PACDN045, and PACDN046 are transient voltage suppressor arrays that provide a very high level of protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). The devices are designed and characterized to safely dissipate ESD strikes at levels well beyond the maximum requirements set forth in the

IEC 61000-4-2 International Standard (Level 4, 8kV contact discharge). All pins are rated at 20kV ESD using the IEC 61000-4-2 contact discharge method.

Using the MIL-STD-883D (Method 3015) specification for Human Body Model (HBM) ESD, all pins are protected for contact discharges to greater than 30kV.

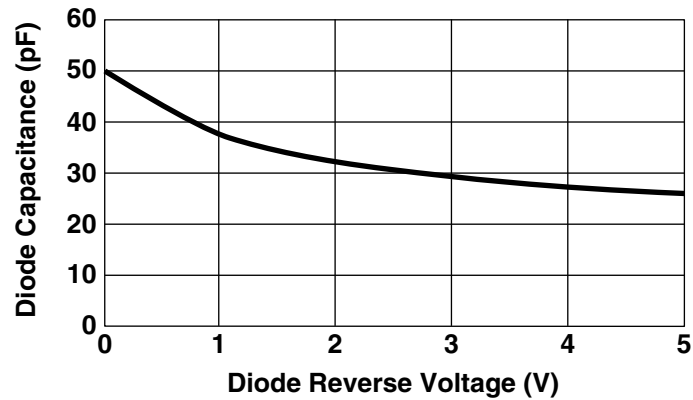
SCHEMATIC CONFIGURATIONS



STANDARD SPECIFICATIONS (At 25°C unless otherwise specified)

Parameter	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage, $I = 10\mu\text{A}$	5.5			V
Leakage Current, $V = 5\text{V}$		1	100	mA
Signal Clamp Voltage:				
Positive Clamp, 10mA	5.6	6.8	8	V
Negative Clamp, 10mA	-1.2	-0.8	-0.4	V
In-system ESD withstand voltage*				
Human Body Model (MIL-STD-883D, method 3015)	± 30			kV
IEC 61000-4-2, contact discharge method	± 20			kV
Clamping voltage during ESD discharge				
MIL-STD-883D (Method 3015), 8kV		12		V
Positive		-8		V
Negative				
Capacitance @ 2.5V dc, 1 MHz		30		pF
Temperature Range:				
Operating	-40		85	°C
Storage	-65		150	
Package Power Rating:				
SC70			0.2	W
SOT23, SOT23-5, SOT23-6, SOT143			0.225	W
TSSOP, MSOP			0.5	W

* ESD applied between channel pin and ground, one at a time. All other channels are open. All GND pins grounded. This parameter is guaranteed by design and characterization.



Typical Diode Capacitance vs. Reverse Voltage

STANDARD PART ORDERING INFORMATION			
Package		Part Marking	Ordering Part Number
Pins	Style		
3	SOT23	D042	PACDN042Y3
3	SC70-3	D42	PACDN042YB3
4	SOT143	D043	PACDN043Y4
5	SOT23-5	D044	PACDN044Y5
5	SC70-5	D44	PACDN044YB5
6	SOT23-6	D045	PACDN045Y6
6	SC70-6	D45	PACDN045YB6
8	TSSOP	PACDN044T	PACDN044T
8	MSOP	D046	PACDN046M