

# ROBUST ESD DEFENSE IN HERMETICALLY SEALED PACKAGE



## Unidirectional Diode Arrays in Space-Saving 01005 DFN Plastic Packaging

Offers unidirectional protection, providing better ESD protection at half the dynamic resistance, suitable for the majority of interfaces, namely I/O ports and power

The SP1053 and SP1054 are in a hermetically sealed plastic package, protecting the die from the environment better. Others in the market in this size or format are either bare silicon, or bare silicon covered by an oxide, which will not stand up against abrasion, or temperature cycling.

### Target Application:

- Mobile Phones
- Smart Phones
- Camcorders
- Portable Medical
- Digital Cameras
- Wearable Technology
- Portable Navigation Components
- Tablets
- Point of Sale Terminals
- Identification Modules



## Unidirectional TVS Diode Arrays in Space-Saving 01005 DFN Plastic Packaging



### Features

- Unidirectional TVS diode arrays offer just half the dynamic resistance of bidirectional solutions
- DFN package, (Dual, Flat, No-lead) plastic, 01005 footprint and also a market first solution for protection devices
- Unidirectional Protection offers a new robust solution for protecting I/O and power ports from ESD damage

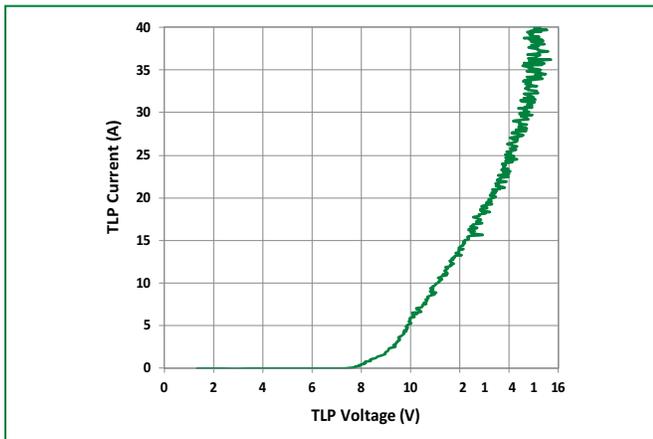
### Benefits

- Lowest dynamic resistance performance means the solution can protect sensitive ports faster and better
- Protects much better than competing solutions in the same footprint, water and vapor barrier and prevents solder shorts between the terminals, abrasion and moisture intrusion that could interfere with ESD protection
- Most of the interfaces including digital audio are unipolar, so best to protect using unidirectional solutions

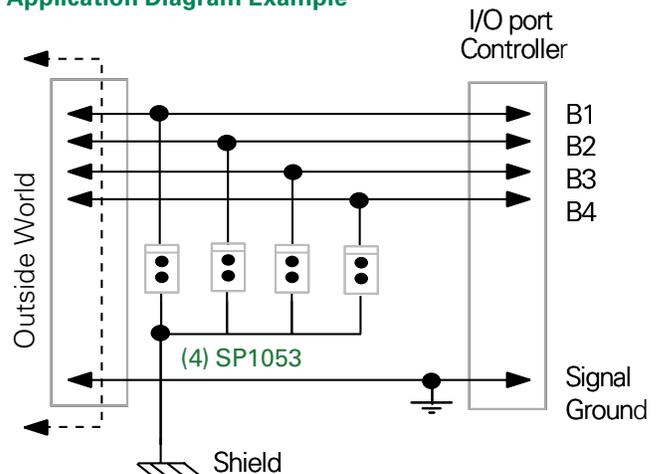
**Half the Dynamic Resistance of Bidirectional Solutions Protects Sensitive Ports Faster and Better.**



### SP1054 Positive Transmission Line Pulsing (TLP) Plot



### Application Diagram Example



Ordering Number	I <sub>pp</sub> (A)	Reverse Breakdown Voltage (V)	Clamping Voltage (V)	Dynamic Resistance (Ω)	V <sub>ESD</sub> Contact (V)	Diode Capacitance (pF)	Package	AEC-Q101 Qualified
SP1053-01UTG	1.0	7 (Typ)	9(Typ)	0.47	±8	8	01005 DFN Plastic Package	Yes
SP1054-01UTG	2.5	7.2V(Typ)	8.5(Typ)	0.21	±30	26		