New ESD protection diode for NFC antennas

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We've introduced a new device specifically designed to protect NFC antennas in mobile devices from transient voltages. The PESD18VF1BSF is an 18 V bidirectional diode with ultra-low capacitance down to 0.23 pF. It extends our existing portfolio of PESD18VF1BL and PESD24VF1BL products.

Housed in an ultra-small, leadless DSN0603-2 (0.6 x 0.3 x 0.3 mm, 0201 inch) package, the PESD18VF1BSF is ideal for space constrained applications such as smartphones.

NFC antennas are integrated into the battery's cover or the battery itself, and are connected to the IC via small contacts on the phone. These contacts can act as entry points for ESD strikes which are potentially hazardous to the NFC controller IC.

PESD18VF1BSF safeguards the NFC chip from these strikes according to the IEC61000-4-2 industry standard. At the same time, it maintains strong signal integrity of the antenna circuit by featuring a very small variation of diode capacitance versus the bias voltage. This combination ensures that your mobile device receives the best possible protection for the NFC system.

Download datasheets

PESD18VF1BSF

Key features and benefits

- Bi-directional configuration, allowing operating voltages up to 18V
- Enables protection of high-speed data lines thanks to ultra-low diode capacitance C_d = 0.28 pF
- Very small voltage dependency of the diode capacitance avoiding intermodulation distortion
- ESD protection of up to 10 kV according to IEC61000-4-2
- Ultra small DSN0603-2 (0201 inch) package

Related links

- PESD18VF1BSF datasheet
- PESD18VF1BSF product information page
- ESD protection of NFC antennas leaflet
- NFC antenna protection portfolio