

High-performance, small form-factor devices protect the NFC antenna

The best ESD protection for NFC systems - from the global leader in ESD protection and Near-Field Communication (NFC).



Features

- › Bidirectional configuration, allowing operating voltages up to 18 V and 24 V
- › Very low capacitance, enabling easy design of the antenna matching circuit
- › Very small voltage dependency of the diode capacitance, avoiding intermodulation distortion
- › Small form-factor packages of 1006 (0402 inch) and 0603 (0201 inch) standard size

General description

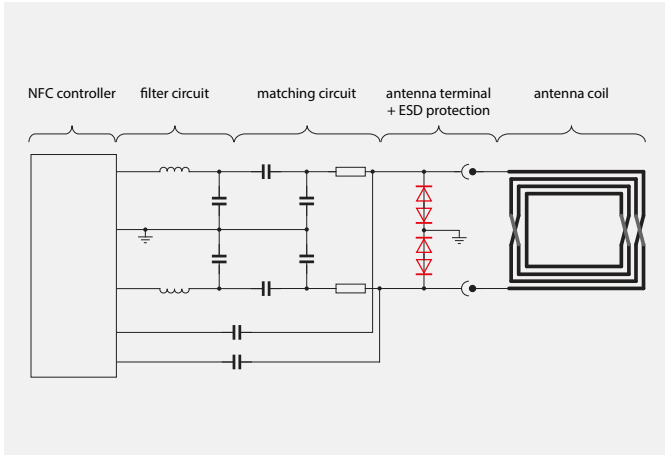
NFC is the breakthrough technology that allows tags in posters, check-in signs, and contactless payment terminals to interact with mobile phones. The NFC antenna is often integrated into the battery cover or the battery itself and is connected to the NFC ICs via small contacts on the phone – an entry point for ESD strikes which are potentially hazardous to the NFC IC. These new Nexperia devices are optimized for the requirements of the NFC system and ensure the best-possible protection of the NFC IC.

Selection guide

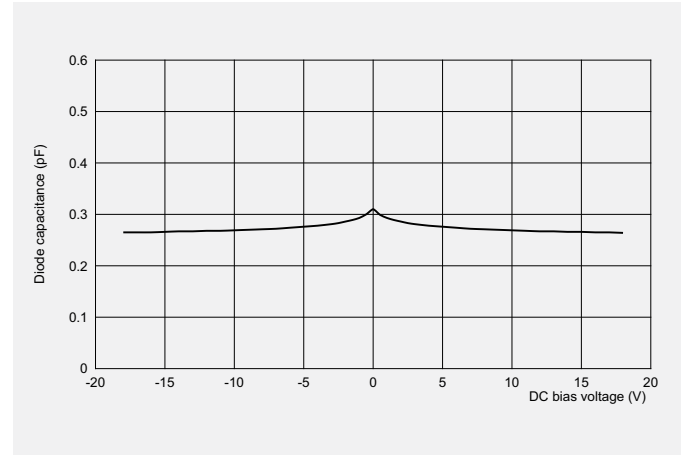
Type number	Protected lines	V_{RWM} (V)	$C_{line, typ}$ (pF)	$C_{line, max}$ (pF)	ESD rating max (kV)	Configuration	Package	Size (mm)	
PESD18VF1BSF	1	18	0.28	0.45	10	Bidirectional	DSN0603-2	0.6 x 0.3 x 0.3	
PESD1NFC-SF			PESD18VF1BL	0.35	0.5	10	Bidirectional	DFN1006-2	1 x 0.6 x 0.48
PESD1NFC-L		24	0.25	0.4	10	Bidirectional	DSN0603-2	0.6 x 0.3 x 0.3	
PESD24VF1BSF			PESD2NFC-SF	PESD24VF1BL	PESD2NFC-L	0.3	0.45	10	Bidirectional

Using tiny packages makes PCB design more flexible.

The highly linear diode capacitance, with very small variation, minimizes signal degradation.



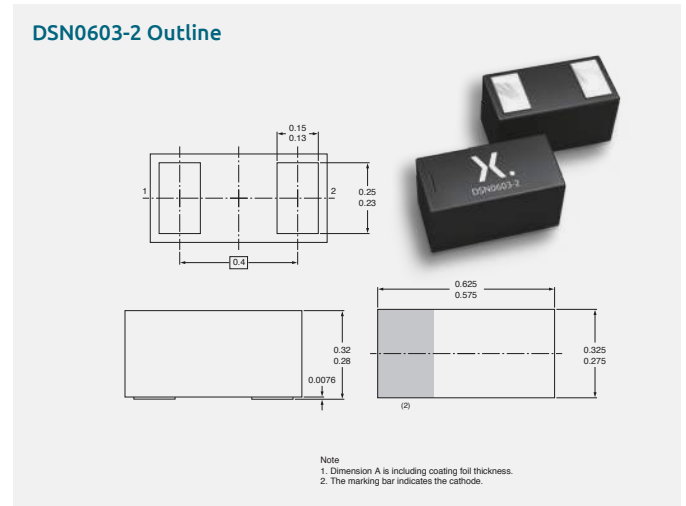
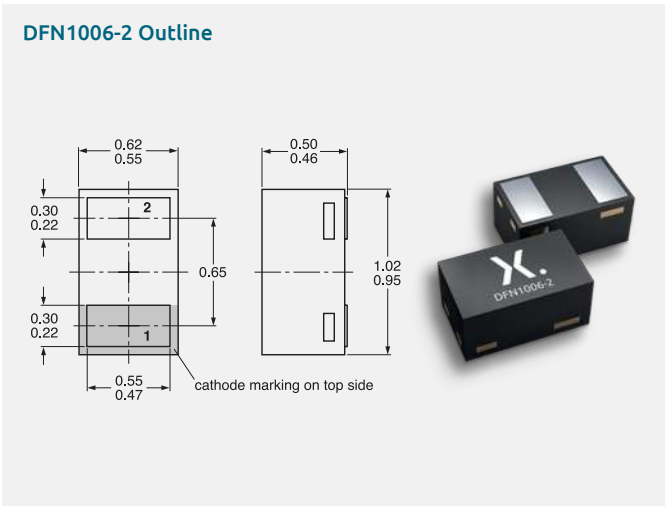
Circuit diagram



Diode capacitance versus bias voltage diagram

DFN1006 and DSN0603 packages

These small packages are ideally suited for use in slim, compact mobile devices.



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