

NXP ultra small multi-line ESD protection solutions

Big protection in the smallest leadless package

Factors such as miniaturisation put today's integrated circuits increasingly at risk to damage by electrostatic discharge (ESD) and other voltage induced transients. That's why NXP offers a series of ESD protection diodes that are perfect for safeguarding your systems. Ultra small, yet offering very low line capacity and excellent ESD protection – they are your flexible solution to protect today's electronics.

Key features

- ▶ Ultra small 6 pin leadless package
- ▶ Very low diode capacitance: $C_d = 12 \text{ pF}$
- ▶ Ultra low leakage current: $I_{RM} = 5 \text{ nA}$
- ▶ ESD protection up to 5 lines
- ▶ ESD protection up to 30 kV
- ▶ IEC 61000-4-2; level 4 (ESD)
- ▶ High peak power dissipation up to 200 W

Key benefits

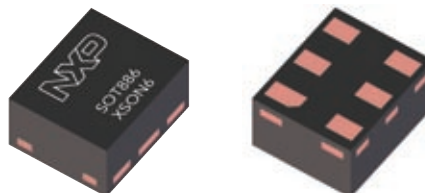
- ▶ Minimal PCB area
- ▶ ESD protection for high speed applications
- ▶ Maximum PCB design flexibility
- ▶ Lower clamping voltages and higher reliability compared to varistors

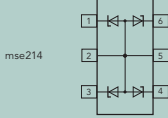
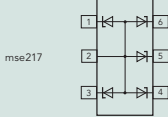
Key applications

- ▶ Portable electronics
- ▶ Cellular handsets and accessories
- ▶ MP3 and PDA
- ▶ MPA (Mobile Personal Assistant)
- ▶ Audio and video equipment
- ▶ Notebooks, desktops and servers

Several factors are responsible for the increased sensitivity to ESD in ICs – portable electronic applications are getting smaller and smaller; data interfaces have greater signal rates; reduced ship size and maximized density.

You can now safeguard your systems with our very low capacitance ESD protection diode arrays in the ultra-small SOT886 leadless package. Delivering excellent protection for your system, these latest ESD protection solutions also minimize board space and increase design freedom.

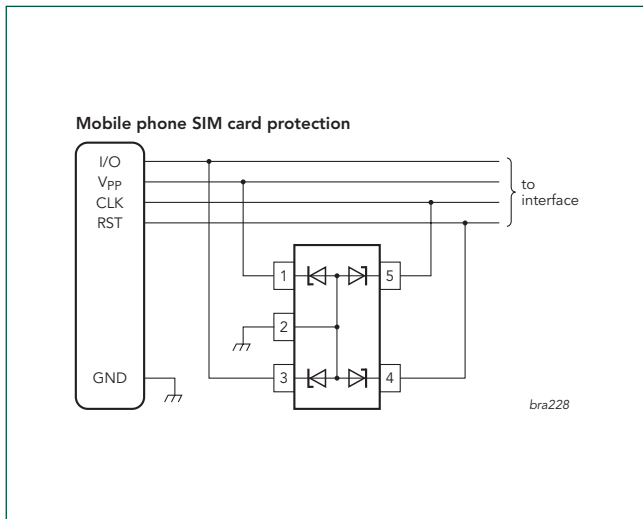


Number of protected lines		I_{RM} @ V_{RWM}		C_{line}	P_{PP} ¹⁾	ESD rating ²⁾	Configuration	Type
uni-directional	bi-directional	max (μA)	(V)	typ (pF)	max (W)	max (kV)		
4	3	0.3	3.3	22	30	20		PESD3V3L4UF
		0.025	5	16	30	20		PESD5V0L4UF
		0.3	3.3	15	16	10		PESD3V3V4UF
		0.025	5	12	16	10		PESD5V0V4UF
		0.3	3.3	215	200	30		PESD3V3S4UF
		0.025	5	165	200	30		PESD5V0S4UF
5	4	0.3	3.3	22	25	20		PESD3V3L5UF
		0.025	5	16	25	20		PESD5V0L5UF

1) 8/20 μs surge pulse acc. to IEC 61000-4-5

2) acc. to IEC 61000-4-2 (contact discharge)

Application diagrams



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PESD3V3L4UF

3.3 V, 22 pF, SOT886

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PESD5V0L4UF

5 V, 16 pF, SOT886

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PESD3V3V4UF

3.3 V, 15 pF, SOT886

NXP

PESD5V0V4UF

5 V, 12 pF, SOT886

NXP

PESD3V3L5UF

3.3 V, 22 pF, SOT886

NXP

PESD5V0L5UF

5 V, 16 pF, SOT886

NXP

PESD3V3S4UF

3.3 V, 215 pF, SOT886

NXP

PESD5V0S4UF

5 V, 165 pF, SOT886

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