



NXP multi-channel ESD protection and EMI filter IP425xCZ8-4/CZ12-6/CZ16-8 IP4256CZ3-M/CZ5-W/CZ6-F

30 dB EMI filter with up to 30 kV IEC contact ESD protection in leadless packages

These highly integrated, space-saving devices, housed in NXP's Ultra Thin Leadless Plastic (ULTP) package, combine high-level ESD protection with EMI filtering of all relevant 2G and 3G mobilephone, WLAN and Bluetooth frequencies. The ESD protection exceeds the requirements of the IEC 61000-4-2 level 4 standard. NXP has 1.000 shot-proven ESD solutions that protect all kinds of portable applications over their full lifetimes, and provides a complete in-house production flow for added supply reliability.

Key features of new family

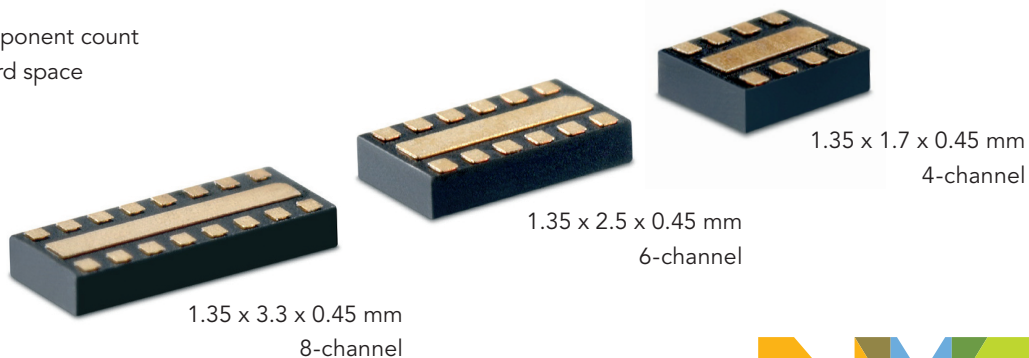
- ▶ Up to 30 dB insertion loss at mobile-phone frequencies (800 MHz to 3 GHz)
- ▶ High ESD protection exceeding IEC 61000-4-2 level 4
- ▶ Available as 1-, 2-, 4-, 6- or 8-channel filter
- ▶ Dark Green-compliant (RoHS-compliant and halogen-/antimony-free)
- ▶ Ultra-thin leadless package, less than 0.5 mm height
- ▶ Terminal pitch of 0.4 mm

Key benefits




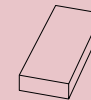

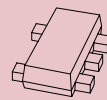

- ▶ Reduced component count
- ▶ Reduced board space
- ▶ Easy routing

Key applications

- EMI/RFI filtering and downstream ESD protection in mobile and portable applications
- ▶ Camera interface
 - ▶ Display and LCD interface
 - ▶ Memory card interface (SD, MMC, etc.)
 - ▶ Touch or keypad interface
 - ▶ Bottom connector

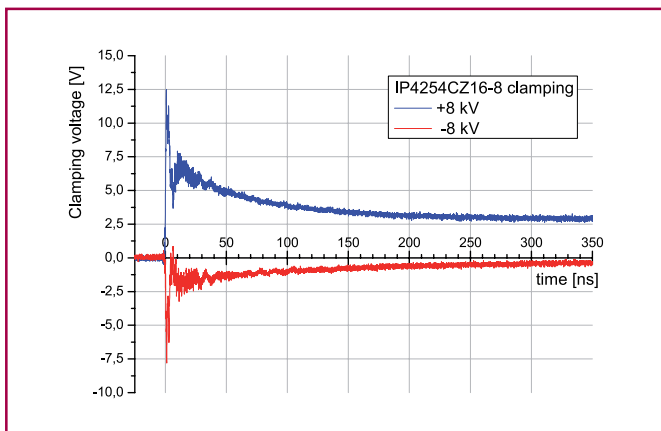


EMI filter family in plastic packages

	IP4251CZ16-8 /CZ12-6/CZ8-4	IP4252CZ16-8 /CZ12-6/CZ8-4	IP4253CZ16-8 /CZ12-6/CZ8-4	IP4254CZ16-8 /CZ12-6/CZ8-4	IP4256CZ3-M	IP4256CZ5-W	IP4256CZ6-F
							
Package	UTLP SOT983/984/985	UTLP SOT983/984/985	UTLP SOT983/984/985	UTLP SOT983/984/985	SOT883	SOT665	SOT886
No. of channels	4, 6, 8	4, 6, 8	4, 6, 8	4, 6, 8	1	2	2
Width (mm)	1.35	1.35	1.35	1.35	0.6	1.2	1
Length (mm)	1.7, 2.5, 3.3	1.7, 2.5, 3.3	1.7, 2.5, 3.3	1.7, 2.5, 3.3	1	1.6	1.45
Max. height (mm)	0.5	0.5	0.5	0.5	0.5	0.6	0.5
Channel resistance (Ω, typ.)	100	40	200	100	100	100	100
Line capacitance (pF @ 0.0 V, typ.)	15	18	45	45	30	30	30
Line capacitance (pF @ 2.5 V, typ.)	10	12	30	30	19	19	19
ESD IEC61000-4-2 (kV contact, typ.)	15	15	30	30	25	25	25
Robustness at ESD level 4 (1000 shots, IEC61000-4-2)	yes	yes	yes	yes	yes	yes	yes

Clamping voltage of IP4254CZ16-8 at ±8 kV IEC 61000-4-2, level 4 pulse

- ▶ Integrated π -filter (C-R-C) structure assures excellent ESD pulse transient response

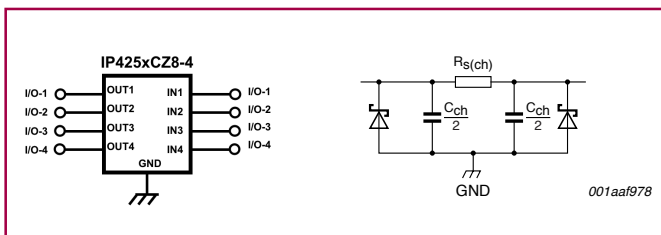


Why integrated silicon solutions?

- ▶ No degradation – full ESD protection even after 1000 IEC level strikes
- ▶ Predictable, reliable suppression of relevant 2G and 3G mobile-phone frequencies while minimizing signal loss
- ▶ Very low clamping voltage due to optimized π -filter structures (C-R-C structure)
 - Prevent damage of ESD-sensitive circuits during an ESD event (IEC testing only ensures the device will survive)
 - Protect against soft errors caused by non-destructive transients
 - Protect sensitive system chips

Application example

4-channel integrated EMI filter with ESD protection



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