

High Power Zener Diodes

Keep your application safe at high power

All electronic components have internal resistors that produce heat and can cause problems if the temperature exceeds the tolerance level known as Power Dissipation (P_{tot}). This excessive heat can lead to reduced performance, potential damage to the components, and ultimately, failure of the entire electronic system. Choose Nexperia High Power Zener Diodes to manage and regulate this power dissipation.

Portfolio

- › Zener voltage range 3.0 V to 75 V
- › Voltage tolerance of about $\pm 5\%$
- › Total power dissipation
 - 4.1 W standard type
 - 5.5 W automotive type
- › Automotive and standard versions available

Benefits

- › ESD maximum rating of 30 kV
- › IEC 61000-4-2 (contact discharge) qualified
- › Junction temperature
 - 150 °C standard type
 - 175 °C automotive type

Key applications

- › Low-cost supply voltage stabilization with a higher P_{tot} requirement
- › Switch protection to turn off inductive loads e.g. high-power relay
- › Wireless charger, clamping of incoming voltage at the reception coil

Package Landscape

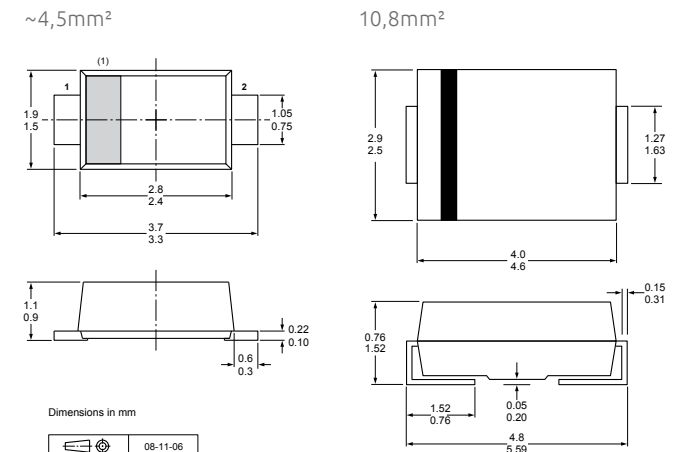
- › **CFP3 (SOD123W)**
Clip-bonded FlatPower package
2.6 x 1.7 x 1.0 mm



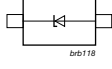
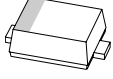
Why CFP?

- › HPZR Series offers the highest P_{tot} on the market compared to competitors in CFP3 & SMA
- › Next to the high P_{tot} , CFP can save up to 60 % of PCB space compared to SMA package

CFP3 vs. SMA



High power voltage regulator Zener Diodes (high P_{tot})

I_F max (mA)	P_{ZSM} (W)	V_Z nom (V)	V_Z tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	P_{tot} (mW)
400	800	3.0"75	C	Europe	Single		HPZR-Q series	 CFP3 (SOD123W)	Yes	2.6 x 1.7 x 1.0	5500
		3.0"75	C	Europe	Single		HPZR series		No		4100

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