



NXP low V_F (MEGA) Schottky diodes



High forward current at low forward voltage in SMD packages

Low V_F maximum efficiency general application (MEGA) Schottky diodes are specially designed to combine high forward current capability with low forward voltage. These high performance diodes are available in various SMD packages.

Main features

- ▶ Very low forward voltage drop, V_F
- ▶ High continuous current capability, I_F
- ▶ High peak current capability, I_{FSM}
- ▶ Packages and designs with high power capabilities
- ▶ Low reverse current
- ▶ High-speed switching
- ▶ AEC-Q101 qualified

Applications

- ▶ Low- and medium-power rectification
- ▶ Switching in low-voltage applications
- ▶ Power management circuits, especially DC-to-DC conversion
- ▶ Reverse polarity protection
- ▶ Inductive load in freewheeling applications

Criteria for decision	Competitive advantage	Customers benefit from
High forward current at low forward voltage	Combination of high forward current and low forward voltage. Devices offer high current in small packages (500 mA in leadless SOD882; up to 5 A in FlatPower SOD128)	<ul style="list-style-type: none">▶ less power dissipation▶ less heat generation▶ extended battery life▶ smaller designs
High peak current/surge capability	Products withstand high surge pulse of 10 A for wire-bonded technology and more than 50 A for solid-clip contact bonding	<ul style="list-style-type: none">▶ robust designs and long product lifetime
High-speed switching	Highest switching speed (only a few ns) for medium-current pulse cycles	<ul style="list-style-type: none">▶ reduced self-heating effect in DC-to-DC conversion
AEC-Q101 qualified	More than 50 years experience developing and producing diodes, and all low V_F Schottky diodes are qualified for automotive use according to the AEC-Q101	<ul style="list-style-type: none">▶ reliable products

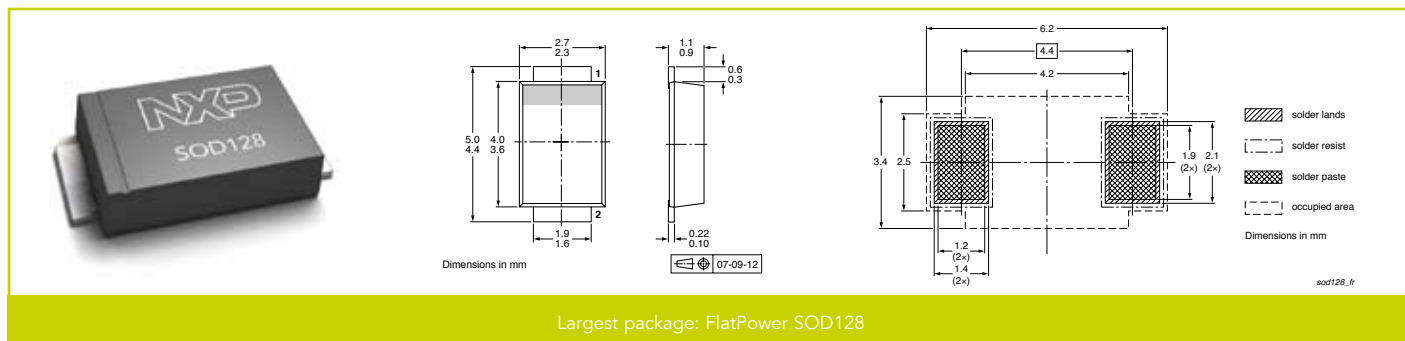
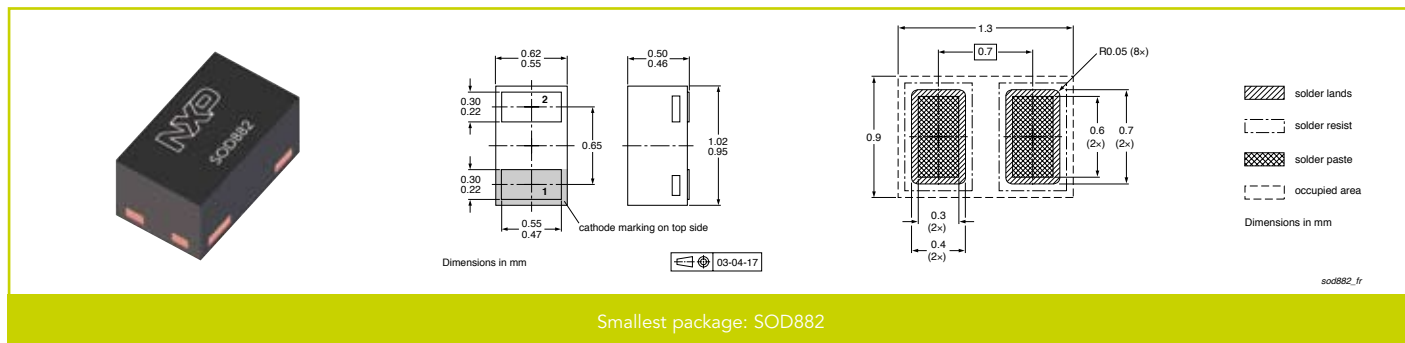
Product highlights

The following products are just a sample of NXP's wide variety of electrical parameters

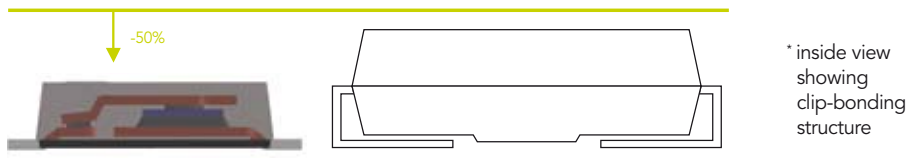
PMEG3005EL	0.5 A, 30 V	in SOD882
PMEG3010EB	1 A, 30 V	in SOD523
PMEG4010ET	1 A, 40 V	in SOT23
PMEG4010BEA	1 A, 40 V	in SOD323
PMEG6010CEJ	1 A, 60 V	in SOD323F
PMEG4030ER	3 A, 40 V	in FlatPower SOD123W
PMEG4050EP	5 A, 40 V	in FlatPower SOD128

Have a look at NXP's complete low V_F (MEGA) Schottky portfolio and get details at:
www.nxp.com → products → diodes → Schottky diodes (> 200 mA)

Package information



FlatPower SOD128* compared with standard SMA package



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