

1200V Silicon Carbide diodes

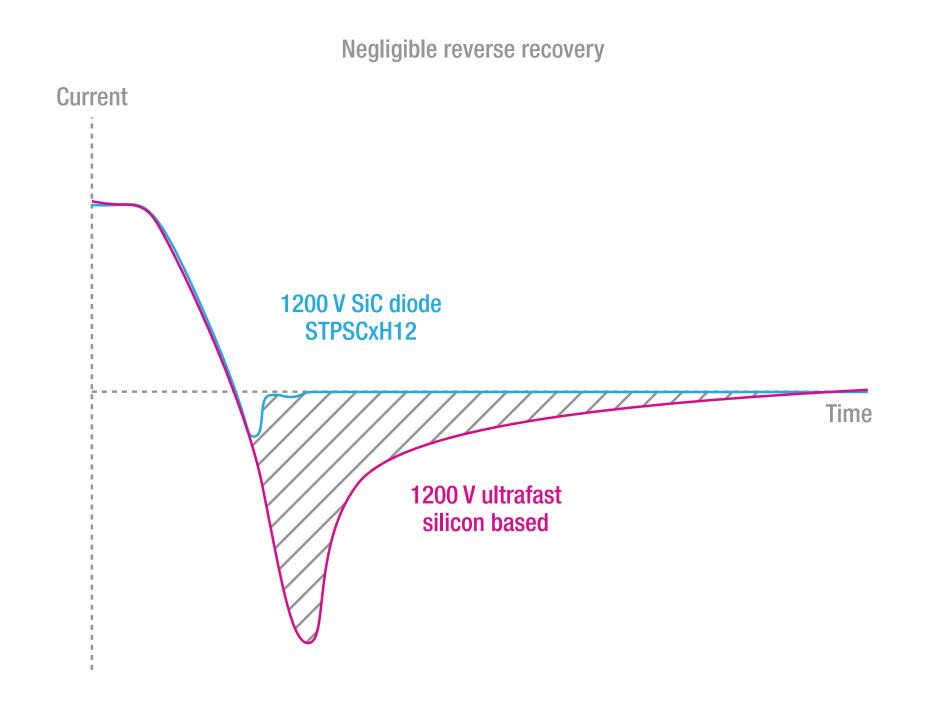
From 2A to 40A, in through hole and surface mount packages

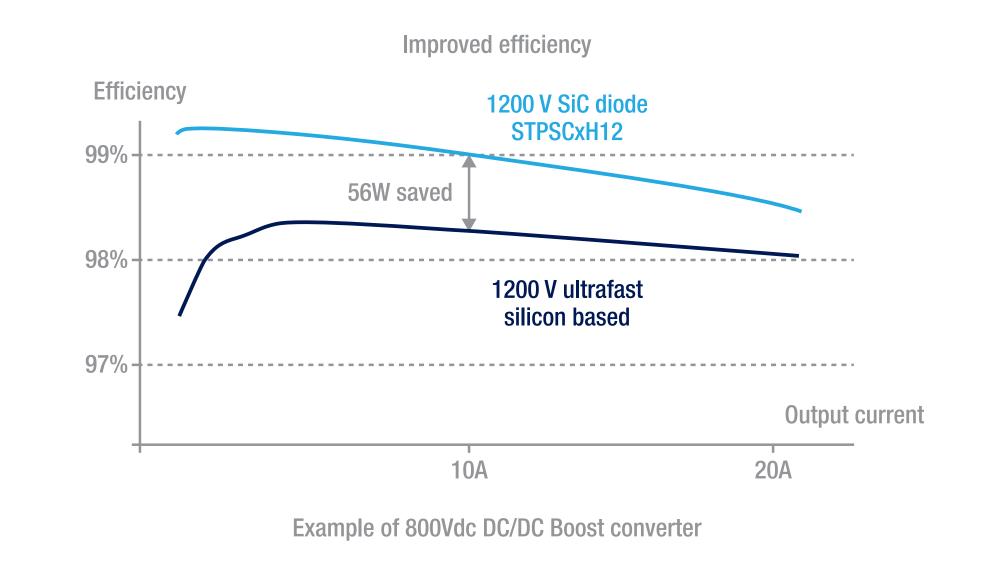
ABSTRACT

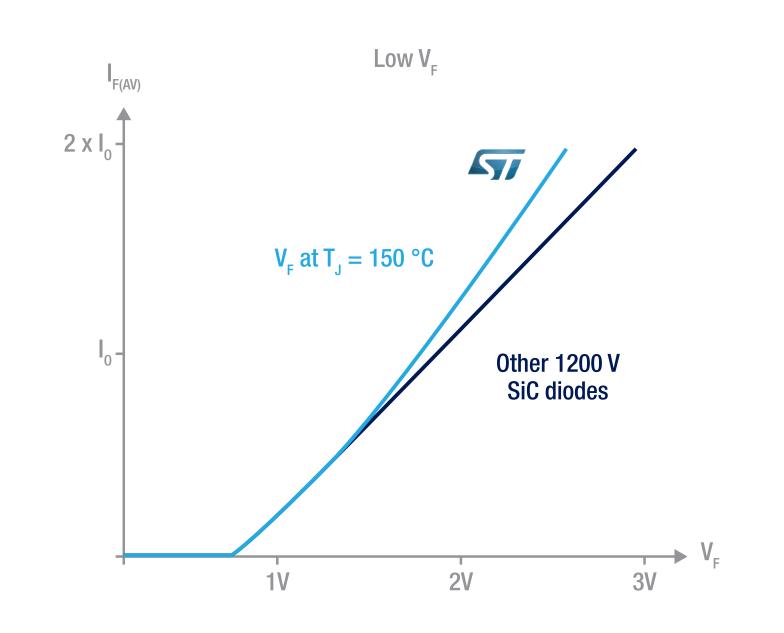
ST is introducing new 1200V SiC diodes, in 4 different packages options (DPAK HV, D2PAK, TO-220AC, and TO-247LL):

- Ideal for use in high-power applications such as solar converters and renewable energies, charging stations, on-board battery chargers (OBCs), telecom power, servers, motor drives, and switched mode power supply (SMPS) solutions
- Negligible switching losses to increase efficiency
- Best forward voltage (V_F) to achieve unbeatable efficiency levels, associated with a high forward surge capability (I_{ESM}) to ensure state-of-the-art robustness









FEATURES AND BENEFITS

Features:

TO-220AC

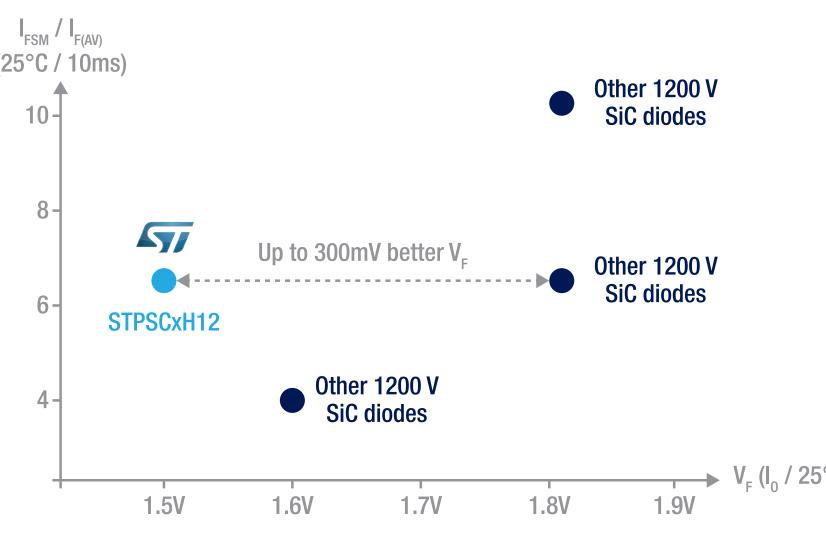
- Best forward voltage (V_F)
- High forward surge capability (I_{FSM})
- Wide range of devices
- All parameters guaranteed from -40°C to 175°C
- Unique DPAK HV version on top of D2PAK, TO-220AC and TO-247LL (long leads)
- Automotive grade versions AEC-Q101 qualified

DPAK HV

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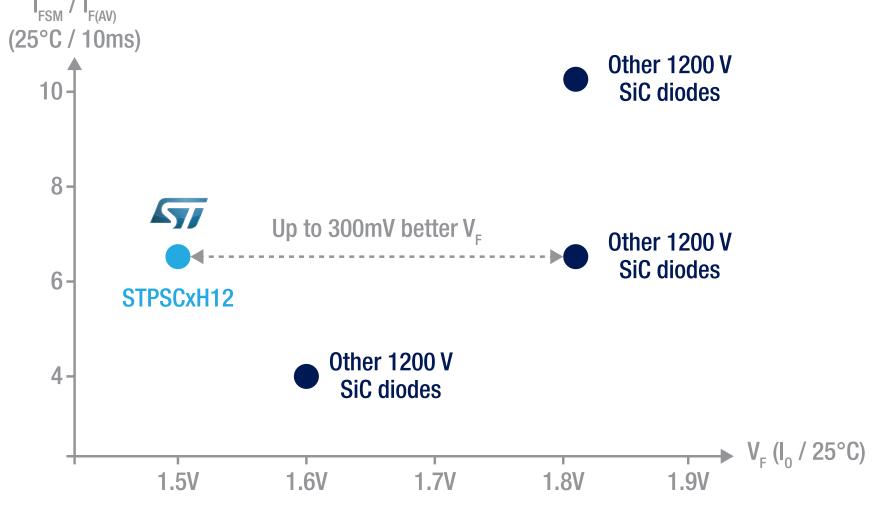
Benefits

- Reduced conduction losses to achieve enhanced efficiency levels
- State of the art robustness for easier design
- Low temperature dependency of V_E

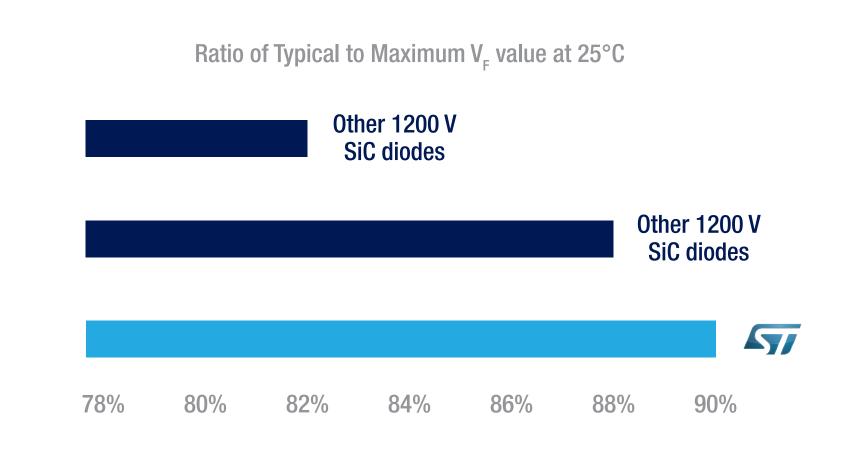


Affordability of high performing systems:

- Easy reproducible high efficiency levels in application, to improve manufacturing yields
- Possibility to select lower current ratings when solution cost matters



V_E at I_E & 25°C typ / max

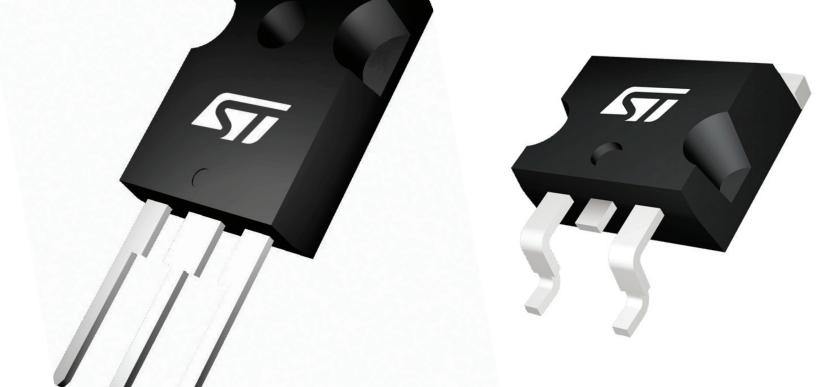


Packages

			F(AV)		FSM GT TO THE	
		STPSC2H12	2A	1.35V / 1.50V	15A	TO-220AC, DPAK HV
0-247	D ² PAK	STPSC5H12	5A	1.35V / 1.50V	35A	TO-220AC, DPAK HV
		STPSC6H12	6A	1.55V / 1.90V	36A	DPAK HV
		STPSC10H12 ^(*)	10A	1.35V / 1.50V	71A	TO-220AC, DPAK HV, D ² PAK
		STPSC15H12 ^(*)	15A	1.35V / 1.50V	105A	T0-220AC
		STPSC20H12 ^(*)	20A	1.35V / 1.50V	140A	TO-220AC, D ² PAK
		STPSC10H12C	2 x 5A	1.35V / 1.50V	35A	TO-247LL
		STPSC20H12C	2 x 10A	1.35V / 1.50V	71A	TO-247LL
		STPSC30H12C	2 x 15A	1.35V / 1.50V	105A	T0-247LL
		STPSC40H12C	2 x 20A	1.35V / 1.50V	140A	T0-247LL

^{(*):} Automotive Grade versions also qualified

Part Number



Surge capability I_{ESM} at 10ms