

200 V, 400 V, and 600 V Standard Rectifiers Are Industry's First in Power DFN Series DFN6546A Package With Low 0.88 mm Profile and Wettable Flanks, Deliver High Current Ratings to 12 A, Improved Thermal Performance, and Forward Surge Capability to 320 A

Product Benefits:

- Compact DFN6546A package with wettable flanks
 - 6.5 mm by 4.6 mm footprint
 - Extremely low typical height of 0.88 mm
- High current ratings from 5 A to 12 A
- High forward surge current capability to 320 A
- Reverse voltages of 200 V, 400 V, and 600 V
- Oxide planar chip junction design
- Ideal for automated placement
- Typical reverse leakage current less than 0.1 μ A
- Low forward voltage drop down to 0.77 V
- Wide temperature range from -55 °C to +175 °C
- ESD capability in compliance with IEC 61000-4-2, air discharge mode
- AEC-Q101 qualified versions available
- MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of 260 °C
- RoHS-compliant and halogen-free



Market Applications:

- Power line polarity protection and rail to rail protection in commercial, industrial, and automotive applications

The News:

Vishay Intertechnology introduces four new series of surface-mount standard rectifiers that are the industry's first such devices in the low profile DFN6546A package with wettable flanks.

- The latest package in Vishay's new Power DFN family, the DFN6546A's compact footprint and low typical height allow the rectifiers to make more efficient use of PCB space
- The devices' advanced construction and die placement technology allow for a higher copper content and larger chip sizes, resulting in improved thermal performance, higher current ratings, and high forward surge current capability
- Compared to solutions in the SMPC (TO-277A) package with the same footprint, the SE50N6x, SE80N6x, SE100N6x, and SE120N6x deliver a 10 % lower profile and 20 % higher current ratings
- The devices' low forward voltage drop reduces power losses to improve efficiency
- The wettable flanks of the rectifiers' DFN6546A package allow for automatic optical inspection (AOI), eliminating the need for an X-ray inspection



The Key Specifications:

Part #	I _{F(AV)} (A)	V _{RRM} (V)	I _{FSM} (A)	V _F at I _F and T _J			T _J max. (°C)	Package
				V _F (V)	I _F (A)	T _A (°C)		
SE50N6D	5	200	240	0.77	5	125	175	DFN6546A
SE50N6G	5	400	240	0.77	5	125	175	DFN6546A
SE50N6J	5	600	240	0.77	5	125	175	DFN6546A
SE80N6D	8	200	240	0.82	8	125	175	DFN6546A
SE80N6G	8	400	240	0.82	8	125	175	DFN6546A
SE80N6J	8	600	240	0.82	8	125	175	DFN6546A
SE100N6D	10	200	300	0.83	10	125	175	DFN6546A
SE100N6G	10	400	300	0.83	10	125	175	DFN6546A
SE100N6J	10	600	300	0.83	10	125	175	DFN6546A
SE120N6D	12	200	320	0.84	12	125	175	DFN6546A
SE120N6G	12	400	320	0.84	12	125	175	DFN6546A
SE120N6J	12	600	320	0.84	12	125	175	DFN6546A

Availability:

Samples and production quantities of the new surface-mount standard rectifiers in the DFN6546A package are available now, with lead times of eight weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?98743> (SE50N6D, SE50N6G, SE50N6J)

<http://www.vishay.com/ppg?98744> (SE80N6D, SE80N6G, SE80N6J)

<http://www.vishay.com/ppg?98727> (SE100N6D, SE100N6G, SE100N6J)

<http://www.vishay.com/ppg?98745> (SE120N6D, SE120N6G, SE120N6J)

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