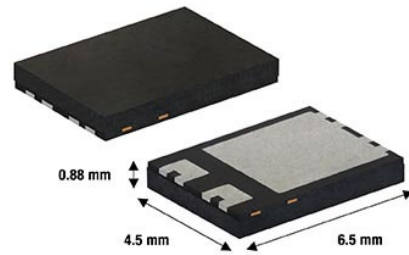


PAR[®] and TRANSZORB[®] TVS Deliver Power Dissipation of 3000 W in New DFN6546A Package With Low 0.88 mm Profile and Wettable Flanks; Unidirectional and Bidirectional Devices Save Space and Provide Excellent Clamping Capability Up to 137 V

Product Benefits:

- Unidirectional and bidirectional devices available
- DFN6546A package with wettable flanks
- Compact 6.5 mm x 4.6 mm footprint with an extremely low typical height of 0.88 mm
- Peak pulse power of 3000 W (10/1000 μ s)
- AEC-Q101 qualification (T3KNxxA and T3KNxxCA)
- LL15i Industrial Reliability Qualification (3KDFNxxA and 3KDFNxxCA)
- High temperature operation up to +185 °C
- Excellent clamping capability up to 137 V
- Ideal for automated placement
- MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of 260 °C
- RoHS-compliant and halogen-free
- Matte tin-plated leads meet the JEDEC 201 Class 2 whisker test



Market Applications:

- Sensitive electronics protection against voltage transients induced by inductive load switching and lightning
- Advanced driver assistance (ADAS), lidar, camera, infotainment, and sensor systems; DC/DC converters; battery management systems (BMS) and onboard chargers; electric power steering (EPS); traction inverters; central control units; and electrical motor drives
- Robot control boards, process / flow control instrumentation, automation systems, and generator start controllers; 60 kW energy storage systems; server power modules; consumer entertainment devices; and telecom and medical equipment

The News:

Vishay Intertechnology introduces four series of unidirectional and bidirectional 3000 W PAR[®] and TRANSZORB[®] surface-mount transient voltage suppressors (TVS) in the new DFN6546A package with wettable flanks. Providing space-saving solutions for industrial and automotive applications, the Automotive Grade T3KNxxA and T3KNxxCA series devices are AEC-Q101 qualified and offer high temperature operation to +185 °C, while the 3KDFNxxA and 3KDFNxxCA series meet the LL15i Industrial Reliability Qualification.

- With their compact footprint and low profile, the diodes 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 significant performance increases
- Footprint-compatible with the SMPC (TO-277A) package, the T3KNxxA, T3KNxxCA, 3KDFNxxA, and 3KDFNxxCA series offer twice the power dissipation with a 20 % lower profile. Compared to devices in the SMC (DO-214AB), they offer the same power dissipation while reducing volume by 76 %
- The wettable flanks of the DFN6546A package allow for automatic optical inspection (AOI), eliminating the need for an X-ray inspection

The Key Specifications:

Series	T3KNxxA	3KDFNxxA	T3KNxxCA	3KDFNxxCA
Power dissipation (W)	3000			
Breakdown voltage (V)	12 to 24		12 to 100	
Stand-off voltage (V)	10.2 to 20.5		10.2 to 85.5	
Max. clamping voltage (V)	16.7 to 33.2		16.7 to 137	
T _J max. (°C)	185	175	185	175
Polarity	Unidirectional		Bidirectional	
Circuit Configuration	Single			
AEC-Q101	Yes	No	Yes	No

Availability:

Samples and production quantities of the new 3000 W TVS in the DFN6546A package are available now, with lead times of 12 weeks.

To access the product datasheets on the Vishay Website, go to
<http://www.vishay.com/ppg?98814> (3KDFN12A thru 3KDFN24A)
<http://www.vishay.com/ppg?98818> (3KDFN12CA thru 3KDFN100CA)
<http://www.vishay.com/ppg?98808> (T3KN12A thru T3KN24A)
<http://www.vishay.com/ppg?98817> (T3KN12CA thru T3KN100CA)

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