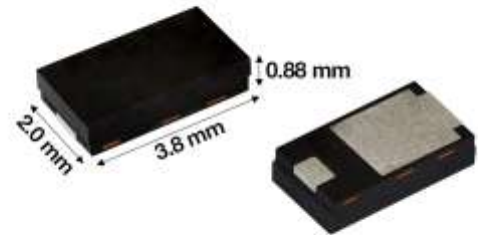




New Industrial-Grade TRANSZORB[®] and Automotive Grade PAR[®] TVS Deliver Peak Pulse Power of 600 W and Operating Temperatures to +185 °C in Compact 3.8 mm by 2.0 mm by 0.88 mm DFN3820A Package With Wettable Flanks

Product Benefits:

- Offered in the DFN3820A package with wettable flanks
 - Compact 3.8 mm by 2.0 mm footprint and an extremely low typical height of 0.88 mm
 - Wettable flanks allow for automatic optical inspection (AOI), eliminating the need for an X-ray inspection
- Industrial-grade TRANSZORB[®] and Automotive Grade PAR[®] TVS available
 - PAR devices are AEC-Q101 qualified and offer high temperature operation to +185 °C
- Peak pulse power of 600 W at 10/1000 μs
- Low leakage current down to 1 μA
- Excellent clamping capability
- 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 JESD 201 class 2 whisker test



Market Applications:

- Signal line protection
 - Server power modules, digital media controllers, and AV signal extenders for computer and consumer applications
 - Industrial robot control boards, process / flow control instruments, and automation systems
- Automotive load dump protection
 - Advanced driver assistance (ADAS), battery management (BMS), electric power steering (EPS), and infotainment systems; central control units; on-board chargers (OBC); DC/DC converters and traction inverters; and electrical motor drives

The News:

Vishay Intertechnology introduces four new series of surface-mount industrial-grade TRANSZORB and Automotive Grade PAR transient voltage suppressors (TVS) in the low profile DFN3820A package with wettable flanks. Providing space-saving solutions for automotive, computer, consumer, and industrial applications, the 6DFNxxA, 6DFNxxxCA, T6NxxA, and T6NxxxCA offer peak pulse power of 600 W at 10/1000 μs and low leakage current down to 1 μA.

- The first package in Vishay's new Power DFN family, the DFN3820A's compact footprint and low profile allow the 6DFNxxA, 6DFNxxxCA, T6NxxA, and T6NxxxCA to make more efficient use of PCB space



- Footprint-compatible with the SMP (DO-220AA) package, the DFN3820A is 85 % smaller than the SMB (DO-214AA) and 42 % smaller than the SlimSMAW (DO-221AD), but keeps peak pulse power dissipation with a 10/1000 μ s waveform at 600 W
- The devices are designed to protect sensitive electronic equipment against voltage transients induced by inductive load switching and lightning

The Key Specifications:

Series	6DFNxxA	6DFNxxxCA	T6NxxA	T6NxxxCA
Automotive Grade	No	No	Yes	Yes
V _{BR} (V)	12 to 51	12 to 100	12 to 51	12 to 100
V _{WM} (V)	10.2 to 43.6	10.2 to 85.5	10.2 to 43.6	10.2 to 85.5
Max. reverse leakage at V _{WM} (μ A)	1.0 to 2.0			
P _{PPM} (10/1000 μ s) (W)	600			
Max. clamping voltage (V)	16.7 to 70.1	16.7 to 137	16.7 to 70.1	16.7 to 137
T _J max. ($^{\circ}$ C)	175	175	185	185
Polarity	Unidirectional	Bidirectional	Unidirectional	Bidirectional
Package	DFN3820A			
Circuit configuration	Single			

Availability:

Samples and production quantities of the new TVS in the DFN3820A 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?98464> (6DFN12A through 6DFN51A)
<http://www.vishay.com/ppg?98490> (6DFN12CA through 6DFN100CA)
<http://www.vishay.com/ppg?98432> (T6N12A through T6N51A)
<http://www.vishay.com/ppg?98489> (T6N12CA through T6N100CA)

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