

# VS-VSUD505CW60 and VS-VSUD510CW60 FRED Pt<sup>®</sup> 500 A Ultrafast Soft Recovery Diode Modules in the New TO-244 Gen III Package Can Withstand IOL Cycles Up to 5x That of the Previous TO-244 Generation for Improved Life Expectancy, While Reducing Losses

## Product Benefits:

- Rugged TO-244 Gen III package
  - Withstands 46 000 IOL cycles at given conditions, offering an improved life expectancy over previous-generation devices
  - Industry-standard package is footprint-compatible with competing solutions in the TO-244 to provide a drop-in replacement for existing designs
- Offered in a common cathode configuration
- Low forward voltage drop down to 0.82 V
- Thermal resistance — junction to case — of 0.16 °C/W
- High operating temperature range up to +175 °C



## Market Applications:

- High frequency welding; high current converters and ballast water management systems (BWMS) in railway equipment, cranes, and ships; and UPS

## The News:

Vishay Intertechnology introduces two new FRED Pt<sup>®</sup> 500 A Ultrafast soft recovery diode modules in the new TO-244 Gen III package. Offering higher reliability than previous-generation solutions, the Vishay Semiconductors VS-VSUD505CW60 and VS-VSUD510CW60 are designed to reduce losses and EMI / RFI in high frequency power conditioning systems.

- Ideal for applications where switching losses comprise a significant portion of the total losses
- The softness of the diode modules' recovery eliminates the need for a snubber, reducing component counts and lowering costs

## The Key Specifications:

Part number	VS-VSUD505CW60	VS-VSUD510CW60
$V_R$ (V)	600	
$I_{F(AV)}$ (A)	500	
$Q_{rr}$ typical (nC)	460	1770
$t_{rr}$ (ns)	178	270
$V_{FM}$ @ 250 A, +175 °C (V)	0.95	0.82
$R_{thJC}$ per diode (°C/W)	0.160	
Package	TO-244	



## NEW PRODUCT INFORMATION



Product Group: Vishay Semiconductors, Diodes / April 2024

### Availability:

Samples and production quantities of the new FRED Pt soft recovery diode modules are available now, with lead times of 26 weeks.

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

<http://www.vishay.com/ppg?97092> (VS-VSUD505CW60)

<http://www.vishay.com/ppg?97093> (VS-VSUD510CW60)

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