

## Product Overview

### NVHL025N65S3: Single N-Channel Power MOSFET SUPERFET® III, Easy Drive, 650 V, 75 A, 25 mΩ, TO-247

For complete documentation, see the data sheet.

SUPERFET III MOSFET is ON Semiconductor's brand-new high voltage super-junction (SJ) MOSFET family that is utilizing charge balance technology for outstanding low on-resistance and lower gate charge performance. This advanced technology is tailored to minimize conduction loss, provide superior switching performance, and withstand extreme dv/dt rate. Consequently, SUPERFET III MOSFET Easy drive series helps manage EMI issues and allows for easier design implementation.

#### Features

- 700 V @  $T_J = 150^\circ\text{C}$
- Ultra Low Gate Charge (Typ.  $Q_g = 222 \text{ nC}$ )
- Low Effective Output Capacitance (Typ.  $C_{oss(\text{eff.})} = 1980 \text{ pF}$ )
- AEC-Q101 Qualified and PPAP Capable
- Typ.  $R_{DS(\text{on})} = 19.5 \text{ m}\Omega$
- 100% Avalanche Tested
- RoHS Compliant

#### Applications

- HV DC/DC converter

#### Benefits

- Higher system reliability at low temperature operation
- Lower switching loss
- Lower switching loss
- AEC-Q101 Qualified and PPAP Capable

#### End Products

- On Board Charger
- DC/DC Converter

### Part Electrical Specifications

Product	Compliance	Status	Channel Polarity	Configuration	$V_{(BR)D}$ Min (V)	$V_{GS}$ Max (V)	$V_{GS(th)}$ Max (V)	$I_D$ Max (A)	$P_D$ Max (W)	$R_{DS(on)}$ Max @ $V_{GS} = 2.5 \text{ V}$ (mΩ)	$R_{DS(on)}$ Max @ $V_{GS} = 4.5 \text{ V}$ (mΩ)	$R_{DS(on)}$ Max @ $V_{GS} = 10 \text{ V}$ (mΩ)	$Q_g$ Typ @ $V_{GS} = 4.5 \text{ V}$ (nC)	$Q_g$ Typ @ $V_{GS} = 10 \text{ V}$ (nC)	$C_{iss}$ Typ (pF)	Package Type
NVHL025N65S3	AEC Qualified PPAP Capable Pb-free	Active	N-Channel	Single	650	30	4.5	75	595			25		236	7330	TO-247-3LD

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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