Product Overview

FCH040N65S3: N-Channel Power MOSFET, SUPERFET® III, Easy Drive, 650 V, 65 A, 40 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°C
- Ultra Low Gate Charge (Typ. Q_g = 136 nC)
- Low Effective Output Capacitance (Typ. $C_{oss(eff.)}$ = 1154 pF)
- Optimized Capacitance
- Typ. $R_{DS(on)}$ = 35.4 mΩ
- 100% Avalanche Tested
- RoHS Compliant

Benefits

- Higher system reliability at low temperature operation
- Lower switching loss
- Lower switching loss
- Lower peak Vds and lower Vgs oscillation

Applications

- Computing
- Telecomunication
- Industrial

End Products

- Server / Telecom
- Solar inverter / UPS
- EVC

Part Electrical Specifications

Product	Compliance	Status	Channel Polarity	Configuration	$V_{(BR)DSS}$ 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 V (mΩ)	$R_{DS(on)}$ Max @ V_{GS} = 4.5 V (mΩ)	$R_{DS(on)}$ Max @ V_{GS} = 10 V (mΩ)	Q_g Typ @ V_{GS} = 4.5 V (nC)	Q_g Typ @ V_{GS} = 10 V (nC)	C_{iss} Typ (pF)	Package Type
FCH040N65S3-F155	Pb-free	Active	N-Channel		650	±30	4.5	65	417	-	-	40	-	136	4740	TO-247-3

For more information please contact your local sales support at www.onsemi.com.

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