Product Overview

FCH023N65S3L4: Power MOSFET, N-Channel, SUPERFET® III, Easy Drive, 650 V, 75 A, 23 mΩ, TO-247 4lead

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 @ TJ = 150 oC
• Kelvin contact
• Ultra Low Gate Charge (Typ. Qg = 222 nC)
• Low Effective Output Capacitance (Typ. Coss(eff.) = 1980 pF)
• Optimized Capacitance
• Typ. RDS(on) = 19.5 mΩ
• 100% Avalanche Tested
• RoHS Compliant

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

Applications
• Telecommunication
• Cloud system
• Industrial

End Products
• Telecom power
• Server power
• EV charger
• Solar / UPS

Part Electrical Specifications

<table>
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<tr>
<th>Product</th>
<th>Compliance</th>
<th>Status</th>
<th>Channel Polarity</th>
<th>Configuration</th>
<th>V(BR)DSS Min (V)</th>
<th>V(DS) Max (V)</th>
<th>V(GS) Min (V)</th>
<th>I(D) Max (A)</th>
<th>P(D) Max (W)</th>
<th>R(DS(on)) Max @ VGS = 2.5 V (mΩ)</th>
<th>R(DS(on)) Max @ VGS = 4.5 V (mΩ)</th>
<th>Qg Typ @ VDS = 10 V (nC)</th>
<th>Qg Typ @ VDS = 10 V (nC)</th>
<th>Ciss Typ (pF)</th>
<th>Package Type</th>
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For more information please contact your local sales support at www.onsemi.com.
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