Product Overview

FCPF250N65S3L1: N-Channel SuperFET® III MOSFET 650 V, 12 A, 250 mΩ , TO-220F

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 is very suitable for various power system for miniaturization and higher efficiency.

Features

- 700 V @ TJ = 150 °C
- Ultra Low Gate Charge (Typ. Qg = 24 nC)
- Low Effective Output Capacitance (Typ. Coss(eff.) = 248 pF)
- Optimized Capacitance
- Typ. RDS(on) = 210 mΩ
- Internal Gate resistance: 8.7ohm

Benefits

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

Applications

- Computing
- Consumer
- Industrial

End Products

- Desk Top / Notebook / Game console
- Telecom / Server

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
FCPF250N65S3L1	Pb-free Halide free	Active	N-Channel	Single	650	30	4.5	12	31	-	-	250	-	24	1010	TO-220-3 FullPak

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

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