

NTHL041N60S5H

Power MOSFET, N-Channel, SUPERFET® V, FAST, 600 V, 57 A, 41 mΩ, TO-247

Product Overview

For complete documentation, see the data sheet.

The SUPERFET V MOSFET is the fifth generation high voltage superjunction (SJ) MOSFET family from ON Semiconductor. SUPERFET V delivers bestinclass FOMs (RDS(ON)·QG and RDS(ON)·EOSS) to improve not only heavy load but also light load efficiency. The 600 V SUPERET V series provides design benefits through reduced conduction and switching losses, while supporting extreme MOSFET dVDS/dt ratings at 120 V/ns. Consequently, the SUPERFET V MOSFET FAST series helps maximize system efficiency and power density.

Features

- Ultra Low Gate Charge (Typ. Qg = 108 nC)
- Low Effective Output Capacitance (Typ. Coss(eff.) = 643 pF)
- Fast switching performance with robust body diode
- 650 V @ TJ = 150°C
- Typ. RDS(on) = 32.8 m Ω
- 100% Avalanche Tested
- RoHS Compliant
- Internal Gate Resistance: 0.6 Ω

Benefits

- Low switching loss
- Low switching loss
- Low switching loss and higher system reliability

Applications

- Telecommunication
- Cloud system
- Industrial

End Products

- Telecom power
- Server power
- EV Charger
- Solar / UPS

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Channel Polarity	Configuration	V _{DSS(BR)} 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
NTHL041N60S5H	3.37		Active	N-Channel	Single	600	30	4.3	57	329			41		108	5840	TO-247-3LD