

NTHL022N120M3S

Silicon Carbide (SiC) MOSFET – EliteSiC, 22 mohm, 1200 V, M3S, TO-247-3L

Product Overview

For complete documentation, see the data sheet.

The new family of 1200V M3S planar SiC MOSFETs is optimized for fast switching applications. Planar technology works reliably with negative gate voltage drive and turn off spikes on the gate. This family has optimum performance when driven with 18V gate drive but also works well with 15V gate drive.

Features

- Excellent FOM [= $R_{dson} * E_{oss}$]
- Ultra Low Gate Charge ($Q_{G(tot)} = 139 \text{ nC}$)
- High Speed Switching with Low Capacitance ($C_{oss} = 141 \text{ pF}$)
- 15V to 18V Gate Drive
- New M3S technology: 22 mohm RDS(ON) with low Eon and Eoff losses
- 100% Avalanche Tested
- Halide Free and RoHS Compliant

Applications

- Industrial

End Products

- UPS / ESS
- Solar
- EV Charger

Part Electrical Specifications

Product	Status	Compliance	Family	Blocking Voltage BV_{DS} (V)	$I_{D(max)}$ (A)	$R_{DS(on)} \text{ Typ}$ @ 25°C (mΩ)	$Q_g \text{ Total}$ (nC)	Output Capacitance (pF)	$T_j \text{ Max}$ (°C)	Package Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
NTHL022N120M3S	Active		M3S	1200	88	22	139	141	175	TO-247-3LD	340 CX.P DF	NA	0	TUBE	450