[illegible] (SiC) MOSFET – Electric, 40 [illegible], 1200 V, M3 [illegible], TO-247-4L

NTH4L040N120M3

Features

- Typ. $R_{DS(on)}$ = 40 mΩ @ V_{GS} = 18 V
- Ultra Low Gate Charge ($Q_{G(tot)}$ = 75 nC)
- High Speed Switching with Low Capacitance (C_{oss} = 80 pF)
- 100% Avalanche Tested
- This Device is Halide Free and RoHS Compliant with exemption 7a, Pb−Free 2LI (on second level interconnection)

Typical Applications

- Solar Inverters

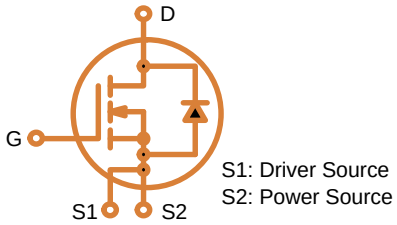


Table 3. ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise specified) (continued)

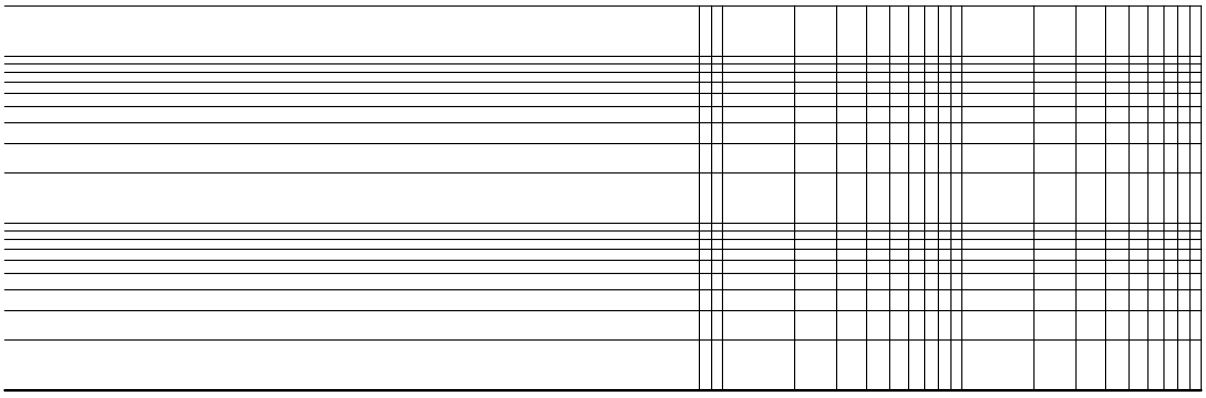
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
SOURCE−DRAIN DIODE CHARACTERISTICS						
Continuous Source−Drain Diode Forward Current	I_{SD}	V_{GS} = −3 V, T_C = 25°C (Note 6)	–	–	45	A
Pulsed Source−Drain Diode Forward Current (Note 2)	I_{SDM}		–	–	134	
Forward Diode Voltage	V_{SD}	V_{GS} = −3 V, I_{SD} = 20 A, T_J = 25°C	–	4.5	–	V
Reverse Recovery Time	t_{RR}	V_{GS} = −3/18 V, I_{SD} = 20 A, dI_S/dt = 1000 A/μs, V_{DS} = 800 V (Note 6)	–	16.8	–	ns
Reverse Recovery Charge	Q_{RR}		–	82	–	nC
Reverse Recovery Energy	E_{REC}		–	44	–	μJ
Peak Reverse Recovery Current	I_{RRM}		–	9.8	–	A
Charge Time	T_A		–	9.6	–	ns
Discharge Time	T_B		–	7.2	–	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

5. E_{ON}/E_{OFF} result is with body diode.
6. Defined by design, not subject to production test.

TYPICAL CHARACTERISTICS

TYPICAL CHARACTERISTICS



TO−247−4LD
CASE 340CJ
ISSUE A

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