# onsemi

# Silicon Carbide (SiC) MOSFET - EliteSiC, 960 mohm, 1700 V, M1, TO-247-3L

# NTHL1000N170M1

Features

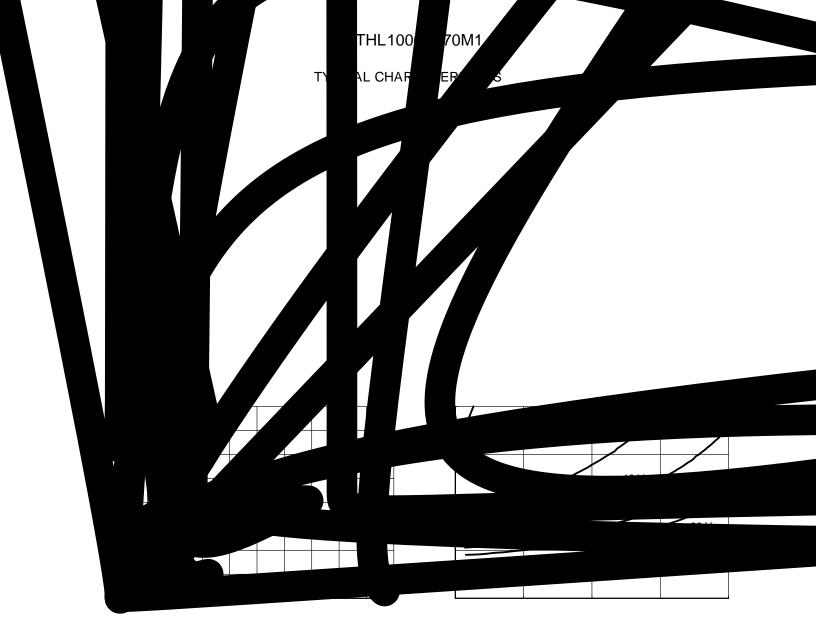
- Typ.  $R_{DS(on)} = 960 \text{ m}\Omega$
- Ultra Low Gate Charge (typ.  $Q_{G(tot)} = 14 \text{ nC}$ )
- Low Effective Output Capacitance (typ.  $C_{oss} = 11 \text{ pF}$ )
- •

#### THERMAL RESISTANCE MAXIMUM RATINGS

Parameter	Symbol	Max	Unit
Junction-to-Case - Steady State (Note 1)	$R_{ extsf{ heta}JC}$	3.1	°C/W

#### ELECTRICAL CHARACTERISTICS (T<sub>J</sub> = $25^{\circ}$ C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Тур	Max	Unit
OFF CHARACTERISTICS						
Drain-to-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	$V_{GS} = 0 V$ , $I_D = 1 mA$	1700			V
Drain-to-Source Breakdown Voltage Temperature Coefficient	V <sub>(BR)DSS</sub> /T <sub>J</sub>	$I_D = 1 \text{ mA}, \text{ referenced to } 25^{\circ}\text{C}$ 1700				



#### TYPICAL CHARACTERISTICS

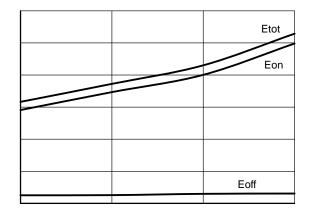
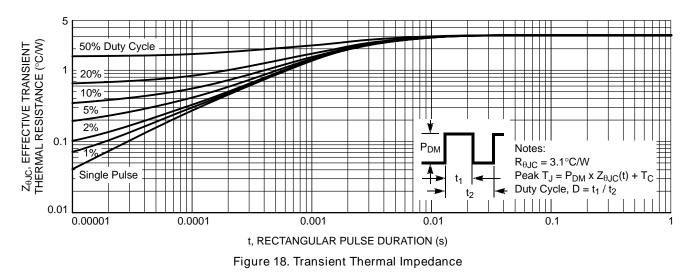


Figure 7. Transfer Characteristics

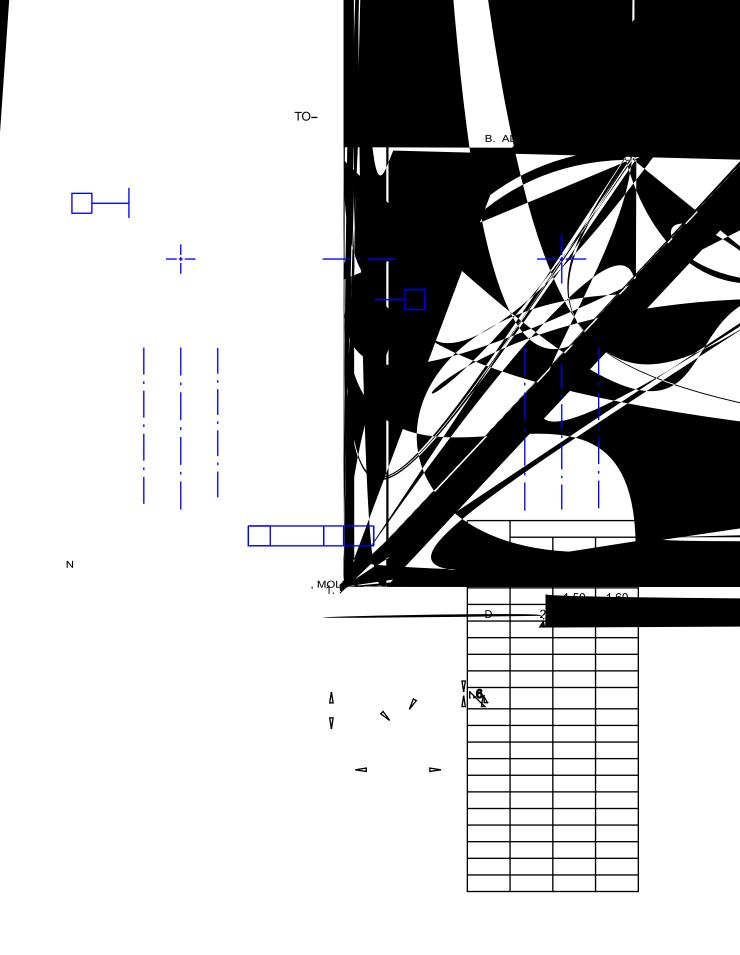
Figure 8. Switching Loss vs. Drain Current

Figure 9. Switching Loss vs. Drain Current



#### ESD RATINGS

ESD Test	Classification	Standard
ESD-HBM	0B (125 V to <250 V)	ANSI/ESDA/JEDEC JS-001
ESD-CDM	C3 (>1000 V)	ANSI/ESDA/JEDEC JS-002



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