

Silicon Carbide (SiC) MOSFET – EliteSiC, 160 mohm, 1200 V, M1, D2PAK-7L

NTBG160N120SC1

Features

- Typ. $R_{DS(on)} = 160 \text{ m}\Omega$
- Ultra Low Gate Charge (typ. $Q_{G(tot)} = 33.8 \text{ nC}$)
- Low Effective Output Capacitance (typ. $C_{oss} = 50.7 \text{ pF}$)
- 100% Avalanche Tested
- $T_j = 175^\circ\text{C}$
- This Device is Halide Free and RoHS Compliant with exemption 7a, Pb Free 2LI (on second level interconnection)

Typical Applications

- UPS
- DC-DC Converter
- Boost Inverter

MAXIMUM RATINGS (T_j)

NTBG160N120SC1

Table 1. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
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NTBG160N120SC1

Table 2. ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise stated) (continued)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
DRAIN-SOURCE DIODE CHARACTERISTICS						
Reverse Recovery Time	t_{RR}	$V_{GS} = -5/20\text{ V}$, $I_{SD} = 16\text{ A}$, $di_S/dt = 1000\text{ A}/\mu\text{s}$		15		ns
Reverse Recovery Charge	Q_{RR}			47		nC
Reverse Recovery Energy	E_{REC}			3.9		μJ
Peak Reverse Recovery Current	I_{RRM}			6.6		A
Charge Time	T_a			7.0		ns
Discharge Time	T_b			7.4		ns

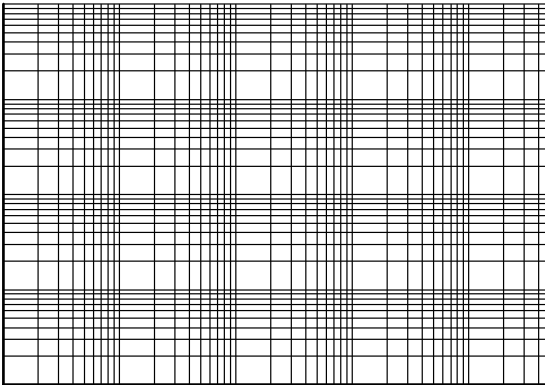
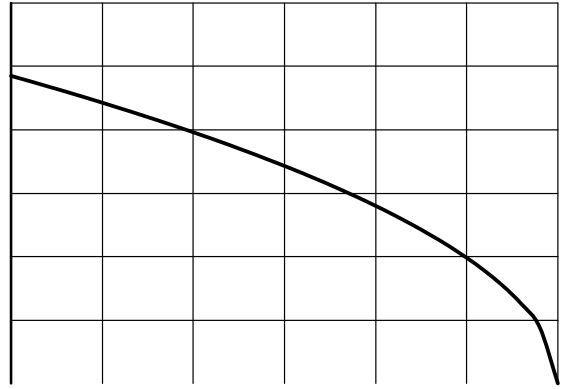
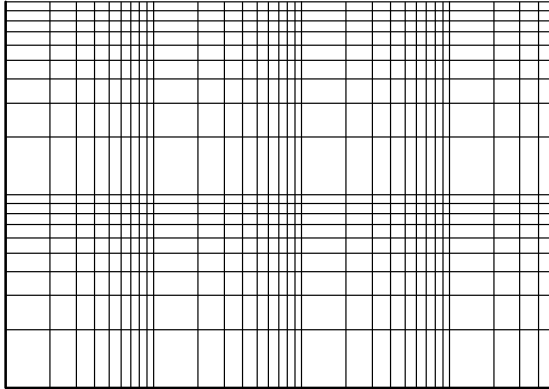
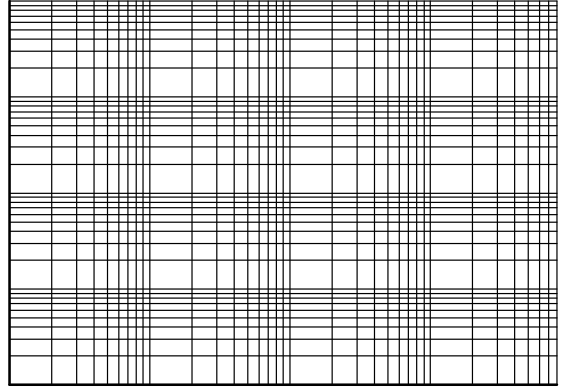
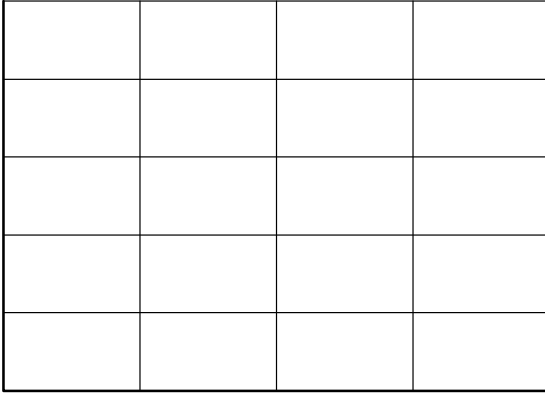
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product

NTBG160N120SC1

TYPICAL CHARACTERISTICS

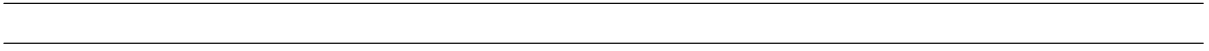
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TYPICAL CHARACTERISTICS (continued)



NTBG160N120SC1

TYPICAL CHARACTERISTICS (continued)



D²PAK7 (TO-263-7L HV)
CASE 418BJ
ISSUE B

DATE 16 AUG 2019

A

c2

H

C

**GENERIC
MARKING DIAGRAM***



XXXX = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week
G = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

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