

## 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 ( $T_j$ )

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Table 1. THERMAL CHARACTERISTICS

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>DRAIN-SOURCE DIODE CHARACTERISTICS</b>						
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		$\mu\text{J}$
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

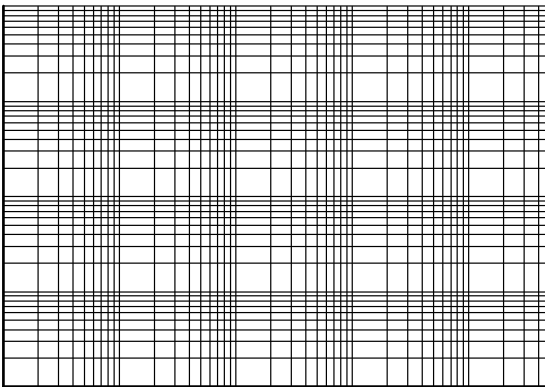
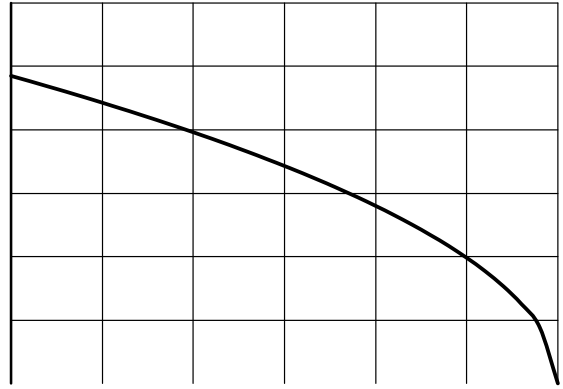
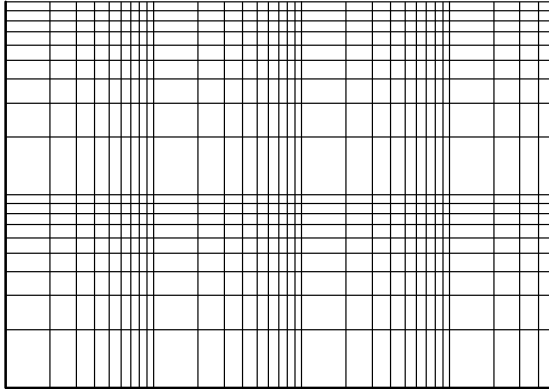
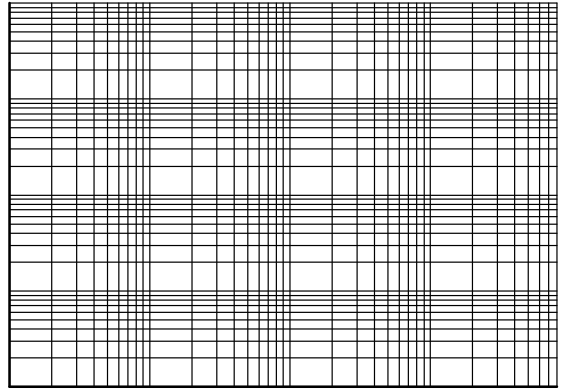
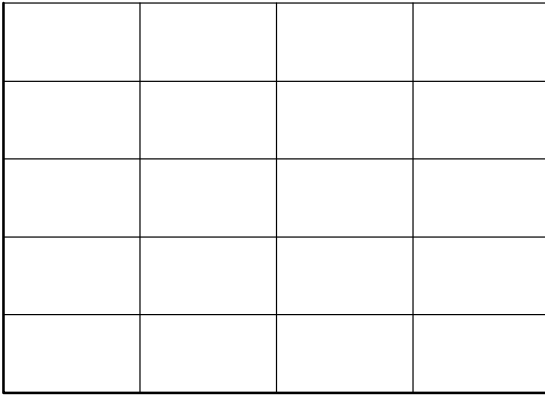
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## TYPICAL CHARACTERISTICS



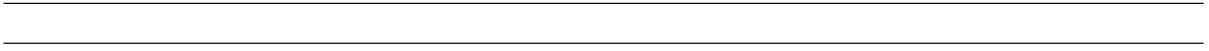
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## TYPICAL CHARACTERISTICS (continued)



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## TYPICAL CHARACTERISTICS (continued)



**D<sup>2</sup>PAK7 (TO-263-7L HV)**  
CASE 418BJ  
ISSUE B

DATE 16 AUG 2019

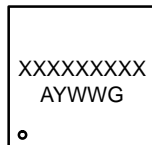
A

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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