
[Silicon Carbide \(SiC\)](#)
[MOSFET](#) – 40 mohm,
1200 V, M1, D2PAK-7L

NVBG040N120SC1

- Typ. $R_{DS(on)} = 40 \text{ m}\Omega$
 - Ultra Low Gate Charge (Typ. $Q_{G(tot)} = 106 \text{ nC}$)
 - Low Effective Output Capacitance (Typ. $C_{oss} = 139 \text{ pF}$)
 - 100% Avalanche Tested
 - AEC-Q101 Qualified and PPAP Capable
 - This Device is Halide Free and RoHS Compliant with exemption 7a, Pb-Free 2LI (on second level interconnection)
-
- Automotive On Board Charger
 - Automotive DC-DC Converter for EV/HEV

Thermal Resistance Junction-to-Case (Note 1)	$R_{\theta JC}$	0.42	$^{\circ}C/W$
Thermal Resistance Junction-to-Ambient (Note 1)	$R_{\theta JA}$	40	$^{\circ}C/W$

($T_J = 25^{\circ}C$ unless otherwise stated)

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Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0 V, I_D = 1 mA$	1200			V
Drain-to-Source Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$	$I_D = 1 mA$, refer to $25^{\circ}C$		0.45		$V/^{\circ}C$
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS} = 0 V, T_J = 25^{\circ}C$ $V_{DS} = 1200 V$				

(T_J = 25°C unless otherwise stated) (continued)

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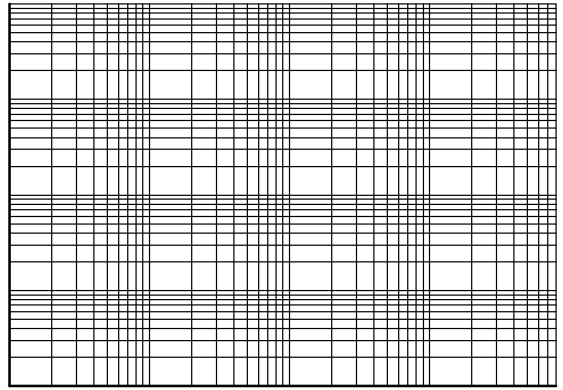
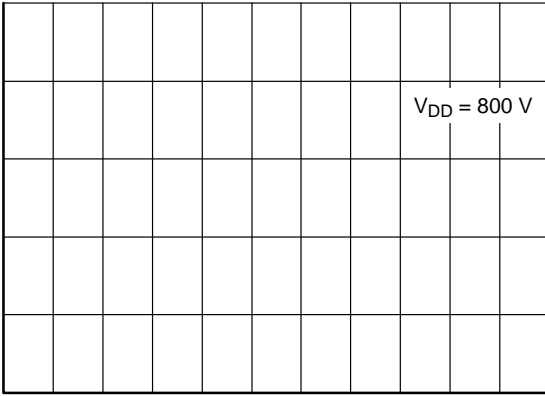
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Reverse Recovery Time	t _{RR}	V _{GS} = -5/20 V, I _{SD} = 47 A, di _S /dt = 1000 A/μs		24		ns
Reverse Recovery Charge	Q _{RR}			124.8		nC
Reverse Recovery Energy	E _{REC}			8.4		μJ
Peak Reverse Recovery Current	I _{RRM}			10.4		A
Charge Time	T _a			12.4		ns
Discharge Time	T _b			11.6		ns

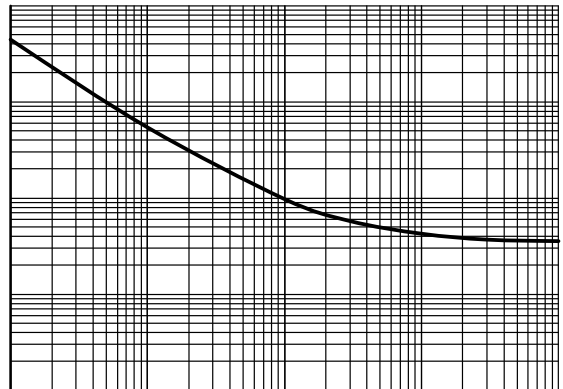
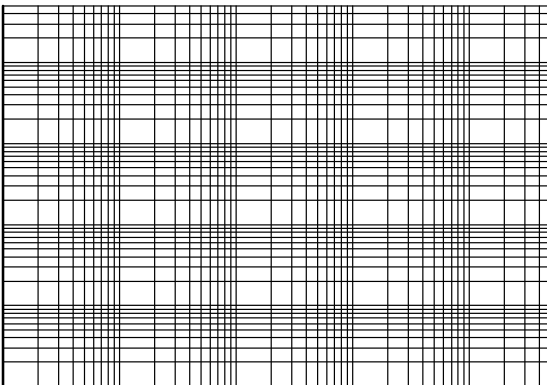
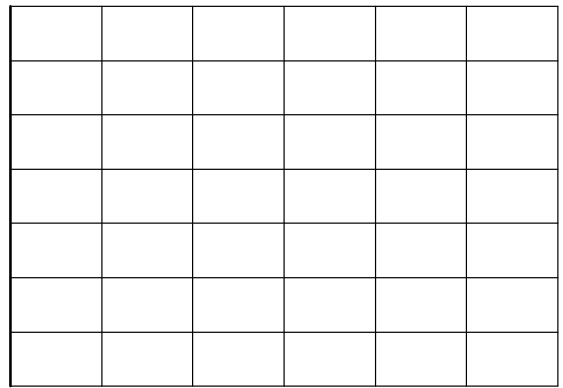
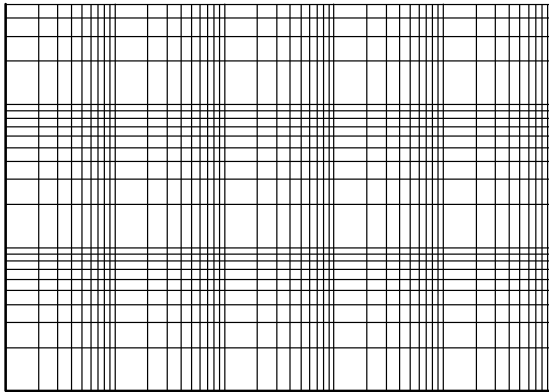
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



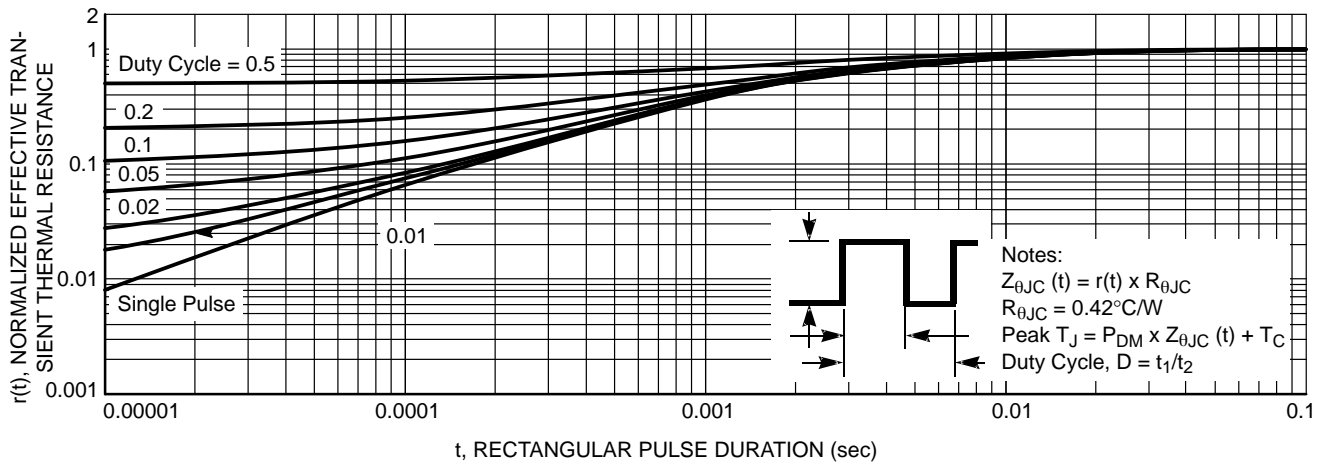
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D²PAK7 (TO-263-7L HV)
CASE 418BJ
ISSUE B

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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