



# NVBG020N090SC1

**Table 1. THERMAL CHARACTERISTICS**

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-to-Case (Note 2)	$R_{\theta JC}$	0.31	°C/W
Thermal Resistance Junction-to-Ambient (Notes 1, 2)	$R_{\theta JA}$	41	

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

Parameter	Max	Unit
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## TYPICAL CHARACTERISTICS

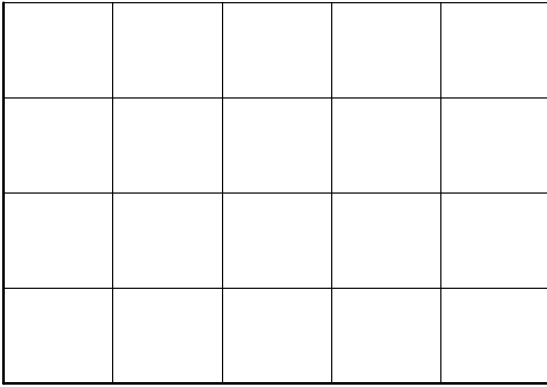


Figure 1. On Region Characteristics

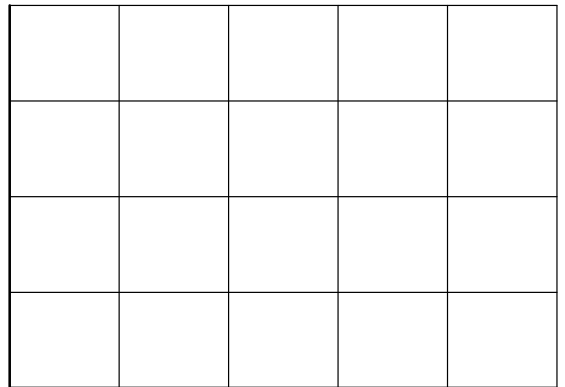
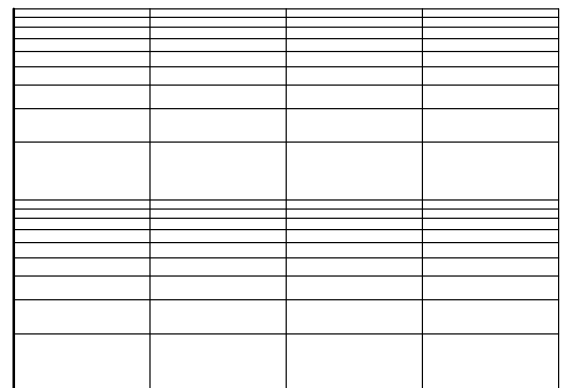
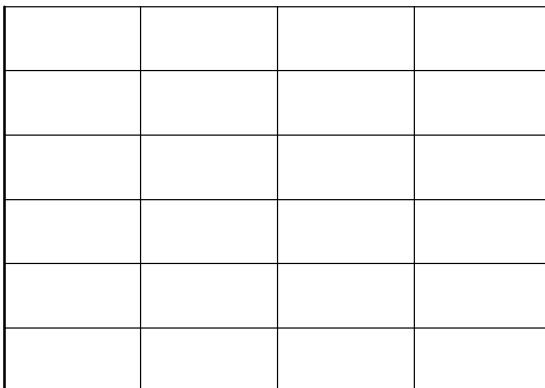
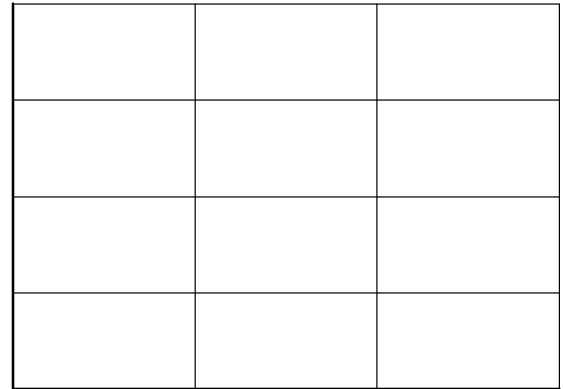
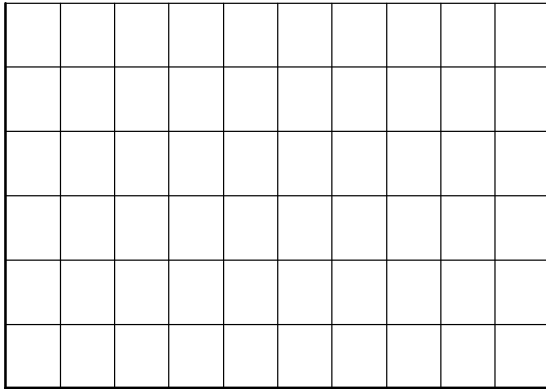


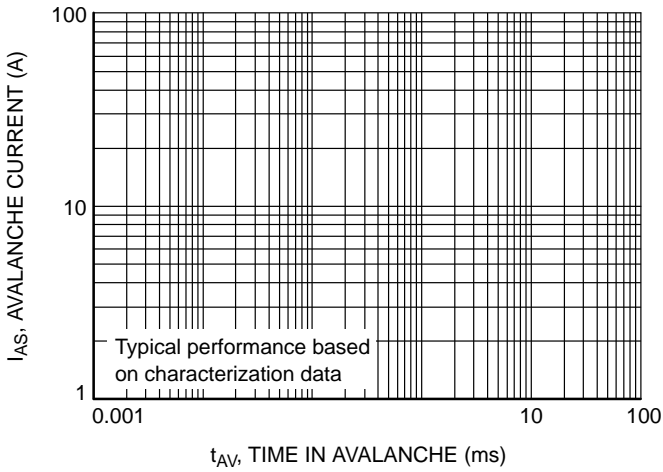
Figure 2. Normalized On



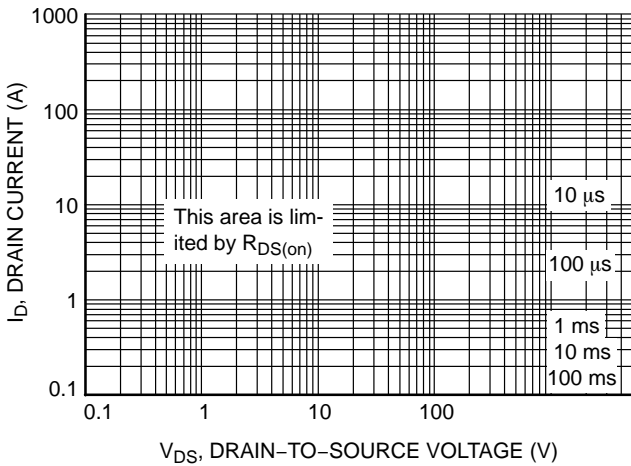
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## TYPICAL CHARACTERISTICS (continued)

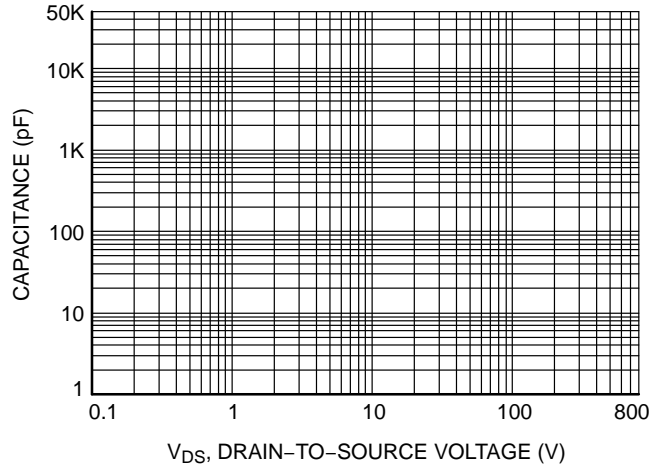
**Figure 7. Gate to Source Voltage vs. Total Charge**



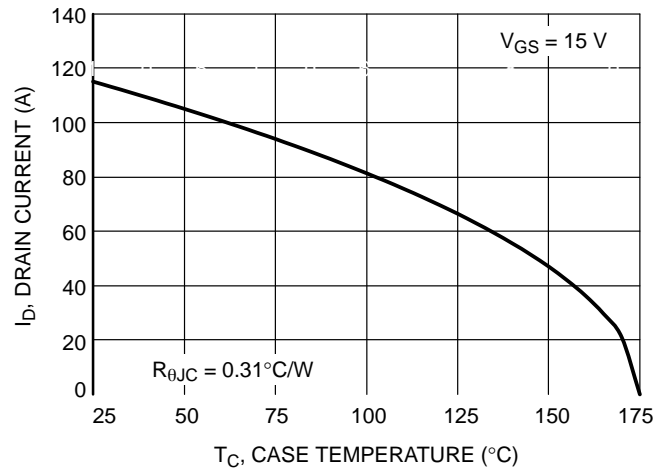
**Figure 9. Unclamped Inductive Switching Capability**



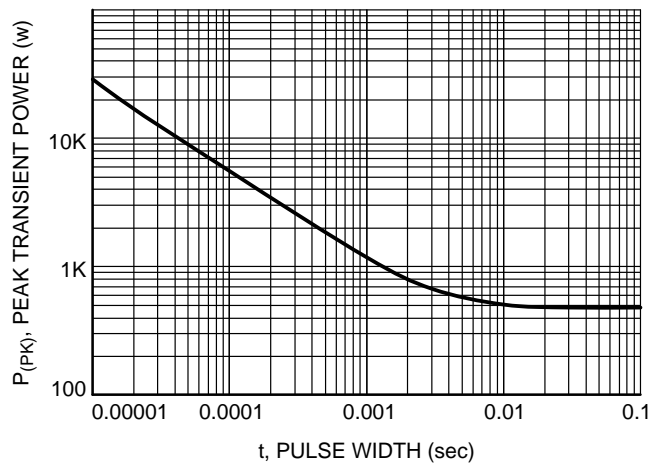
**Figure 11. Safe Operating Area**



**Figure 8. Capacitance vs. Drain to Source Voltage**



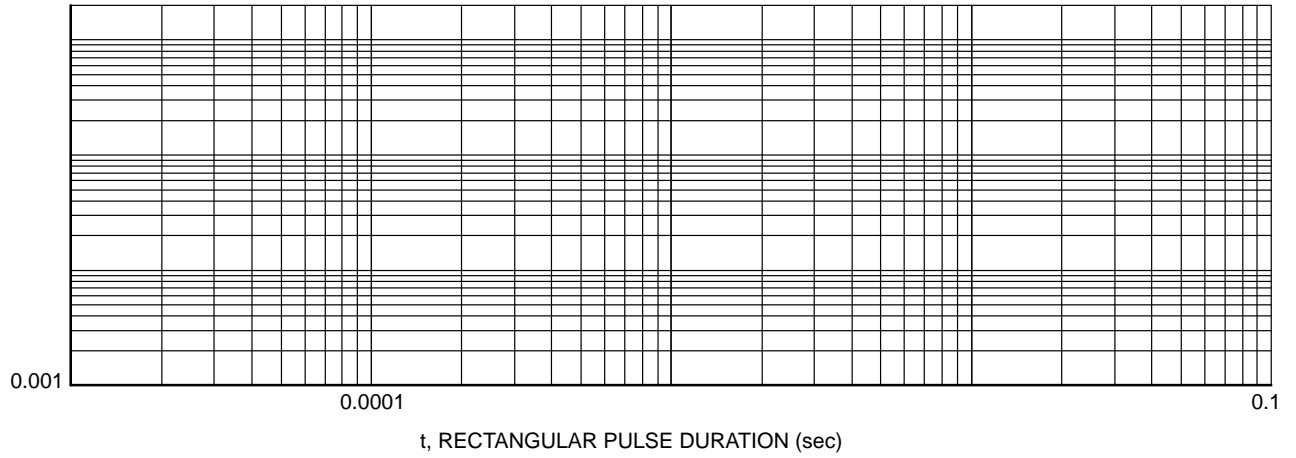
**Figure 10. Maximum Continuous Drain Current vs. Case Temperature**



**Figure 12. Single Pulse Maximum Power Dissipation**

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## TYPICAL CHARACTERISTICS (continued)



**Figure 13. Junction to Ambient Transient Thermal Response Curve**

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

DATE 16 AUG 2019

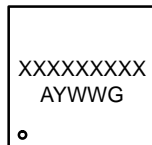
A

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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