

**A** **m** **50** **50 A**  
**D** **T<sub>9</sub>C**  
**6-P** **P** **M**  
**T** **E-** **™** **D** **M**  
**N<sub>H</sub>** **50** **5L4** **PC**  
**T<sub>9</sub>**

**Product Description**

The NVH950S75L4SPC is a power module from the VE-Trac™ Direct family of highly integrated power modules with industry standard footprints for Hybrid (HEV) and Electric Vehicle (EV) applications. It offers high current density, while offering robust short circuit protection and increased blocking voltage. Additionally, FS4 750 V Narrow Mesa IGBTs show low power losses during lighter loads, which helps to improve overall system efficiency in automotive applications.

For assembly ease and reliability, a new generation of press-fit pins are integrated into the power module signal terminals. In addition, the

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# NVH950S75L4SPC

## MODULE CHARACTERISTICS (T<sub>vj</sub> = 25°C, Unless Otherwise Specified)

Symbol	Parameter	Rating	Unit
T <sub>vj</sub>	Operating Junction Temperature	40 to 175	°C
T <sub>STG</sub>	Storage Temperature	40 to 125	°C
V <sub>ISO</sub>	Isolation Voltage (DC, 0 Hz, 1 s)	4200	V
L <sub>sCE</sub>	Stray Inductance	8	nH
RCC'+EE'	Module Lead Resistance, Terminals Chip	0.75	mΩ
G	Module Weight		





# NVH950S75L4SPC

## TYPICAL CHARACTERISTICS

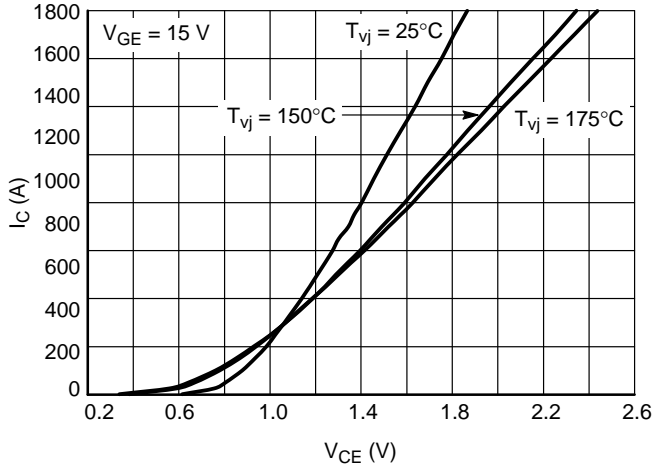


Figure 2. IGBT Output Characteristic

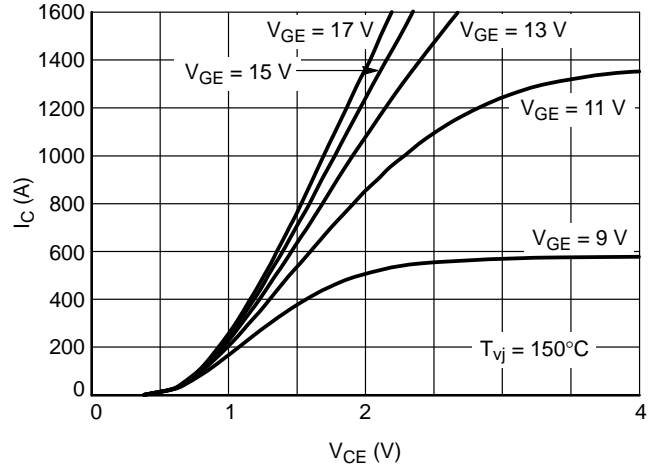


Figure 3. IGBT Output Characteristic

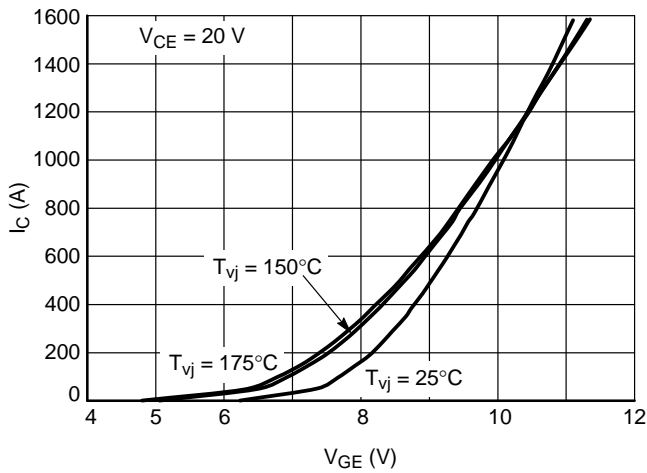


Figure 4. IGBT Transfer Characteristic

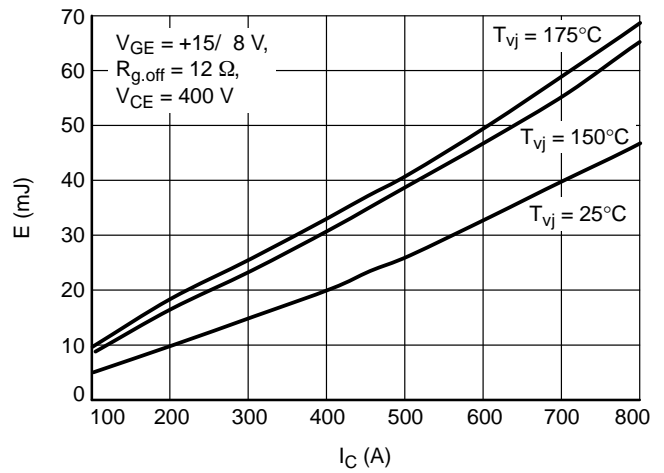


Figure 5. IGBT Turn-off Losses vs.  $I_C$

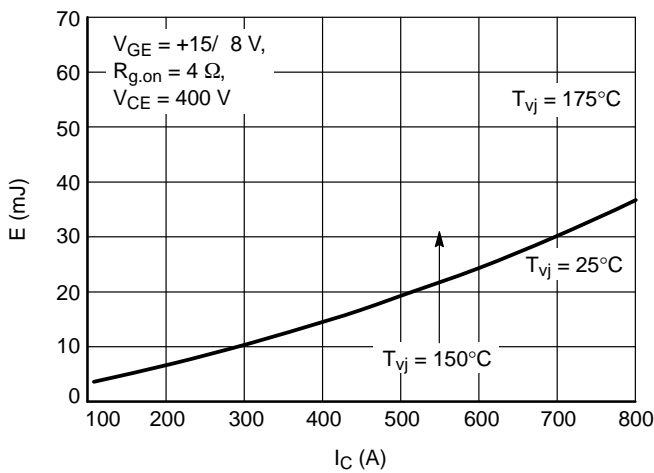


Figure 6. IGBT Turn-on Losses vs.  $I_C$

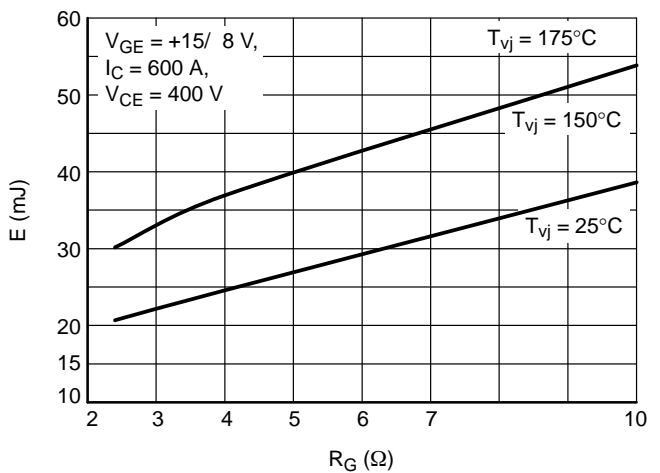


Figure 7.  $E_{ON}$  vs.  $R_G$

# NVH950S75L4SPC

## TYPICAL CHARACTERISTICS

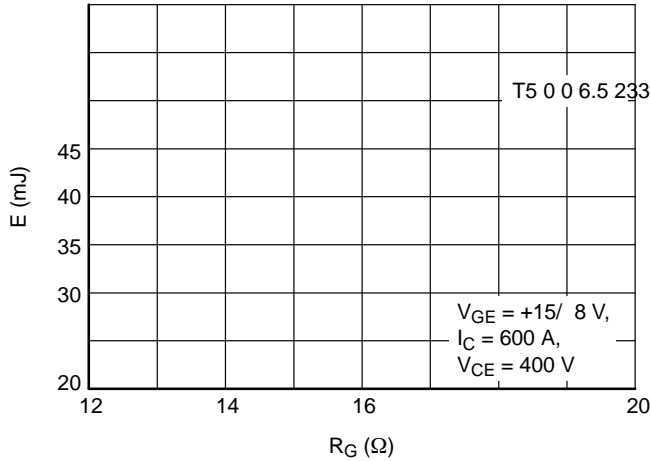


Figure 8.  $E_{OFF}$  vs.  $R_G$

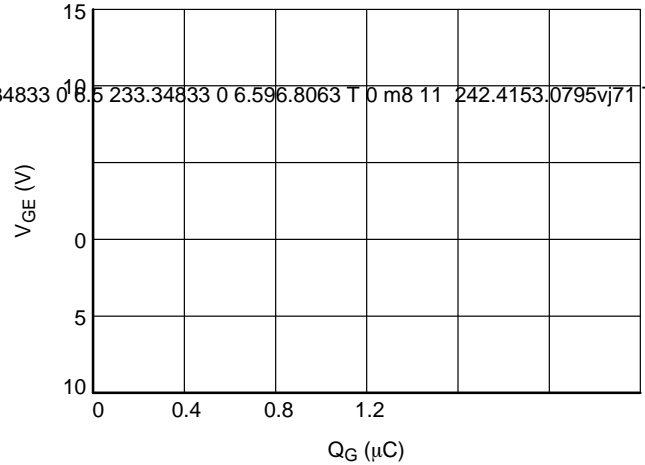


Figure 9. Gate Charge Characteristic

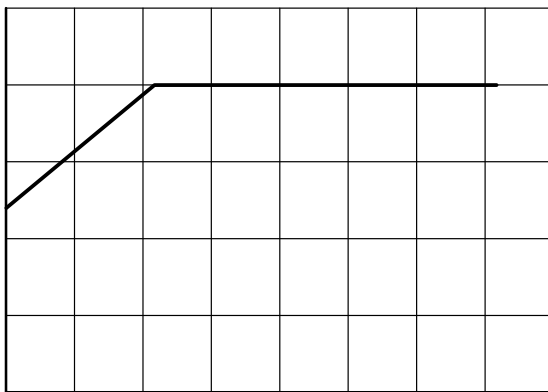


Figure 10. Maximum Allowed  $V_{CE}$

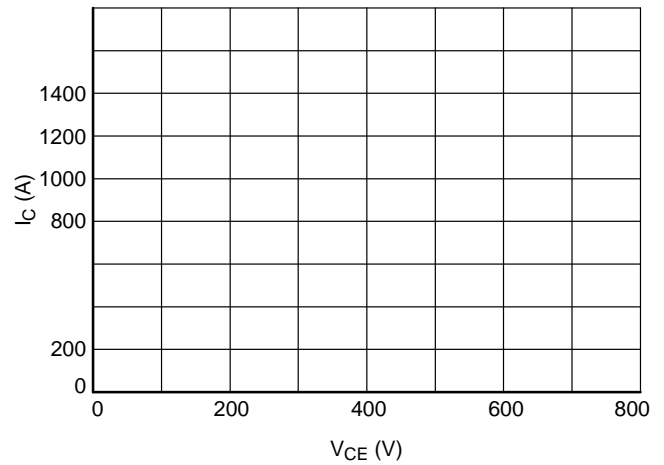


Figure 11. Reverse Bias Safe Operating Area

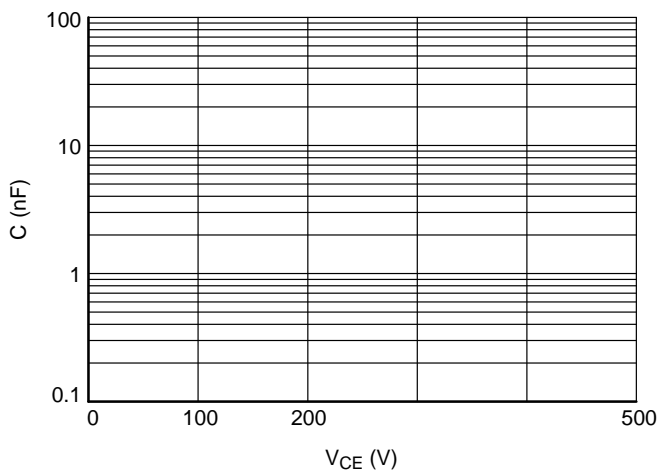


Figure 12. Capacitance Characteristic

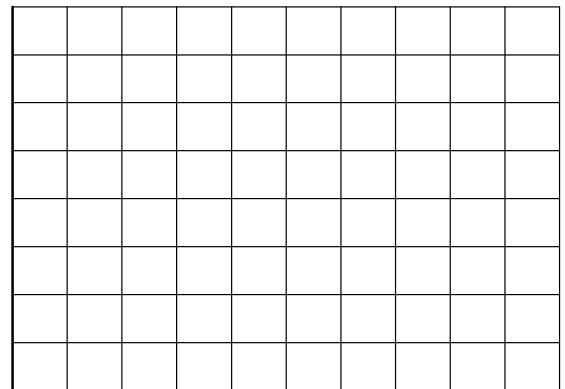


Figure 13. Diode Forward Characteristic

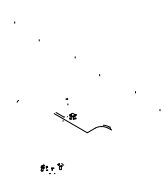
**NVH950S75L4SPC**



NVH950S75L4SPC

**SSDC33, 154.50x92.0 (SPC)**  
CASE 183AC  
ISSUE A

DATE 11 DEC 2019



**GENERIC  
MARKING DIAGRAM\***

XXXXXXXXXXXXXXXXXXXXXG ATYYWW
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XXXXX = Specific Device Code  
G = Pb-Free Package  
AT = Assembly & Test Site Code  
YYWW= Year and Work Week Code

\*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.

**SSDC33, 154.50x92.0 (SPC)**  
CASE 183AC  
ISSUE A

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