

MOSFET – Power, Single N-Channel

100 V, 20 m , 41 A

NVD6824NL

Features

- X Low $R_{DS(on)}$ to Minimize Conduction Losses
- X High Current Capability
- X Avalanche Energy Specified
- X AEC iQ101 Qualified
- X These Devices are P-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS ($T_J = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
t			

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ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
OFF CHARACTERISTICS							
Drain to iSource Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\text{ A}$	100			V	
Drain to iSource Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$			92		mV/ $^\circ\text{C}$	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS} = 0\text{ V}, V_{DS} = 100\text{ V}$	$T_J = 25\text{ }^\circ\text{C}$			1.0	A
			$T_J = 125\text{ }^\circ\text{C}$			100	
Gate to iSource Leakage Current	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = 20\text{ V}$					

TYPICAL CHARACTERISTICS

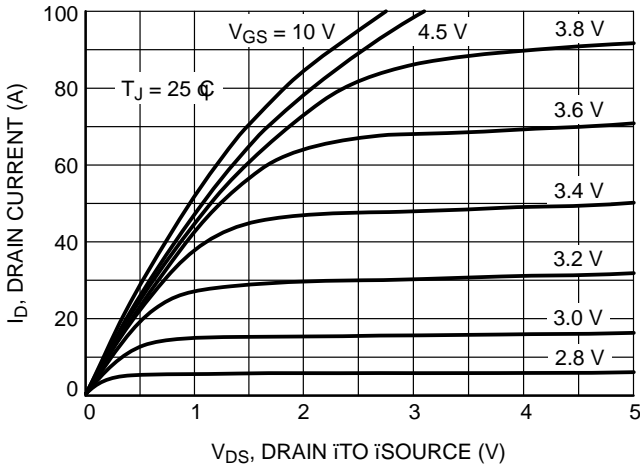


Figure 1. On-Region Characteristics

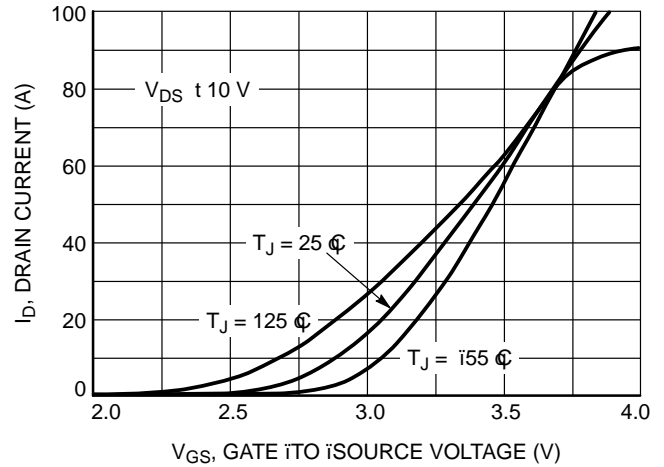


Figure 2. Transfer Characteristics

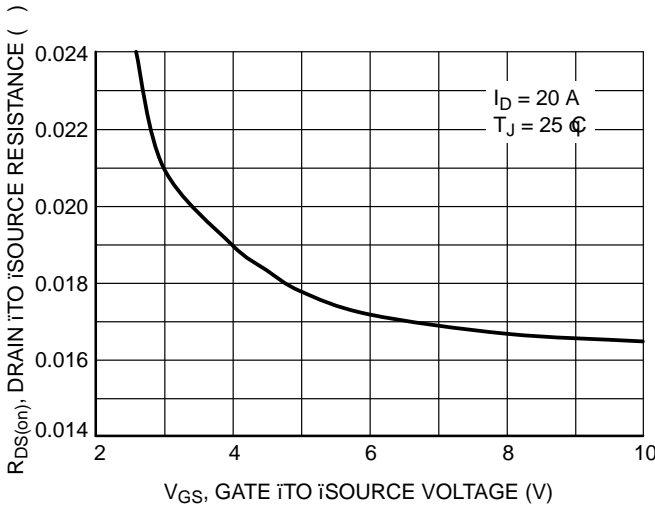


Figure 3. On-Resistance vs. Gate Voltage

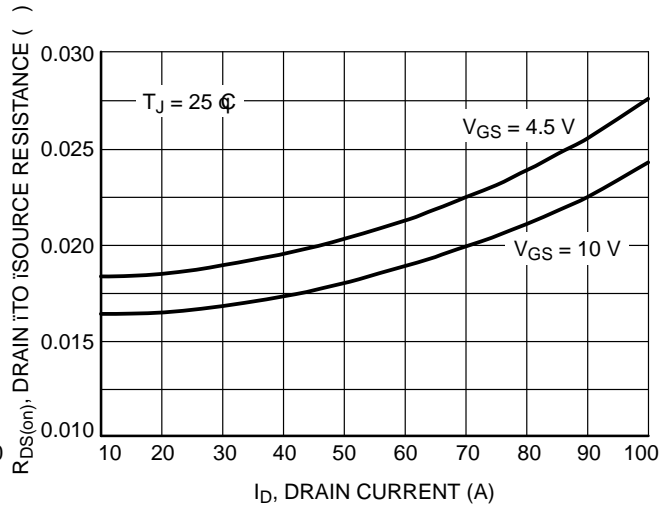


Figure 4. On-Resistance vs. Drain Current and Gate Voltage

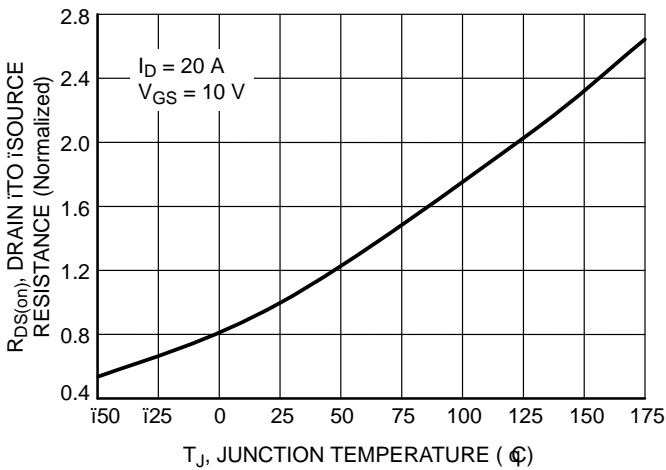


Figure 5. On-Resistance Variation with Temperature

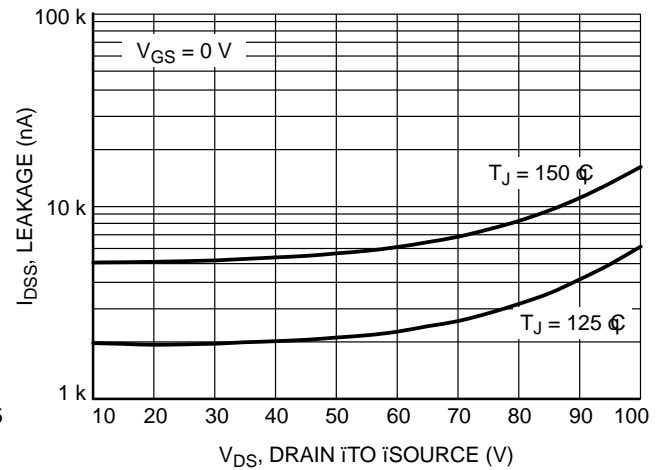


Figure 6. Drain-Source Leakage Current vs. Voltage

TYPICAL CHARACTERISTICS

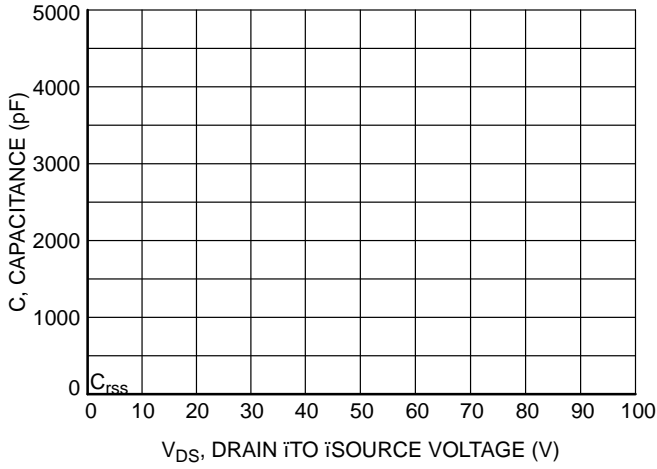


Figure 7. Capacitance Variation

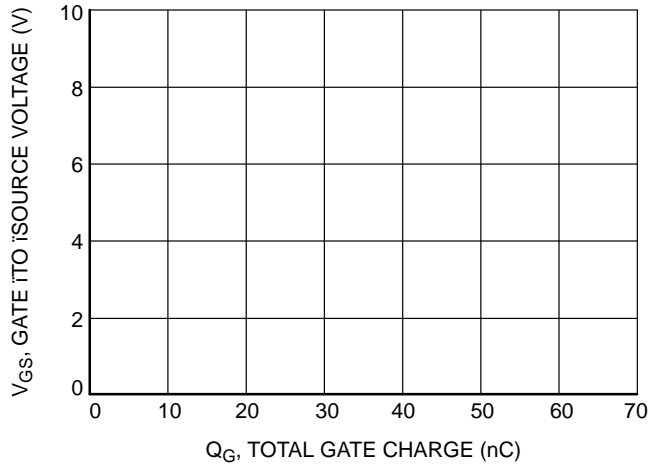


Figure 8. Gate to Source Voltage vs. Total Charge

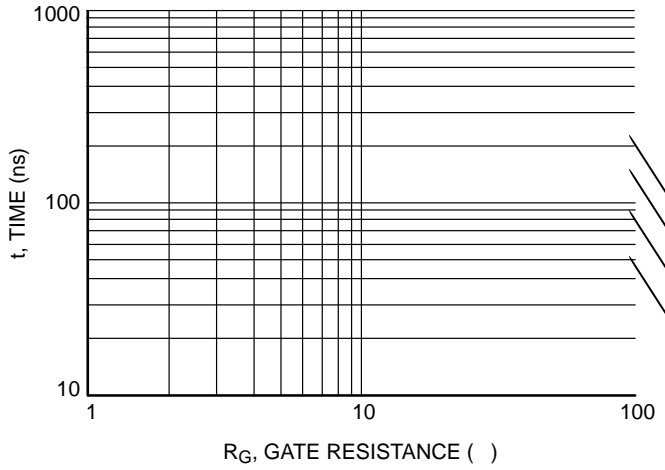


Figure 9. Resistive Switching Time Variation vs. Gate Resistance

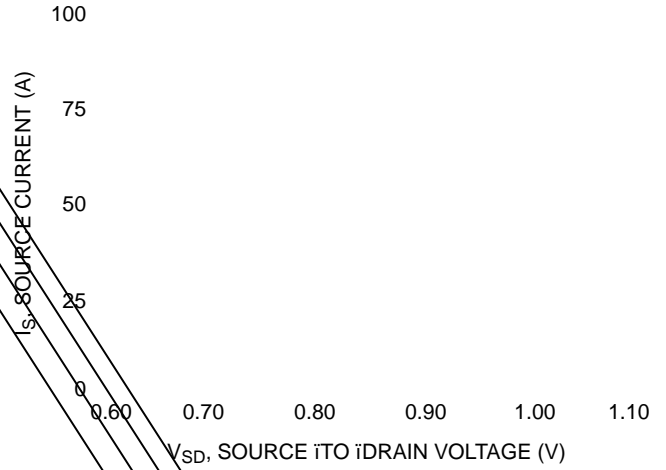


Figure 10. Diode Forward Voltage vs. Current

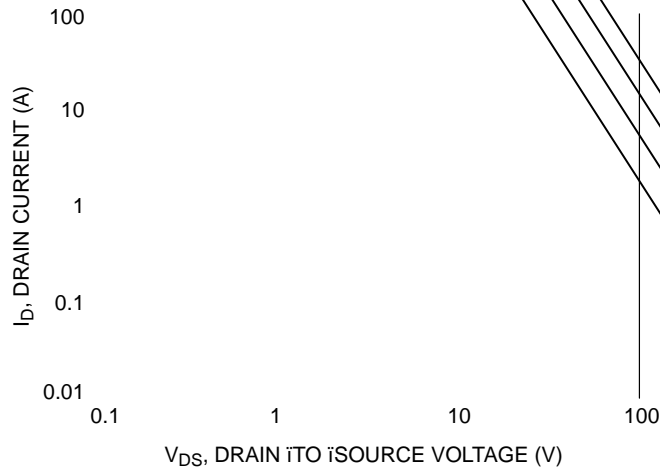


Figure 11. Maximum Rated Forward Biased Safe Operating Area

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TYPICAL CHARACTERISTICS

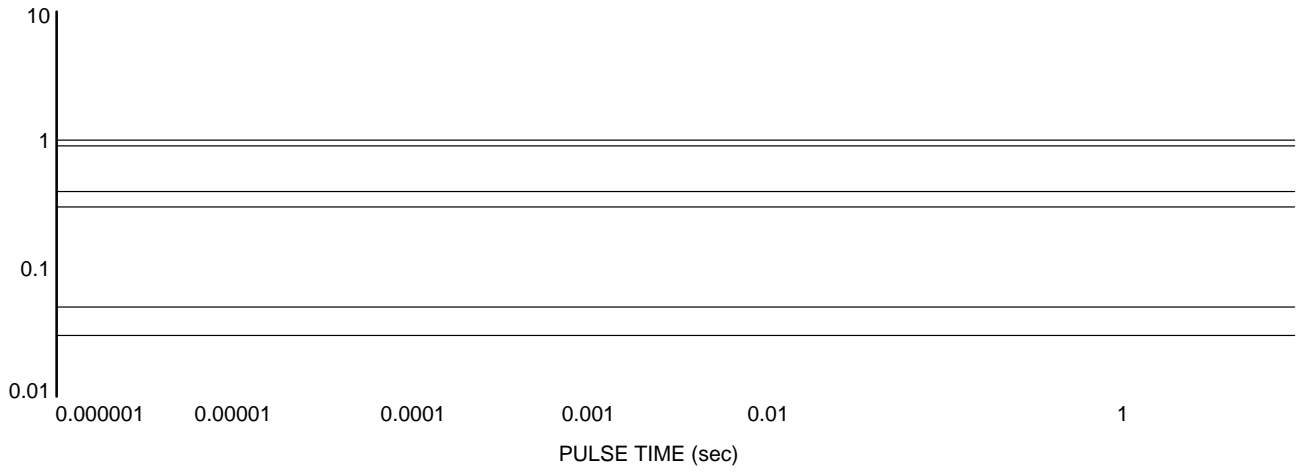


Figure 12. Thermal Response

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PACKAGE DIMENSIONS



DPAK (SINGLE GAUGE)
CASE 369C
ISSUE G

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SCALE 1:1

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