

# NVMFS5C404N-ADD/D

## NVMFS5C404N Addendum



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### ADDENDUM

NVMFS5C404N Power MOSFET (Datasheet dated July, 2019 – Rev. 3) shall operate under the condition listed below. (Note 1)

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

Parameter	Symbol	Value	Unit		
Drain-to-Source Voltage	$V_{DSS}$	40	V		
Gate-to-Source Voltage	$V_{GS}$	$\pm 20$	V		
Continuous Drain Current $R_{\theta JC}$ (Notes 1, 3)	Steady State	$T_C = 25^\circ\text{C}$	$I_D$	378	A
		$T_C = 100^\circ\text{C}$		267	
Power Dissipation $R_{\theta JC}$ (Note 1)	Steady State	$T_C = 25^\circ\text{C}$	$P_D$	200	W
		$T_C = 100^\circ\text{C}$		100	
Continuous Drain Current $R_{\theta JA}$ (Notes 1, 2, 3)	Steady State	$T_A = 25^\circ\text{C}$	$I_D$	53	A
		$T_A = 100^\circ\text{C}$		37	
Power Dissipation $R_{\theta JA}$ (Notes 1 & 2)	Steady State	$T_A = 25^\circ\text{C}$	$P_D$	3.9	W
		$T_A = 100^\circ\text{C}$		1.9	
Pulsed Drain Current	$T_A = 25^\circ\text{C}, t_p = 10 \mu\text{s}$	$I_{DM}$	900	A	
Operating Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +175		$^\circ\text{C}$	
Source Current (Body Diode)	$I_S$	191		A	
Single Pulse Drain-to-Source Avalanche Energy ( $I_{L(pk)} = 38 \text{ A}$ )	$E_{AS}$	907		mJ	
Lead Temperature for Soldering Purposes (1/8" from case for 10 s)	$T_L$	260		$^\circ\text{C}$	

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

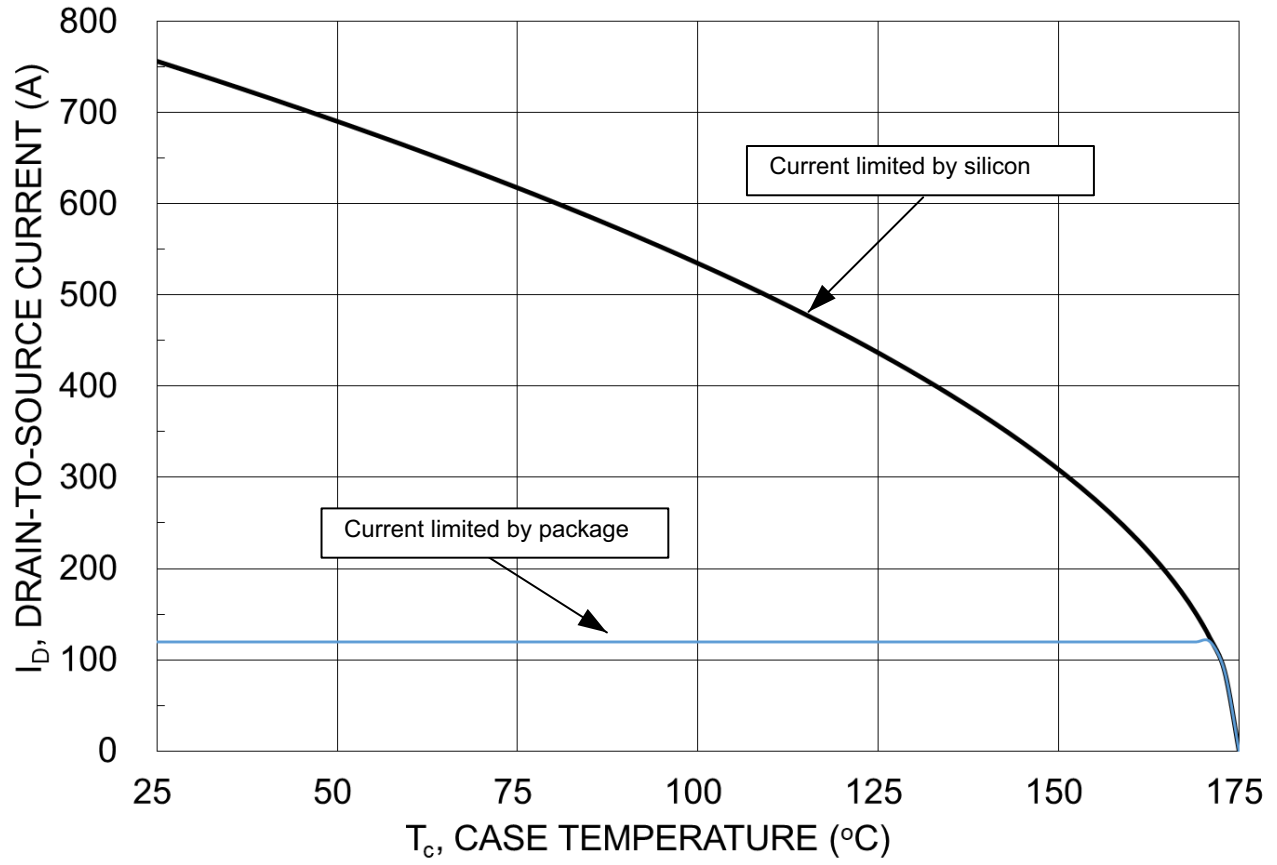
#### THERMAL RESISTANCE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Junction-to-Case – Steady State	$R_{\theta JC}$	0.75	$^\circ\text{C}/\text{W}$
Junction-to-Ambient – Steady State (Note 2)	$R_{\theta JA}$	39	


1. The entire application environment impacts the thermal resistance values shown, they are not constants and are only valid for the particular conditions noted.
2. Surface-mounted on FR4 board using a 650 mm<sup>2</sup>, 2 oz. Cu pad.
3. Maximum current for pulses as long as 1 second is higher but is dependent on pulse duration and duty cycle.
4. Continuous drain current limited by package is 120 A.

# NVMFS5C404N-ADD/D

Id vs Tc Plot



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