



勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
 Http://www.100y.com.tw

2N6661/VN88AFD

Vishay Siliconix

N-Channel 80-V and 90-V (D-S) MOSFETS

PRODUCT SUMMARY				
Part Number	$V_{(BR)DSS}$ Min (V)	$r_{DS(on)}$ Max (Ω)	$V_{GS(th)}$ (V)	I_D (A)
2N6661	90	4 @ $V_{GS} = 10$ V	0.8 to 2	0.9
VN88AFD	80	4 @ $V_{GS} = 10$ V	0.8 to 2.5	1.29

FEATURES

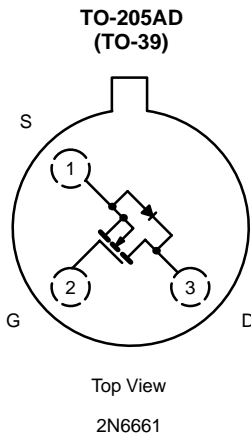
- Low On-Resistance: 3.6 Ω
- Low Threshold: 1.6 V
- Low Input Capacitance: 35 pF
- Fast Switching Speed: 6 ns
- Low Input and Output Leakage

BENEFITS

- Low Offset Voltage
- Low-Voltage Operation
- Easily Driven Without Buffer
- High-Speed Circuits
- Low Error Voltage

APPLICATIONS

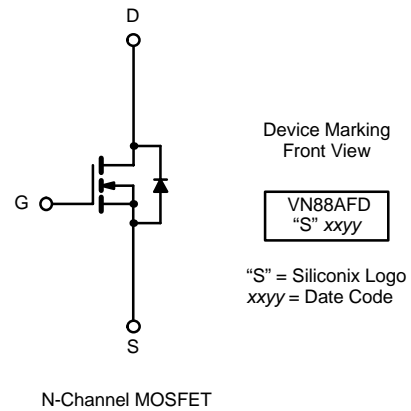
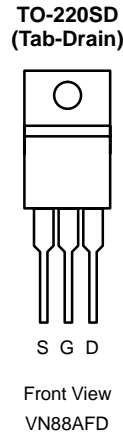
- Direct Logic-Level Interface: TTL/CMOS
- Drivers: Relays, Solenoids, Lamps, Hammers, Displays, Memories, Transistors, etc.
- Battery Operated Systems
- Solid-State Relays



Device Marking
Side View

2N6661
 "S" flxxyy

"S" = Siliconix Logo
 f = Factory Code
 ll = Lot Traceability
 xxyy = Date Code



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
Parameter	Symbol	2N6661	VN88AFD	Unit
Drain-Source Voltage	V_{DS}	90	80	V
Gate-Source Voltage	V_{GS}	± 20	± 30	
Continuous Drain Current ($T_J = 150^\circ\text{C}$)	$T_C = 25^\circ\text{C}$	0.9	1.29	A
	$T_C = 100^\circ\text{C}$	0.7	0.81	
Pulsed Drain Current ^a	I_{DM}	± 3	± 3	
Power Dissipation	$T_C = 25^\circ\text{C}$	6.25	15	W
	$T_C = 100^\circ\text{C}$	2.5	6	
Thermal Resistance, Junction-to-Ambient ^b	R_{thJA}	170		$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Case	R_{thJC}		8.3	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150		$^\circ\text{C}$

Notes
 a. Pulse width limited by maximum junction temperature.
 b. This parameter not registered with JEDEC.



SPECIFICATIONS (T _A = 25 °C UNLESS OTHERWISE NOTED)								
Parameter	Symbol	Test Conditions	Typ ^a	Limits				Unit
				2N6661		VN88AFD		
				Min	Max	Min	Max	
Static								
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0 V, I _D = 10 μA	125	90		80		V
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 1 mA	1.6	0.8	2	0.8	2.5	
		T _J = -55 °C	1.8					
		T _J = 125 °C	1.3					
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±15 V			±100		±100	nA
		T _J = 125 °C			±500		±500	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 90 V, V _{GS} = 0 V			10			μA
		V _{DS} = 80 V, V _{GS} = 0 V					10	
		V _{DS} = 0.8 × V _{(BR)DSS} , V _{GS} = 0 V					1	
		T _J = 125 °C			500		500	
On-State Drain Current ^b	I _{D(on)}	V _{DS} = 15 V, V _{GS} = 10 V	1.8	1.5				A
		V _{DS} = 10 V, V _{GS} = 10 V	1.8			1.5		
Drain-Source On-Resistance ^b	r _{DS(on)}	V _{GS} = 5 V, I _D = 0.3 A	3.8		5.3		5.6	Ω
		V _{GS} = 10 V, I _D = 1 A	3.6		4		4	
		T _J = 125 °C ^d	6.7		9		8	
Forward Transconductance ^b	g _{fs}	V _{DS} = 10 V, I _D = 0.5 A	350	170		170		mS
Diode Forward Voltage	V _{SD}	I _S = 0.86 A, V _{GS} = 0 V	0.9					V
Dynamic								
Input Capacitance	C _{iss}	V _{DS} = 24 V, V _{GS} = 0 V f = 1 MHz	35		50		50	pF
Output Capacitance	C _{oss}		15		40		40	
Reverse Transfer Capacitance	C _{rss}		2		10		10	
Drain-Source Capacitance	C _{ds}		30		40			
Switching^c								
Turn-On Time	t _{ON}	V _{DD} = 25 V, R _L = 23 Ω I _D ≅ 1 A, V _{GEN} = 10 V R _G = 25 Ω	6		10		15	ns
Turn-Off Time	t _{OFF}		8		10		15	

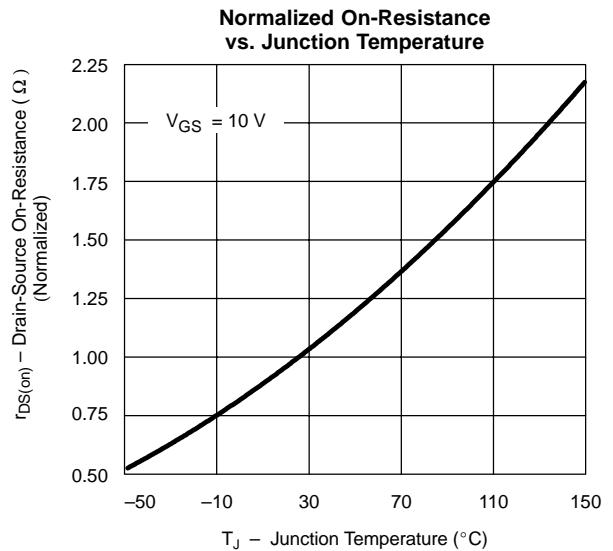
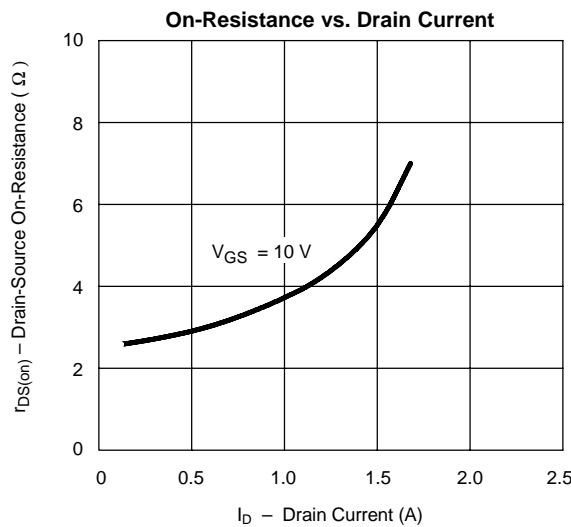
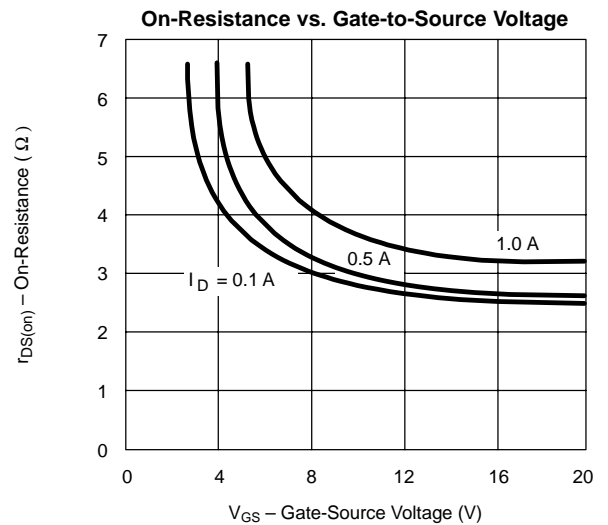
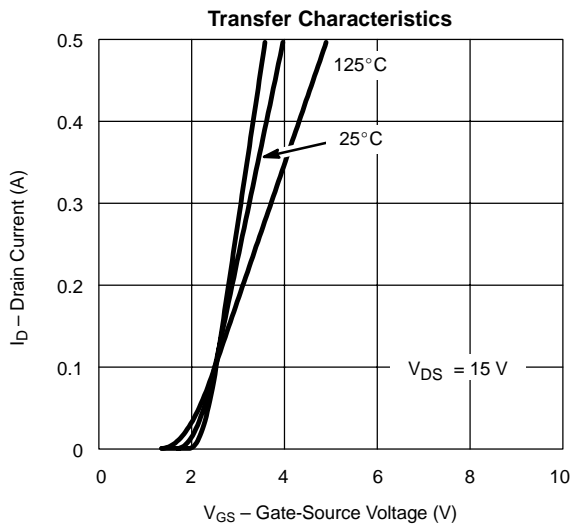
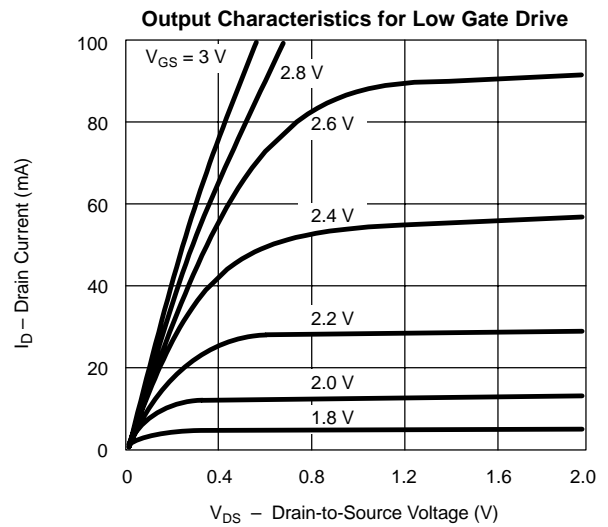
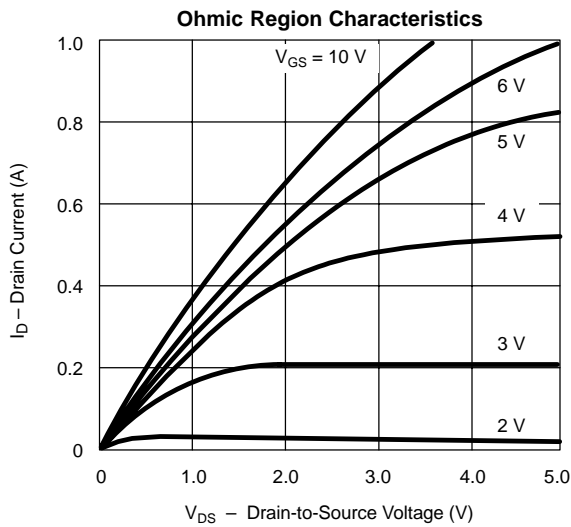
Notes

- For DESIGN AID ONLY, not subject to production testing.
- Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.
- Switching time is essentially independent of operating temperature.
- This parameter not registered with JEDEC.

VNDQ09

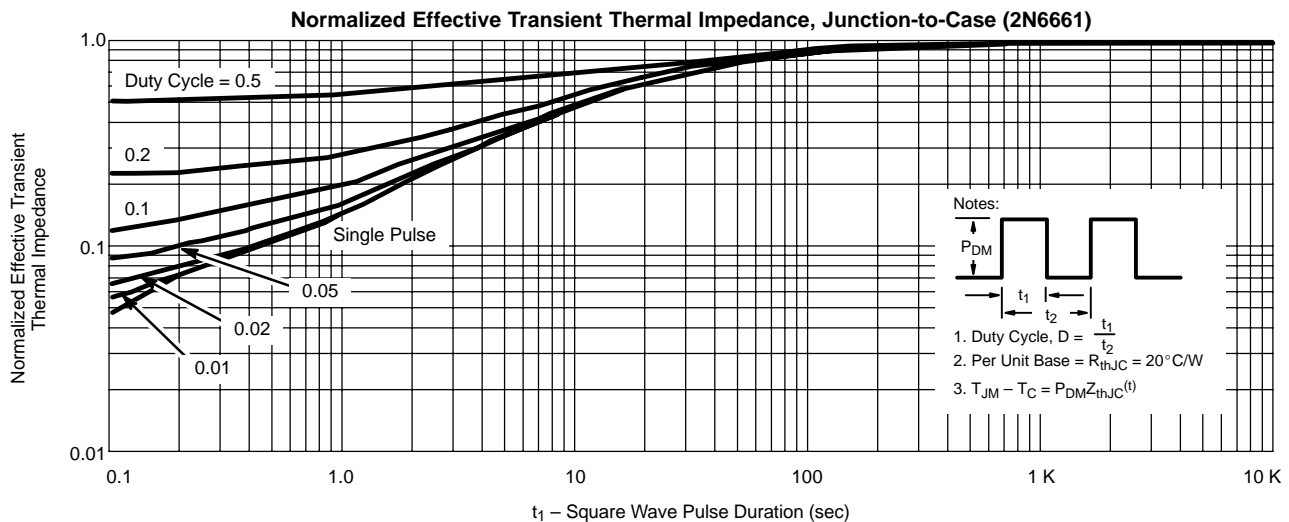
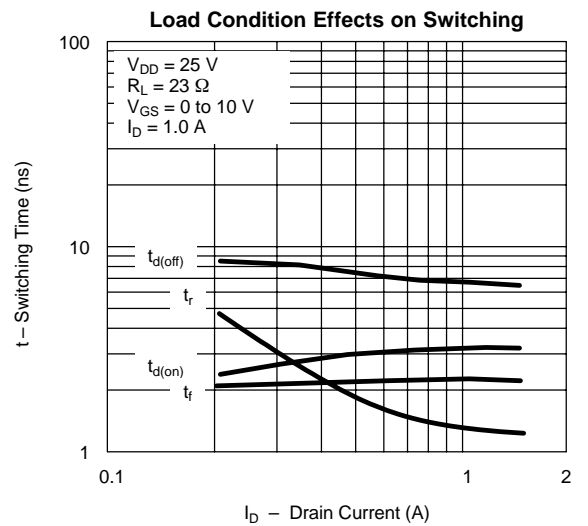
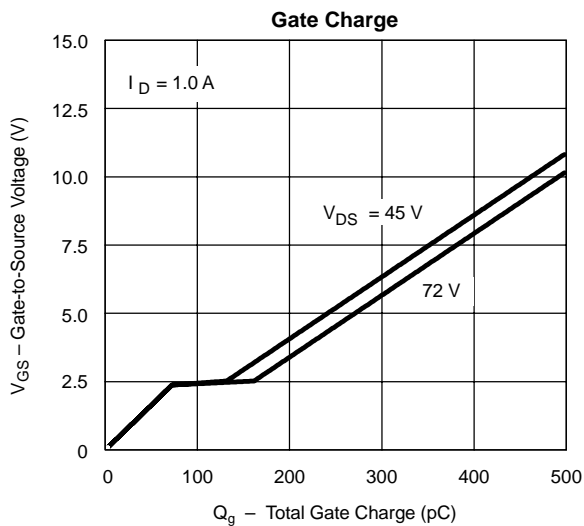
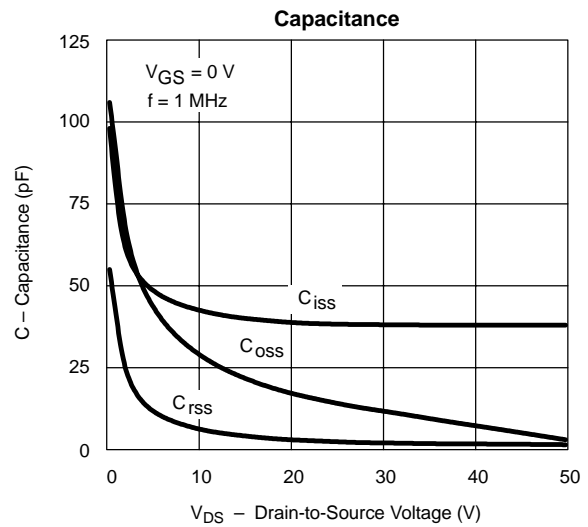
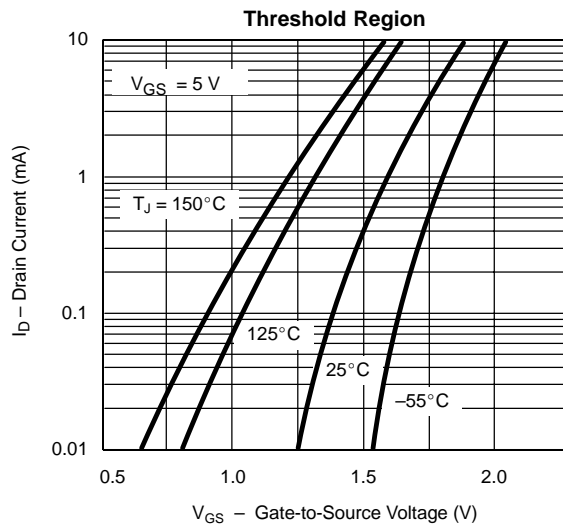


TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)





TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)





勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Legal Disclaimer Notice

Vishay

Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Vishay:](#)

[VN88AFD](#)