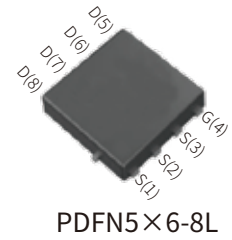


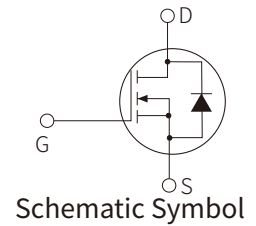
FEATURES

- | $R_{DS(ON)}$ Typ = $4m\Omega$ @ $V_{GS} = 10V$
- | Advanced Trench Technology
- | Excellent $R_{DS(ON)}$ and Low Gate Charge
- | 100% UIS TESTED!
- | 100% ΔV_{ds} TESTED!



APPLICATION

- | Load Switch
- | PWM Application
- | Power Management



APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V_{DS}	30	V
Pulsed Drain Current ⁽¹⁾	I_{DM}	320	A
Continuous Drain Current	I_D	80	A
		48	A
Power Dissipation $T_c = 25^\circ C$	P_D	25	W
Gate-to-Source Voltage	V_{GS}	± 20	V
Junction & Storage Temperature Range	T_J, T_{STG}	-55 ~ +150	$^\circ C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	5	$^\circ C/W$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	30			V
Gate Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Drain Leakage Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1.0	μA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.4	3	3.6	V
Static Drain-Source ON-Resistance ⁽³⁾	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		4	5.2	m Ω
Dynamic Characteristics						
Input capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=15V,$ $f=1MHz$		947		pF
Output capacitance	C_{oss}			1098		pF
Reverse transfer capacitance	C_{rss}			50		pF
Total Gate Charge	Q_g	$V_{DS}=15V, V_{GS}=0$ to 10V $I_D=15A$		14		nC
Gate-Source Charge	Q_{gs}			2		nC
Gate Drain("Miller") Charge	Q_{gd}			2.1		nC
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=15V, V_{GS}=10V$ $R_{GEN}=6\Omega, I_D=15A$		2.5		nS
Turn-on Rise Time	t_r			2.6		nS
Turn-Off Delay Time	$t_{d(off)}$			13		nS
Turn-Off Fall Time	t_f			7		nS
Drain-Source Diode Characteristics and Max Ratings						
Drain to Source Diode Forward Voltage	V_{SD}	$I_S=20A, V_{GS}=0V$			1.2	V
Body Diode Reverse Recovery Time	t_{rr}	$I_F=15A$ $di/dt=100A/us$		28		nS
Body Diode Reverse Recovery Charge	Q_{rr}			12		nC
Maximum Continuous Drain to Source Diode Forward Current	I_S				54	A
Maximum Pulsed Drain to Source Diode Forward Current	I_{SM}				216	A

Notes:

1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 0.5%

PARAMETER CHARACTERISTIC CURVE

Fig 1: Output Characteristics

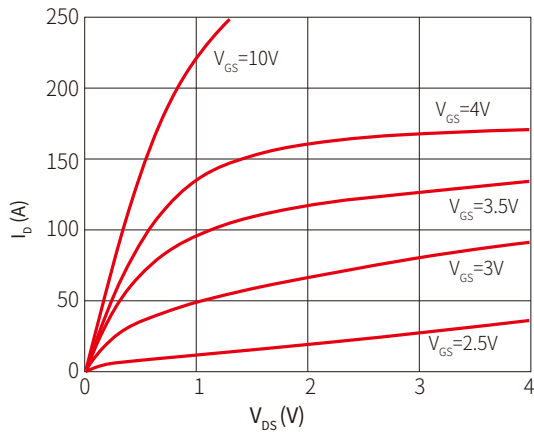


Figure 2: Typical Transfer Characteristics

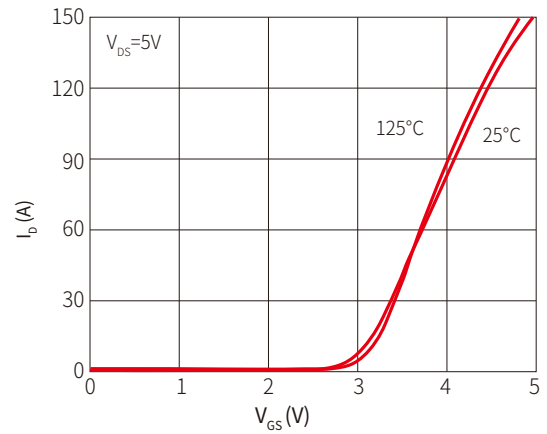


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

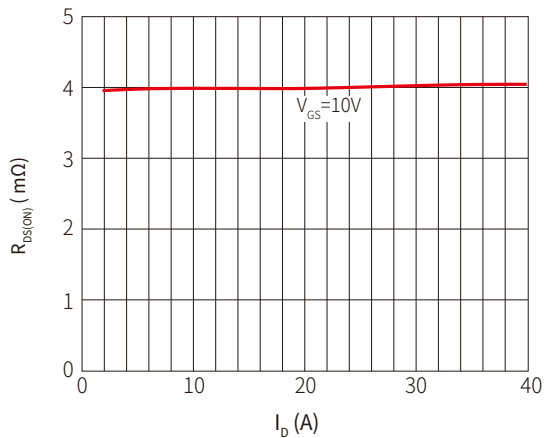


Figure 4: On-Resistance vs. Junction Temperature

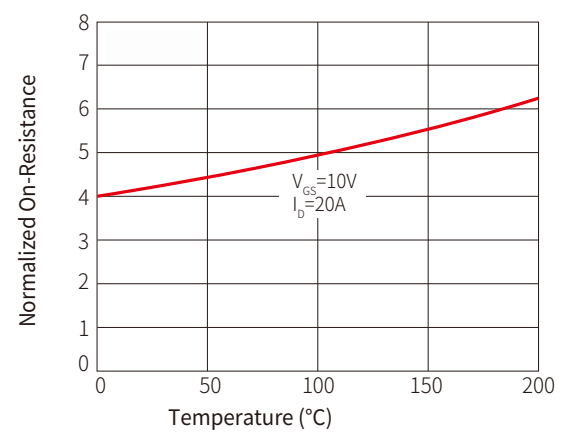


Figure 5: On-Resistance vs. Gate-Source Voltage

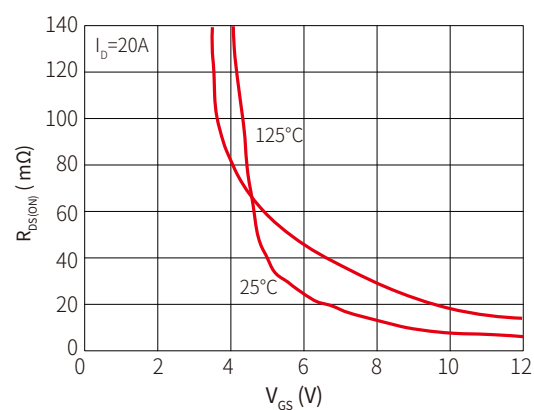


Figure 6: Body-Diode Characteristics

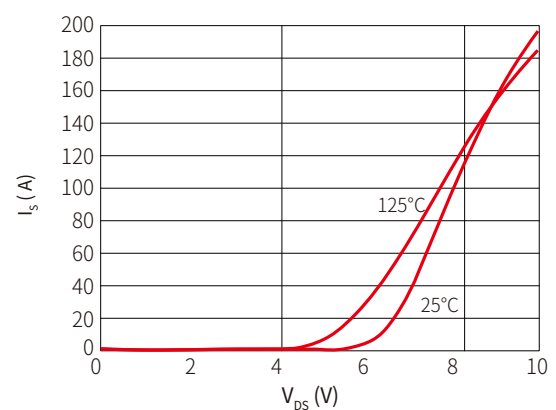


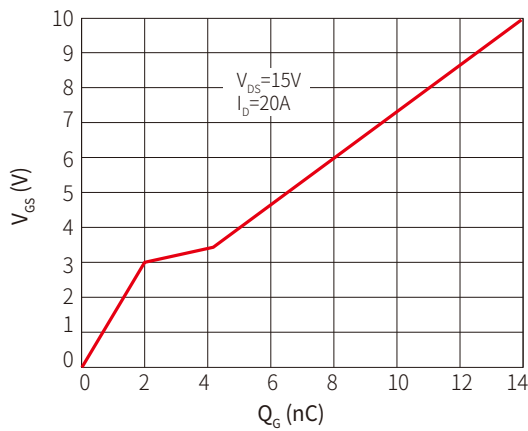
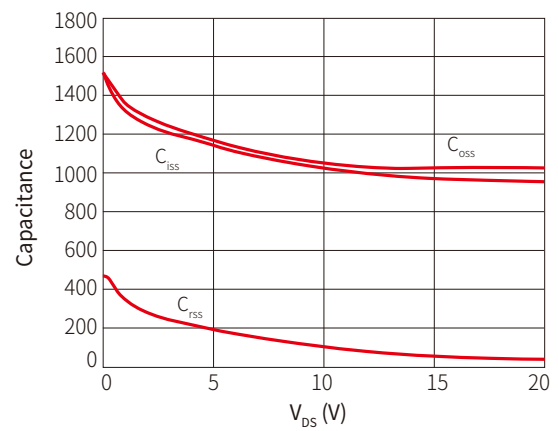
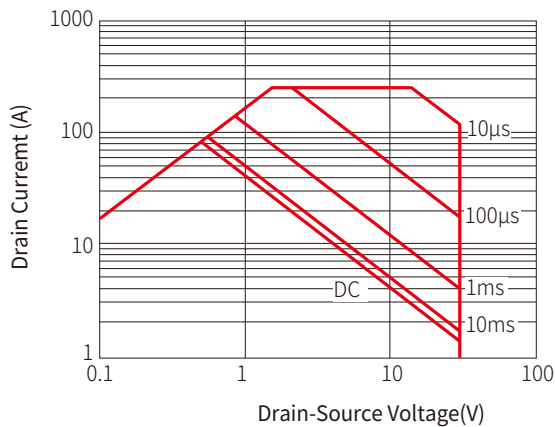
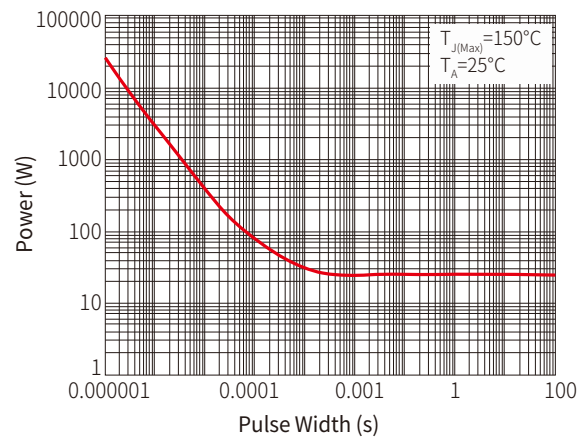
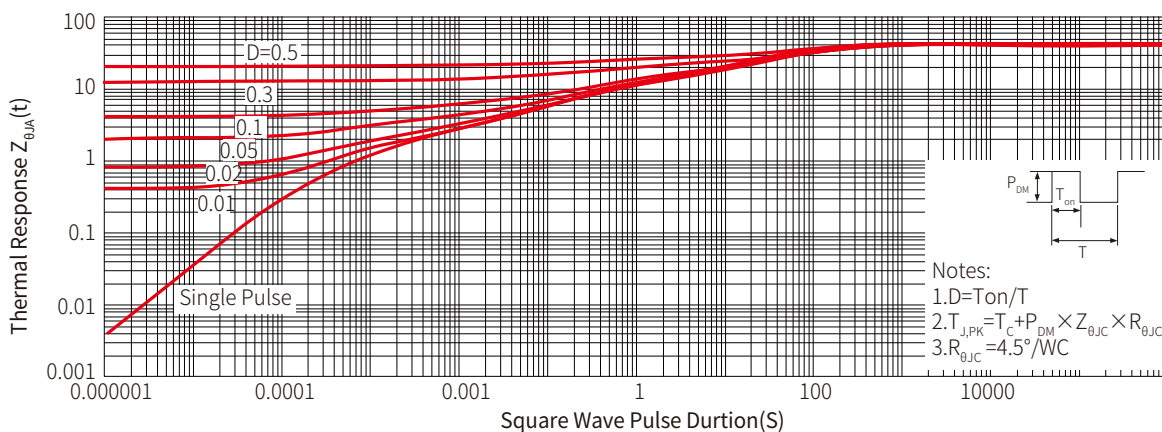
Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

Figure 9: Maximum Forward Biased Safe Operating Area

Figure 10: Single Pulse Power Rating Junction-to-Ambient

Figure 11: Normalized Maximum Transient Thermal Impedance


Figure 1: Mechanical drawing of the package showing top, side, and detail views. The top view shows dimensions D1, E1, and a central die area with dimensions D2, E2, and D. The side view shows the package height and the exposed die attached pad. The detail view shows the terminal tip and the even/odd terminal side.

Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.17	0.035	0.046
A1	0.00	0.05	0.000	0.002
A3	0.254REF		0.010REF	
b	0.31	0.51	0.012	0.020
b1	0.03	0.13	0.001	0.005
b2	0.21	0.41	0.008	0.016
D	5.15BSC		0.203BSC	
D1	5.00BSC		0.197BSC	
D2	3.70	3.90	0.146	0.154
E	6.15BSC		0.242BSC	
E1	6.00BSC		0.236BSC	
E2	3.56	3.76	0.140	0.148
e	1.27BSC		0.050BSC	
L	0.51	0.71	0.020	0.028
M	0.51	0.71	0.020	0.028
P	10°	12°	0.394°	0.472°
aaa	0.10		0.004	
bbb	0.10		0.004	
ccc	0.10		0.004	
ddd	0.05		0.002	
eee	0.08		0.003	

Part Number	Component Package	Marking	QTY/Reel	Reel Size
SNM80N03HG	PDFN5×6-8L	 80N03H XXXX	5000PCS	13"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.