

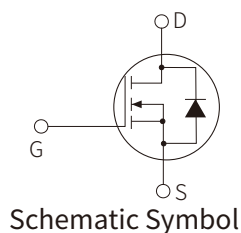
FEATURES

- Uses advanced MOSFET-DPMOS technology
- Extremely low on-resistance $R_{DS(on)}$
- Excellent $Q_g \times R_{DS(on)}$ product(FOM)
- Qualified according to JEDEC criteria



APPLICATION

- Networking DC-DC Power System
- Battery management
- Load Switch



APPROVALS

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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Pulsed drain current ($T_c=25^\circ\text{C}$, tp limited by T_{jmax})	$I_{D\ pulse}$	1104	A
Continuous Drain Current	I_D	$T_c=25^\circ\text{C}$ 276	A
		$T_c=100^\circ\text{C}$ 175	A
Gate-Source Voltage	V_{GSS}	± 20	V
Power Dissipation ($T_c=25^\circ\text{C}$)	P_{tot}	208	W
Junction Temperature	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$
Thermal Resistance- Junction to Case	$R_{\theta JC}$	0.6	$^\circ\text{C/W}$
Thermal resistance, junction – Ambient(min. footprint)	$R_{\theta JA}$	62	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V,I _{DS} =250μA	60			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} ,I _{DS} =250μA	1.2	1.8	2.4	V
Drain Leakage Current	I _{DSS}	V _{DS} =60V,V _{GS} =0V			1	μA
Gate Leakage Current	I _{GSS}	V _{GS} =±20V,V _{DS} =0V			±100	nA
On-State Resistance ⁽³⁾	R _{DS(on)}	V _{GS} =10V,I _D =30A		0.95	1.25	mΩ
		V _{GS} =4.5V,I _D =20A		1.15	1.5	mΩ
Dynamic Characteristics						
Total Gate Charge	Q _g	V _{GS} =10V V _{DS} =30V,I _D =30A,f=1MHz		55		nC
Gate Source Charge	Q _{gs}			16		nC
Gate Drain("Miller") Charge	Q _{gd}			10		nC
Input capacitance	C _{iss}	V _{GS} =0V,V _{DS} =30V, f=1MHz		3552		pF
Output capacitance	C _{oss}			816		pF
Reverse transfer capacitance	C _{rss}			53		pF
Switching Characteristics						
Turn-on Delay Time	t _{d(on)}	V _{DD} =30V,V _{GS} =10V R _{GEN} =2.7Ω		9		nS
Turn-on Rise Time	t _r			12		nS
Turn-Off Delay Time	t _{d(off)}			47		nS
Turn-Off Fall Time	t _f			12		nS
Drain-Source Diode Characteristics and Max Ratings						
Drain to Source Diode Forward Voltage	V _{SD}	I _{SD} =30A,V _{GS} =0V		0.8	1.2	V
Diode continuous forward current T _C = 25°C	I _S				276	A
Diode pluse current T _C = 25°C	I _{S pluse}				1104	A
Body Diode Reverse Recovery Time ⁽¹⁾	t _{rr}	I _F =30A, dI/dt=100A/μs		32		ns
Body Diode Reverse Recovery Charge ⁽¹⁾	Q _{rr}			65		nC

Notes:

1. Defined by design. Not subject to production test

PARAMETER CHARACTERISTIC CURVE

Fig 1: Output Characteristics

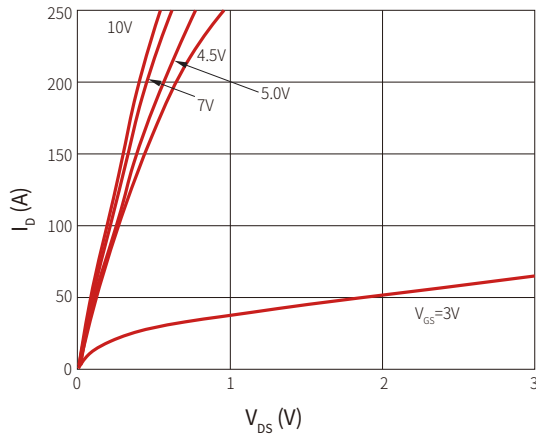


Figure 2: Transfer Characteristics

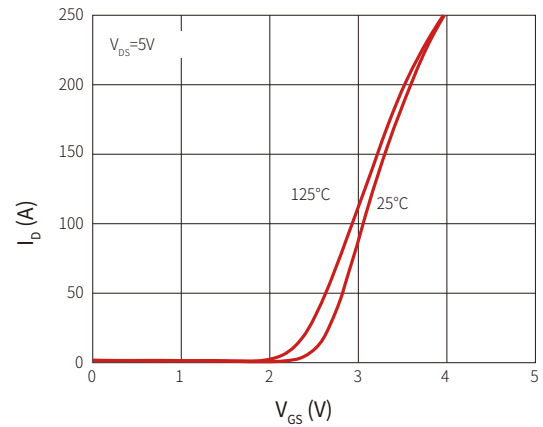


Figure 3: On-Resistance vs. Drain Current

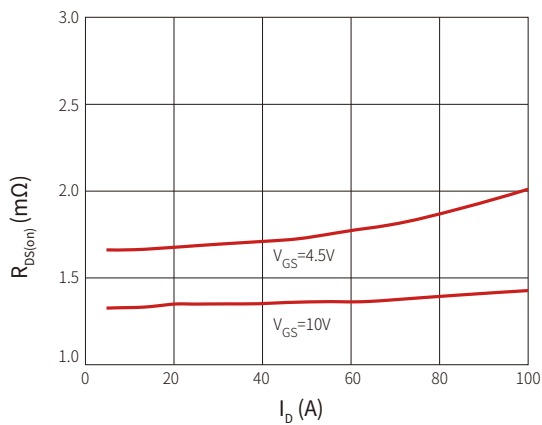


Figure 4: $R_{DS(on)}$ vs Gate Voltage

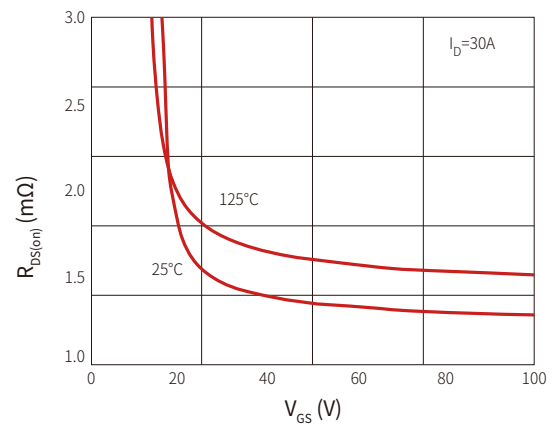


Figure 5: $R_{DS(on)}$ vs. Temperature

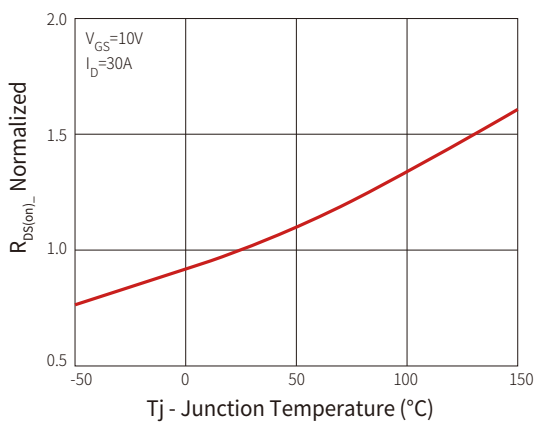


Figure 6: Capacitance Characteristics

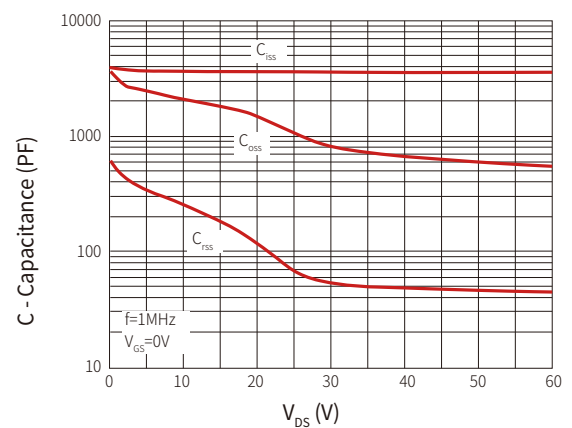
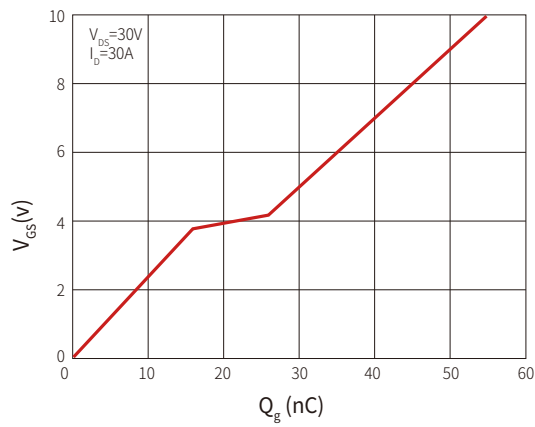
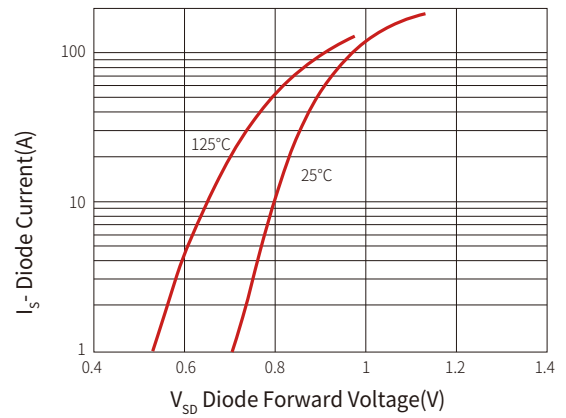
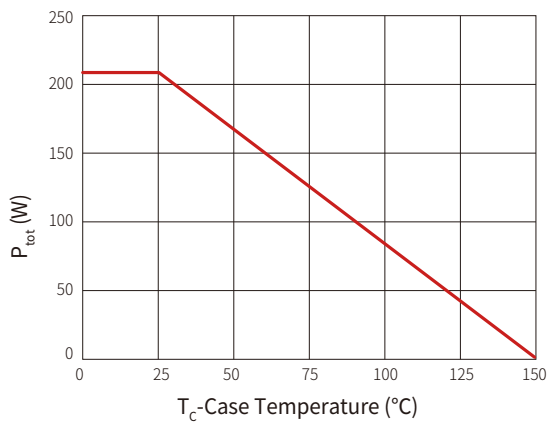
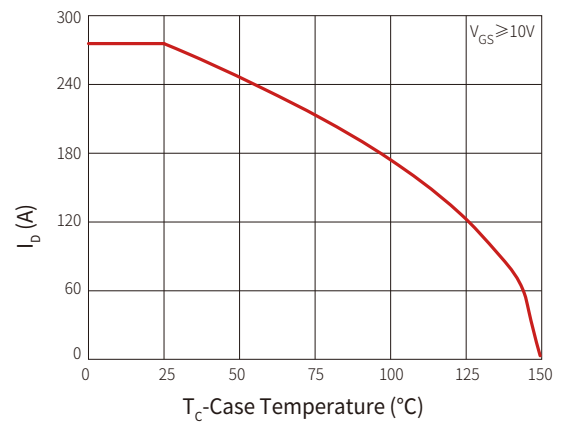
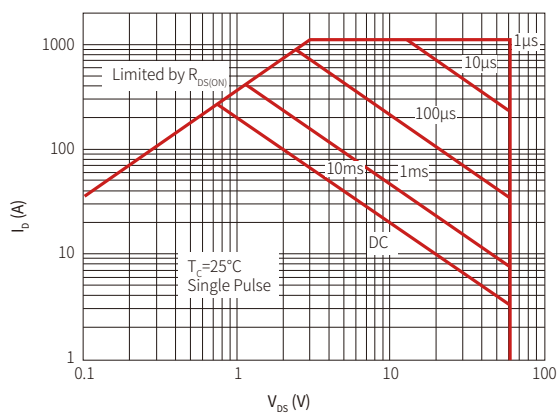
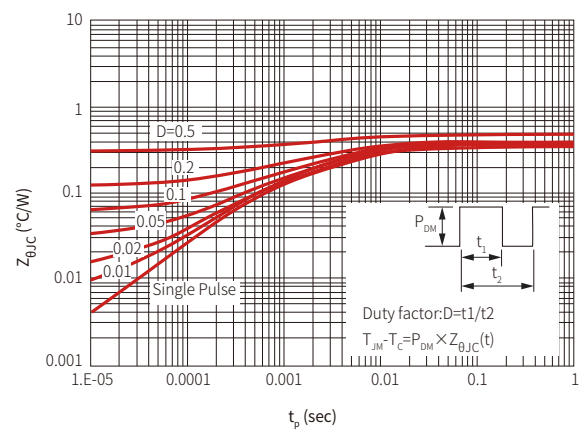
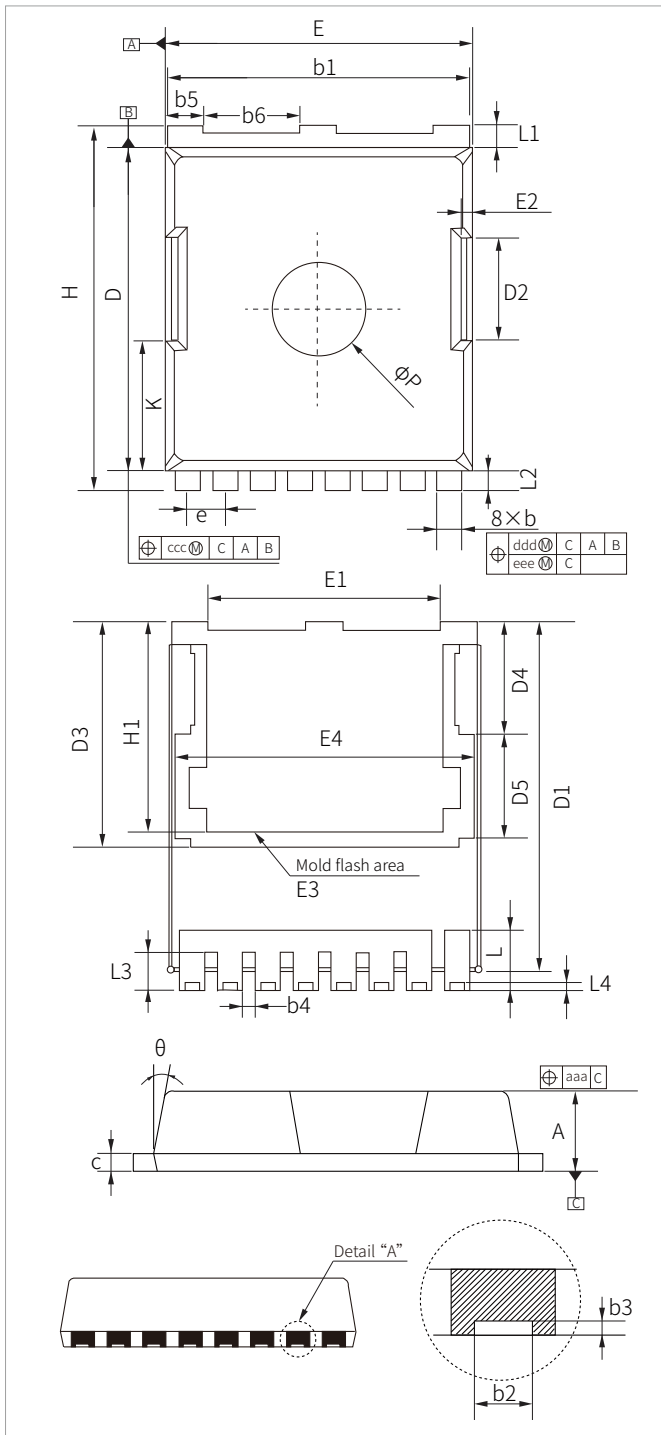


Figure 7: Gate Charge Characteristics

Figure 8: Body-Diode Forward Characteristics

Figure 9: Power Dissipation

Figure 10: Drain Current Derating

Figure 11: Safe Operating Area

Figure 12: Max. Transient Thermal Impedance


TOLL-8L PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.087	0.094
b	0.70	0.90	0.028	0.035
b1	9.70	9.90	0.382	0.390
b2	0.36	0.55	0.014	0.022
b3	0.05	-	0.002	-
b4	0.30	0.50	0.012	0.020
b5	1.10	1.30	0.043	0.051
b6	3.00	3.20	0.118	0.126
c	0.40	0.60	0.016	0.024
D	10.28	10.55	0.405	0.415
D1	10.98	11.18	0.432	0.440
D2	3.20	3.40	0.126	0.134
D3	7.15		0.281	
D4	3.59		0.141	
D5	3.26		0.128	
e	1.10	1.30	0.043	0.051
E	9.80	10.00	0.386	0.394
E1	7.40	7.60	0.291	0.299
E2	7.40	7.60	0.291	0.299
E3	8.50		0.335	
E4	9.46		0.372	
H	11.50	11.85	0.453	0.466
H1	6.55	6.75	0.258	0.266
K	4.08	4.28	0.161	0.169
L	1.60	2.10	0.063	0.083
L1	0.50	0.90	0.020	0.035
L2	0.50	0.70	0.020	0.028
L3	1.00	1.30	0.040	0.051
L4	0.13	0.33	0.005	0.013
P	2.85	3.15	0.112	0.124
θ	10°REF		0.398°REF	
aaa	0.20		0.008	
ccc	0.20		0.008	
ddd	0.25		0.010	
eee	0.20		0.008	

ORDERING INFORMATION

Part Number	Component Package	Marking	QTY/Reel	QTY/Box
SNM360N06T	TOLL-8L	 360N06 XXXX	2000PCS	10000PCS

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.