

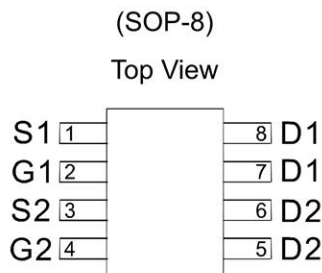
GENERAL FEATURES

- $R_{DS(ON)} \leq 35 \text{ m}\Omega @ V_{GS}=10\text{V}$
- $R_{DS(ON)} \leq 45 \text{ m}\Omega @ V_{GS}=4.5\text{V}$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

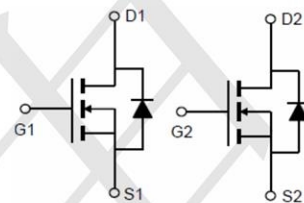
Application

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

Package and Pin Configuration

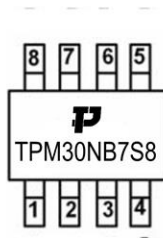


Circuit diagram



Schematic diagram

Marking:



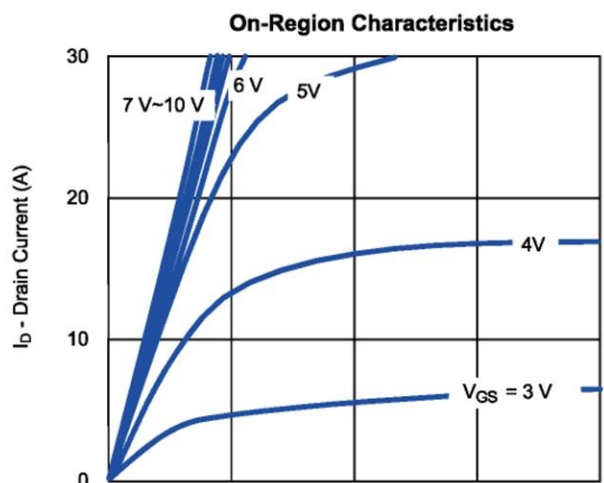
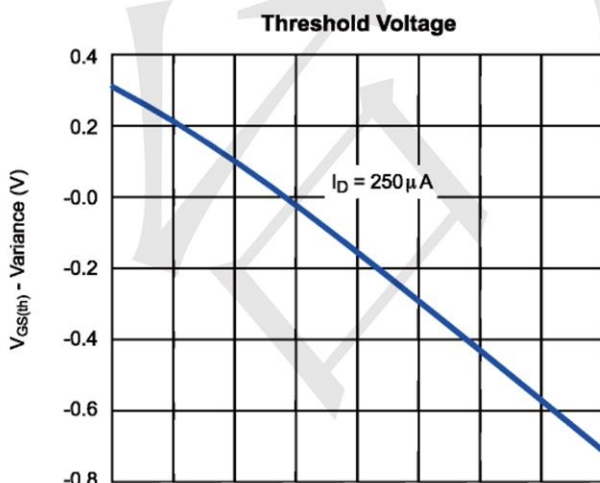
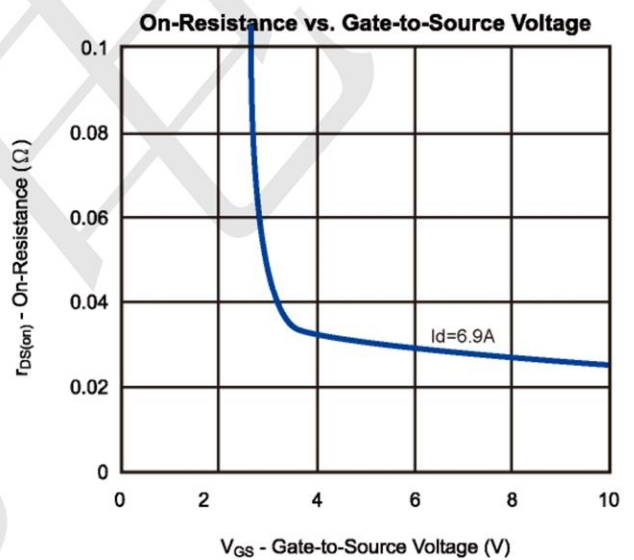
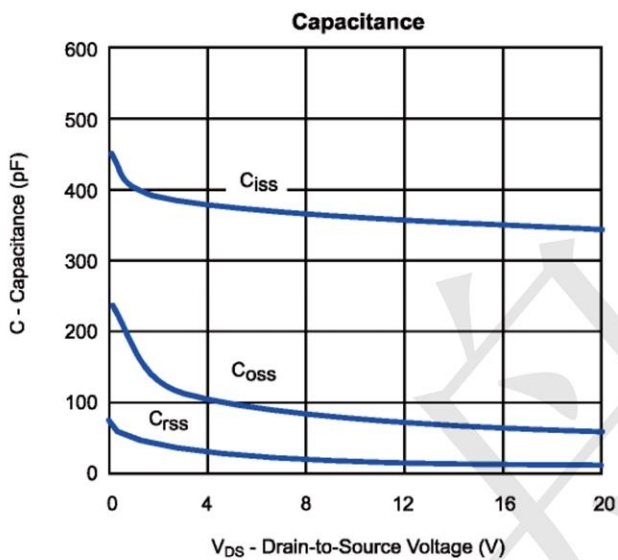
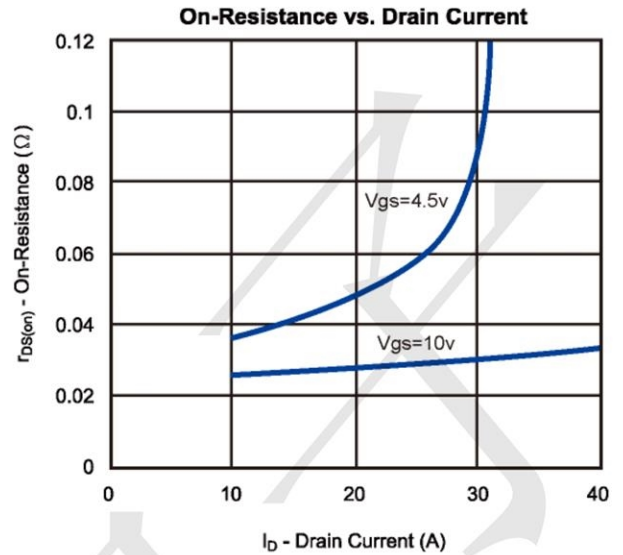
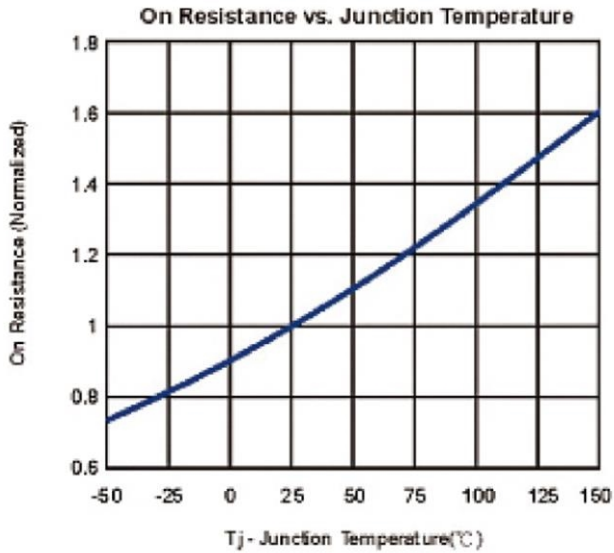
Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

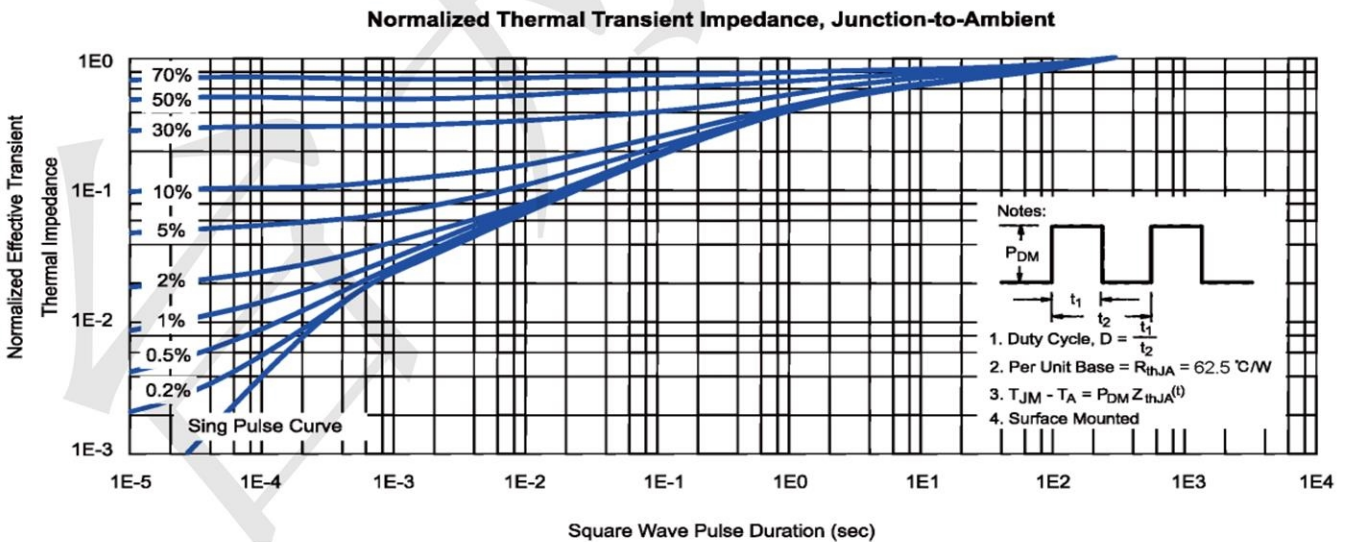
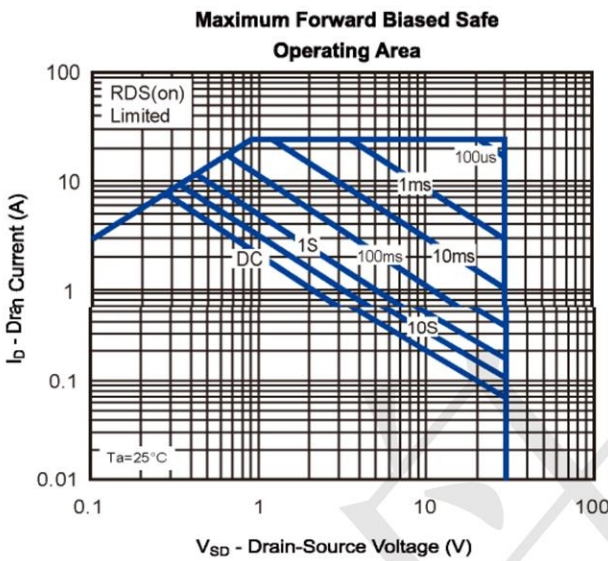
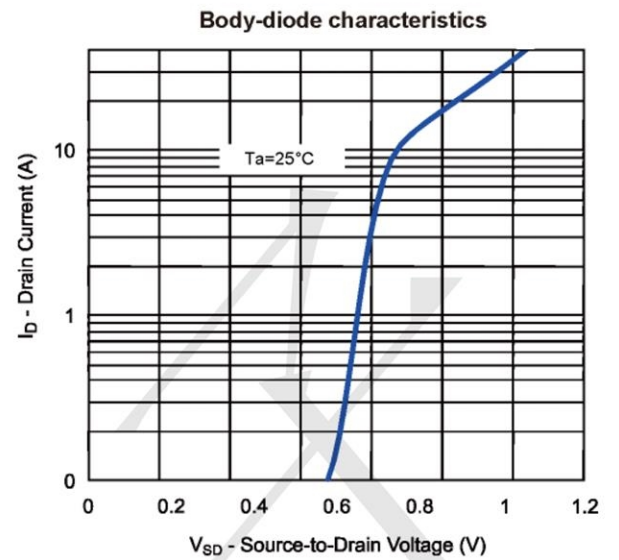
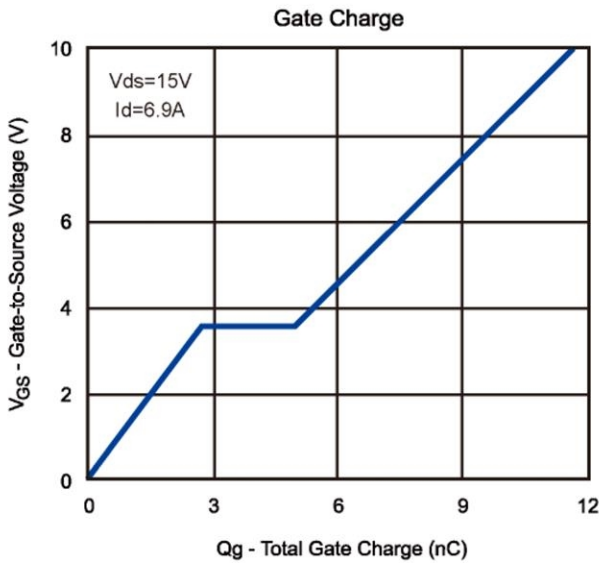
Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_A=25^\circ\text{C}$	7
		$T_A=70^\circ\text{C}$	4.8
Pulsed Drain Current	I_{DM}	24	A
Maximum Power Dissipation	P_D	$T_A=25^\circ\text{C}$	2
		$T_A=70^\circ\text{C}$	1.3
Operating Junction Temperature	T_J	-55 to 150	$^\circ\text{C}$
Thermal Resistance-Junction to Ambient*	$R_{\theta JA}$	62.5	$^\circ\text{C}/\text{W}$

Electrical Characteristics (T_A=25°C unless otherwise noted)

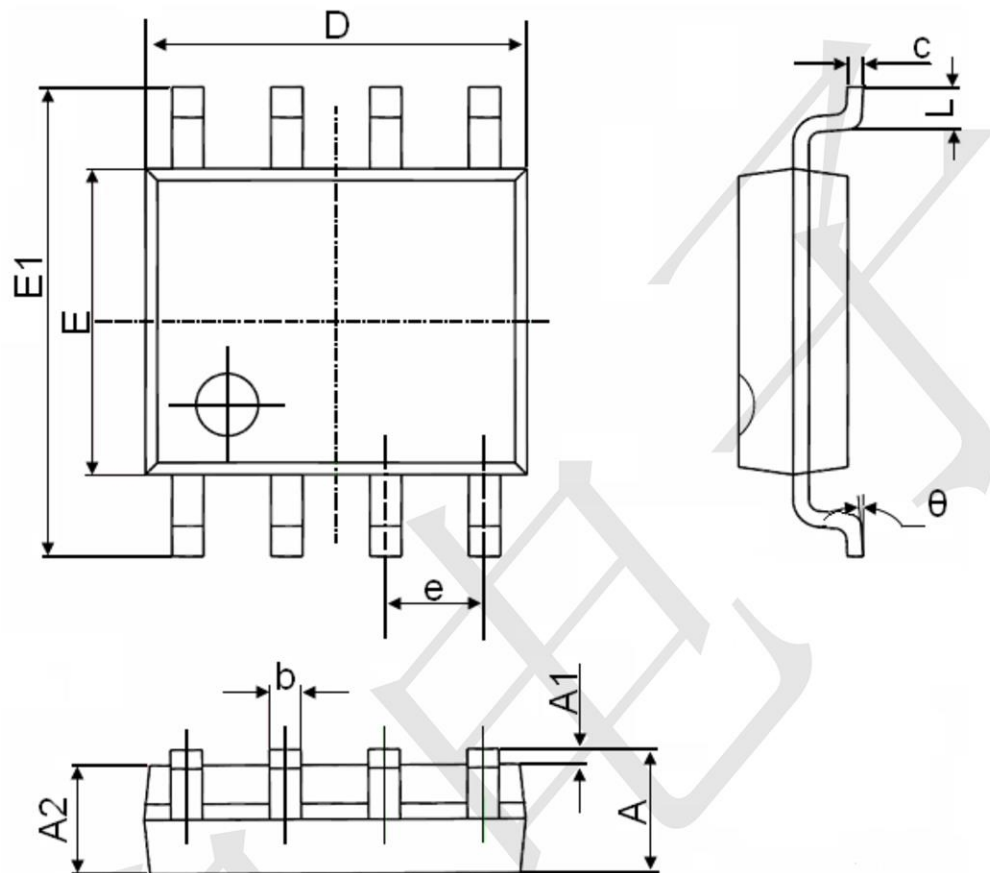
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250 μA	30			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250 μA	1		3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =30V, V _{GS} =0V			1	μA
R _{DS(ON)}	Drain-Source On-Resistance	V _{GS} =10V, I _D = 6.9A		18	35	mΩ
		V _{GS} =4.5V, I _D = 5.8A		24	45	
V _{SD}	Diode Forward Voltage	I _S =1.7A, V _{GS} =0V		0.75	1.2	V
DYNAMIC						
Q _g	Total Gate Charge	V _{DS} =15V, V _{GS} =10V, I _D =6.9A		11.5		nC
Q _{gs}	Gate-Source Charge			2.7		
Q _{gd}	Gate-Drain Charge			2.3		
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz		350		pF
C _{oss}	Output Capacitance			65		
C _{rss}	Reverse Transfer Capacitance			16		
t _{d(on)}	Turn-On Delay Time	V _{DD} =15V, R _L =15Ω I _D =1A, V _{GEN} =10V R _C =6Ω		9		ns
t _r	Turn-On Rise Time			10		
t _{d(off)}	Turn-Off Delay Time			32		
t _f	Turn-Off Fall Time			3.5		

Typical Electrical and Thermal Characteristics





SOP-8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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