TECH PUBLIC
台舟电子

TPM20PB5LS8

Dual P-Channel Enhancement Mode MOSFET

www.sot23.com.tw

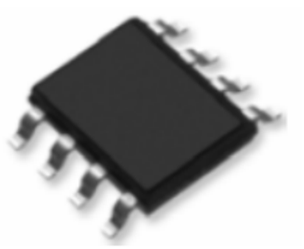
GENERAL FEATURES

- V_{DS}= -20V
- $R_{DS(on)}$= 68mΩ @V_{GS}= -1.8V，I_D = -2A
- $R_{DS(on)}$= 52mΩ @V_{GS}= -2.5V，I_D = -4.1A
- $R_{DS(on)}$ = 39mΩ@V_{GS}= -4.5V ，I_D = -5.0A

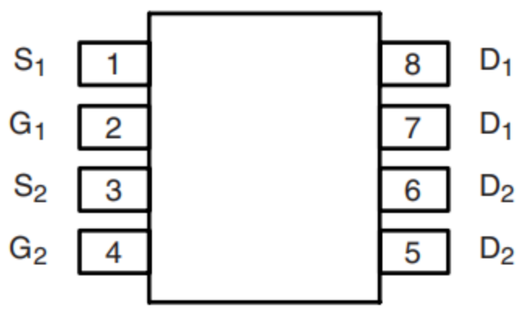
Application

- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

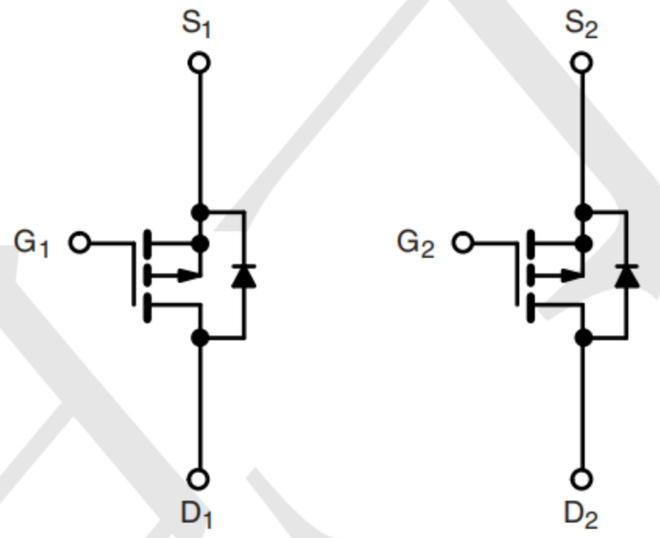
Package and Pin Configuration



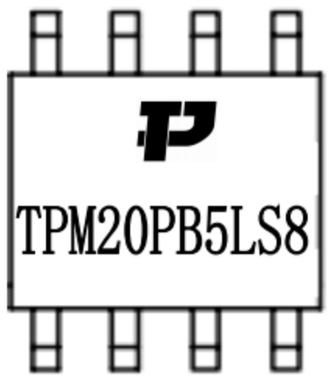
SOP-8 top view



Circuit diagram



Marking:



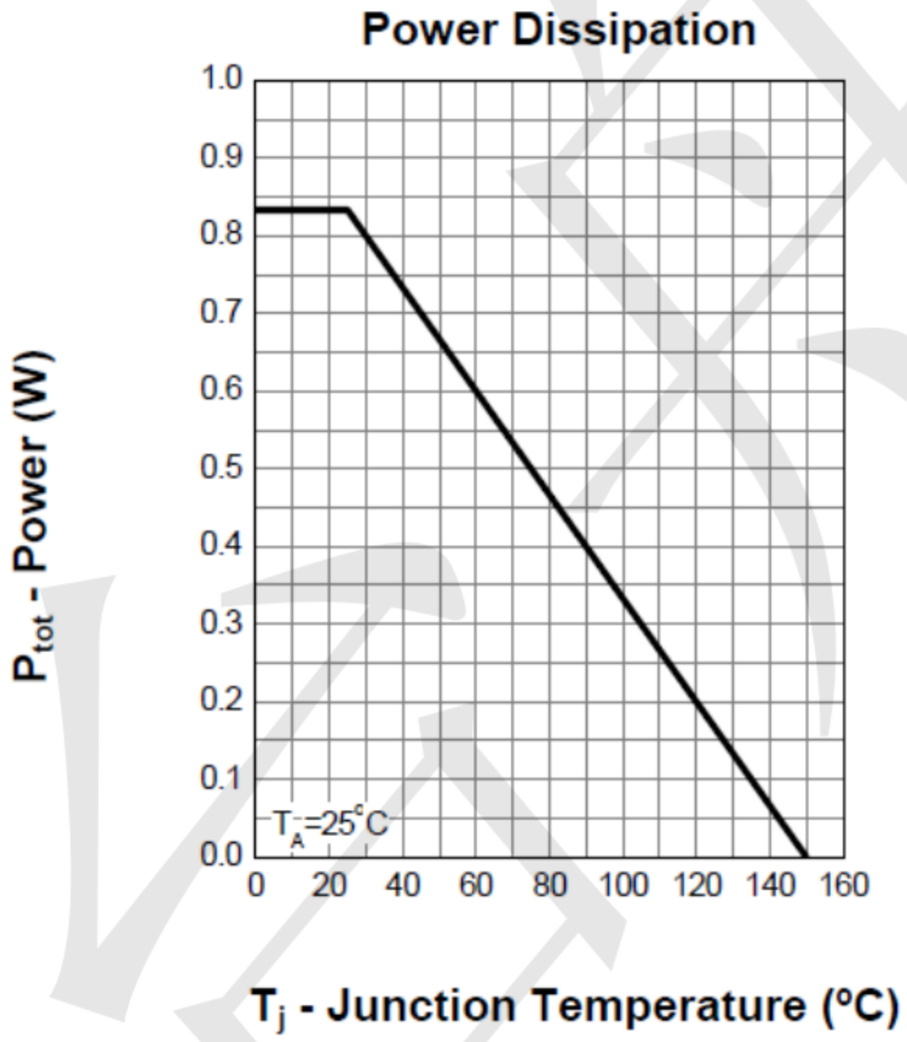
Absolute Maximum Ratings (T_A=25℃unless otherwise noted)

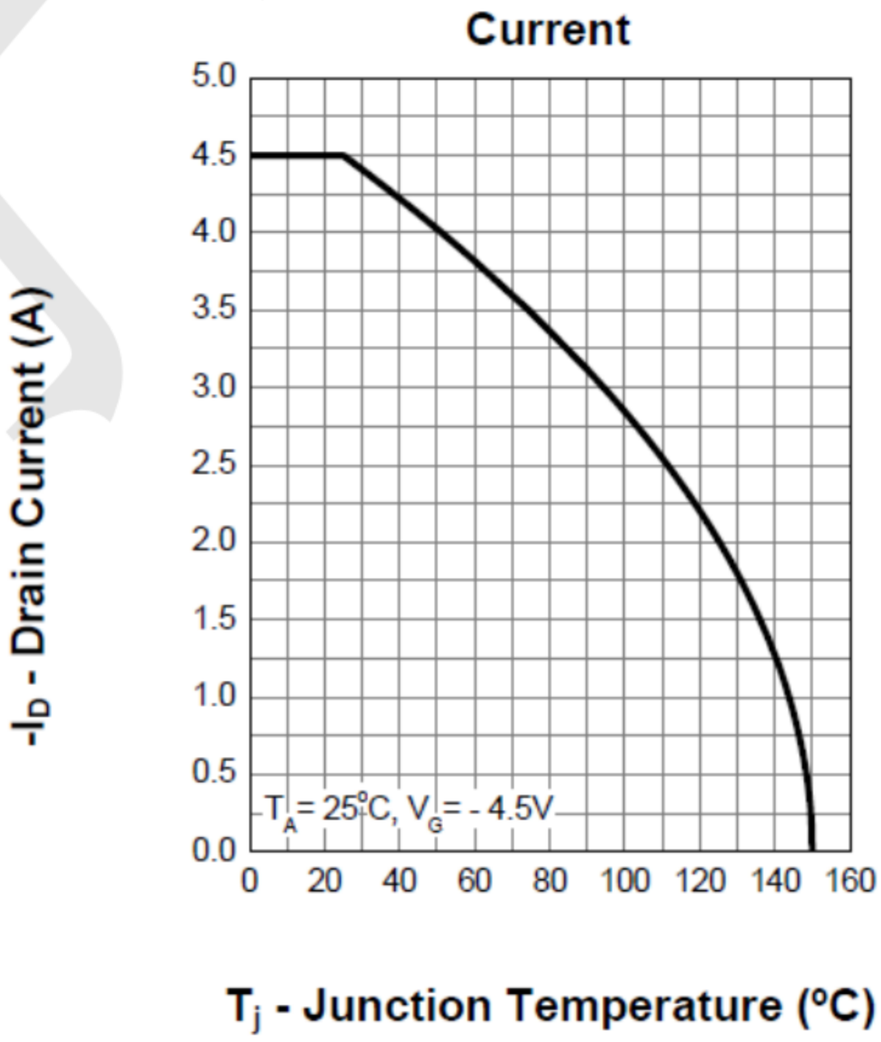
Parameter		Symbol	Rating	Units
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	±12	V
Drain Current (Note 1)	Continuous	I_D	-5.0	A
	Pulsed		-20	
Total Power Dissipation	@TA=25°C	P_D	1.25	W
	@TA=75°C		0.8	
Operating Junction Temperature Range		T_J	-55 to 150	°C

Electrical Characteristics (T_j=25℃unless otherwise noted)

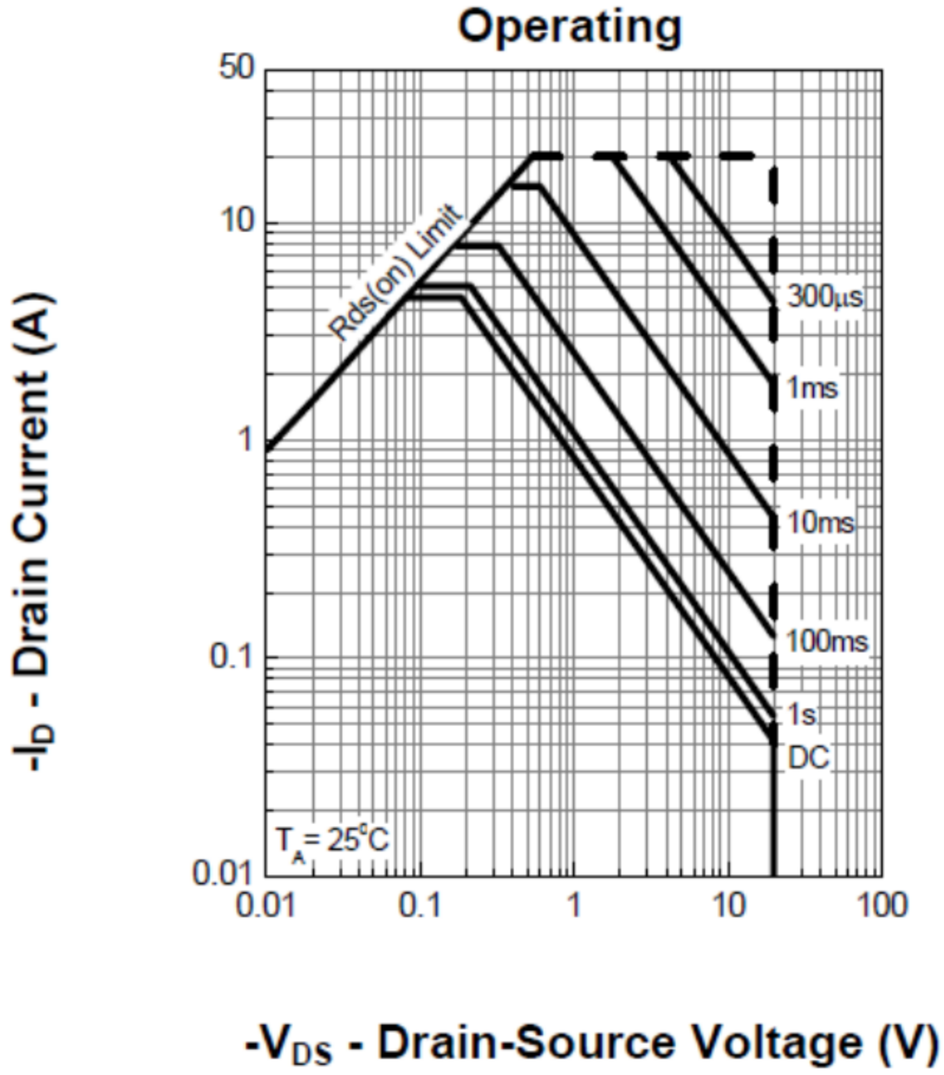
Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS (Note 2)						
BVDSS	Drain-Source Breakdown Voltage	I_D=-250μA, V_{GS}=0 V	-20	-	-	V
IDSS	Zero Gate Voltage Drain Current	V_{DS}=-16 V, V_{GS}=0 V	-	-	1	μA
IGSS	Gate-Body leakage current	V_{DS}=0 V, V_{GS}=±8 V	-	-	±100	μA
V_{GS}(th)	Gate Threshold Voltage	V_{DS}=V_{GS} I_D=-250μA	-0.4	-	-1	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance[2]	V_{GS}=-1.8V, I_D=-2A	-	45	68	mΩ
		V_{GS}=-2.50V, I_D=-4.1A		35	52	
		V_{GS}=-4.5V, I_D=-4.7A	-	33	39	
DYNAMIC PARAMETERS						
C_{iss}	Input Capacitance	V_{GS}=0V, V_{DS}=-10V, f=1MHz	-	1020	-	pF
C_{oss}	Output Capacitance		-	191	-	pF
C_{rss}	Reverse Transfer Capacitance		-	140	-	pF
SWITCHING PARAMETERS						
$t_{d(on)}$	Turn-On DelayTime[2]	V_{GS}=-10V, V_{GEN}=-4.5V, R_L=10Ω, R_G=6Ω I_D=-1A	-	25	50	ns
$t_{d(off)}$	Turn-Off DelayTime		-	71	142	
V_{SD}	Drain-Source Diode Forward Voltage	V_{GS}=0V,I_S=-1		-	-1.2	V

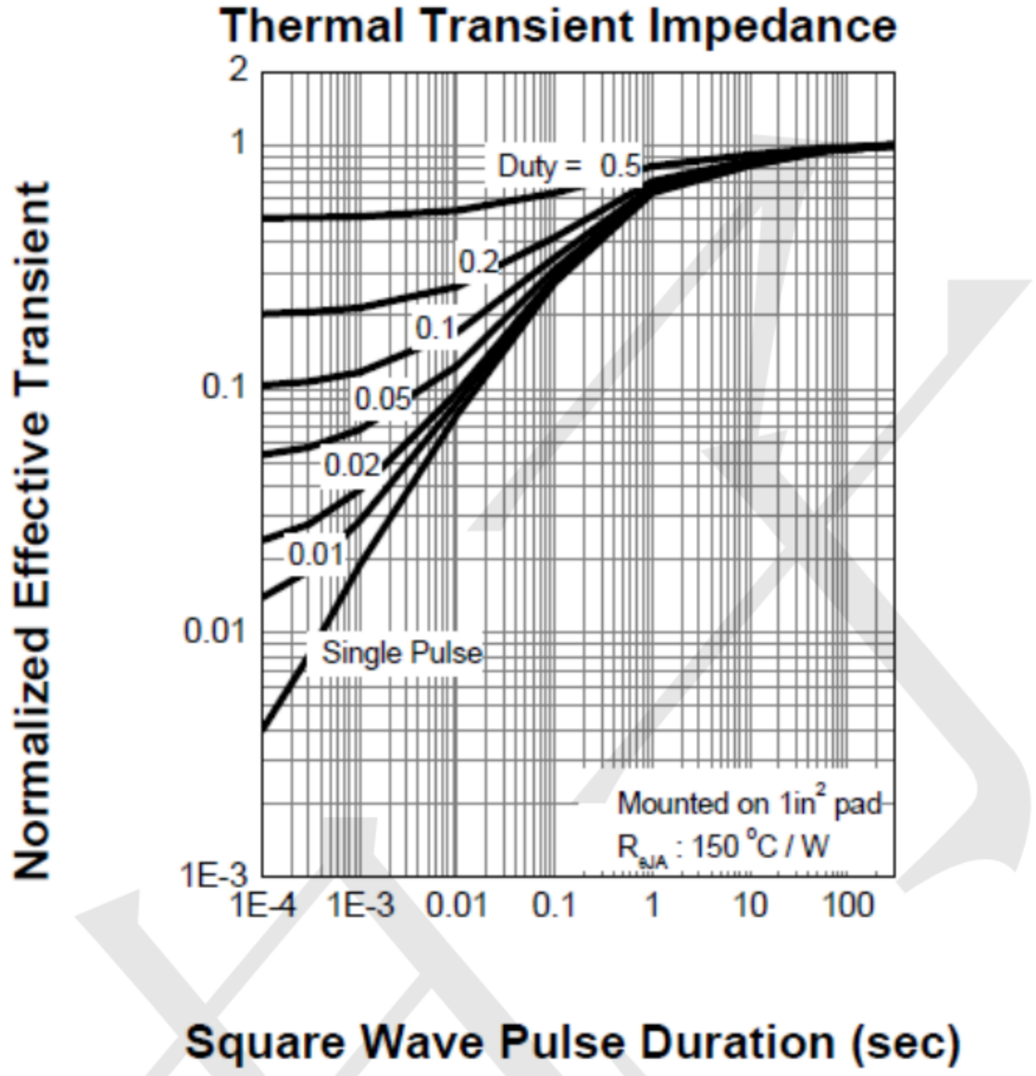
Typical Electrical and Thermal Characteristics

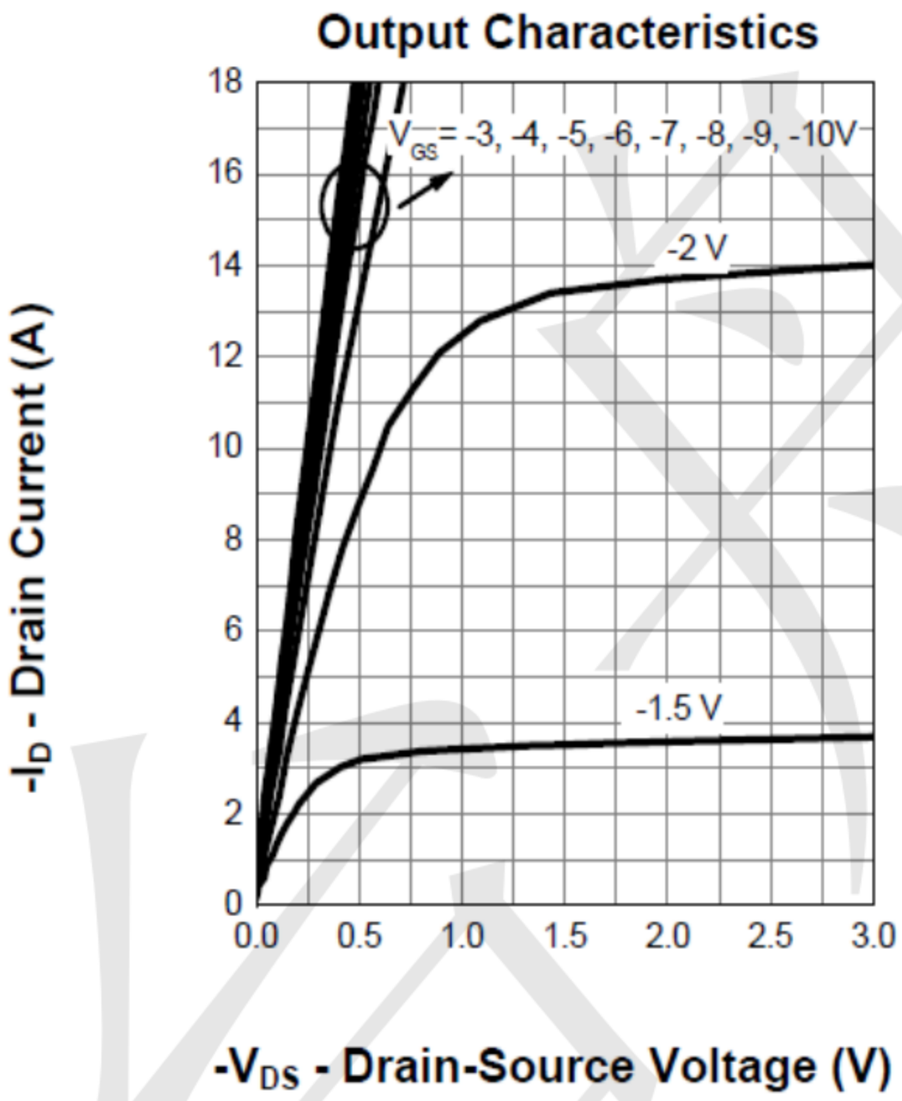


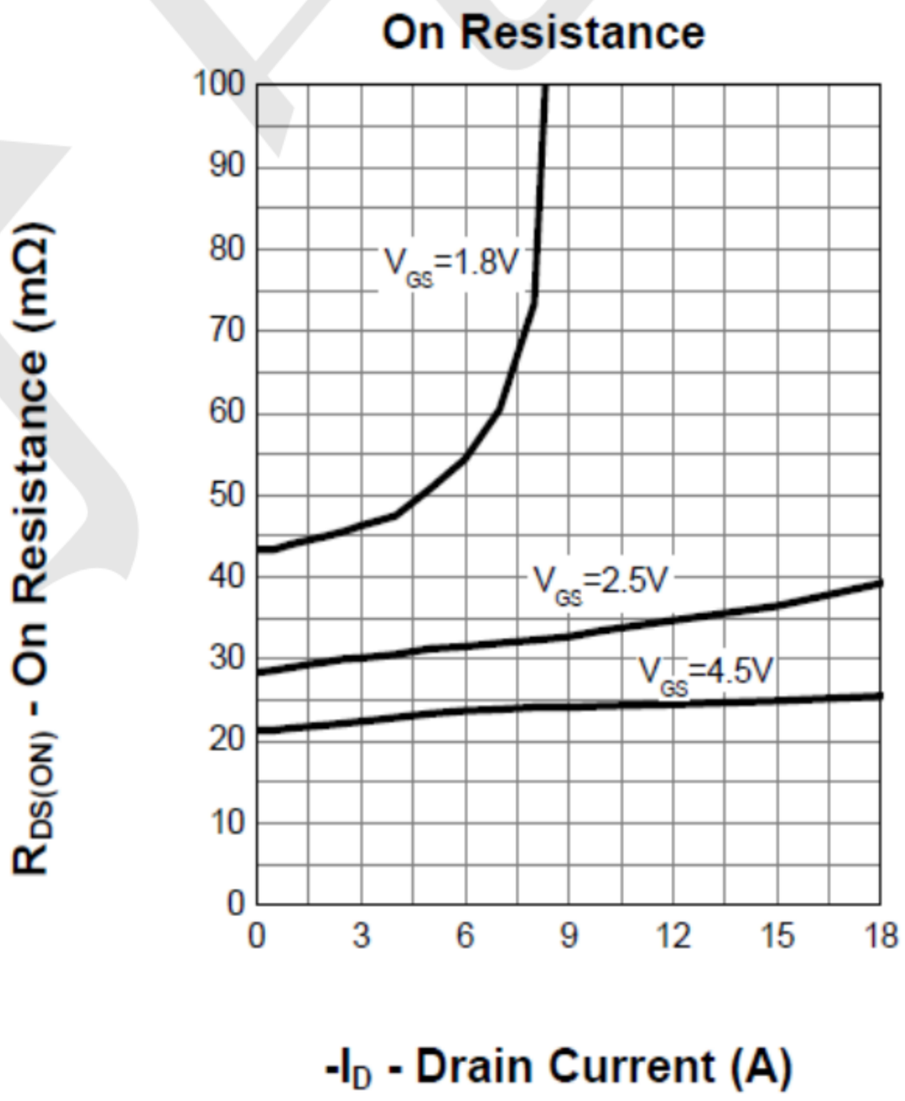


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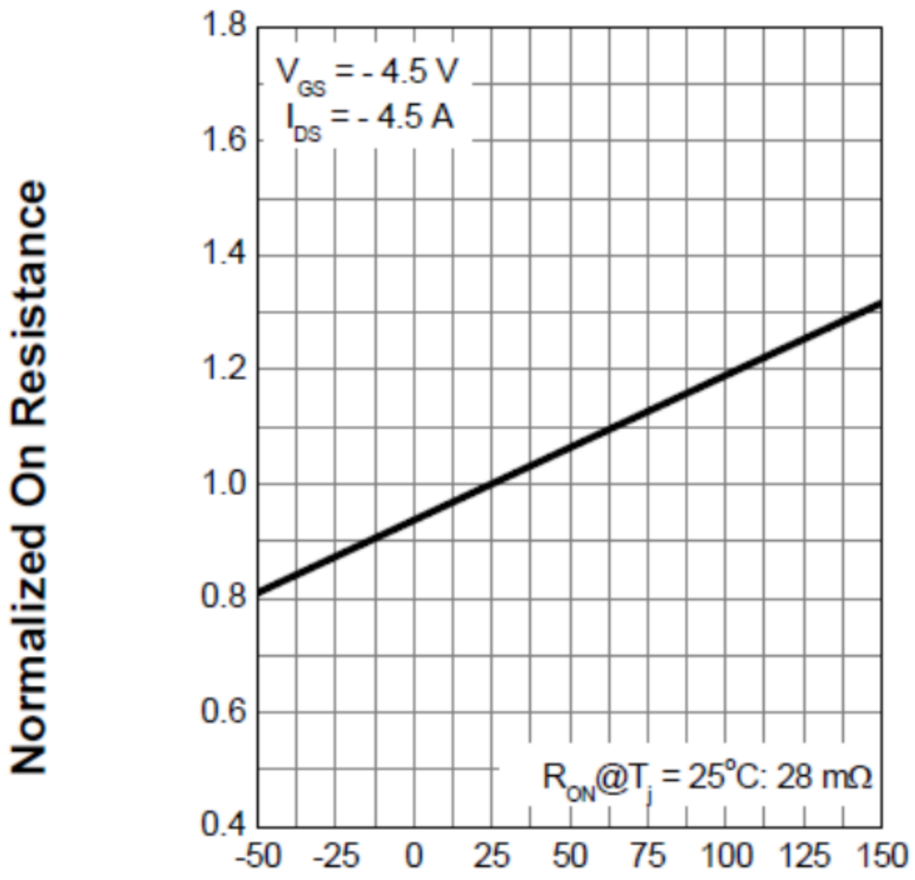




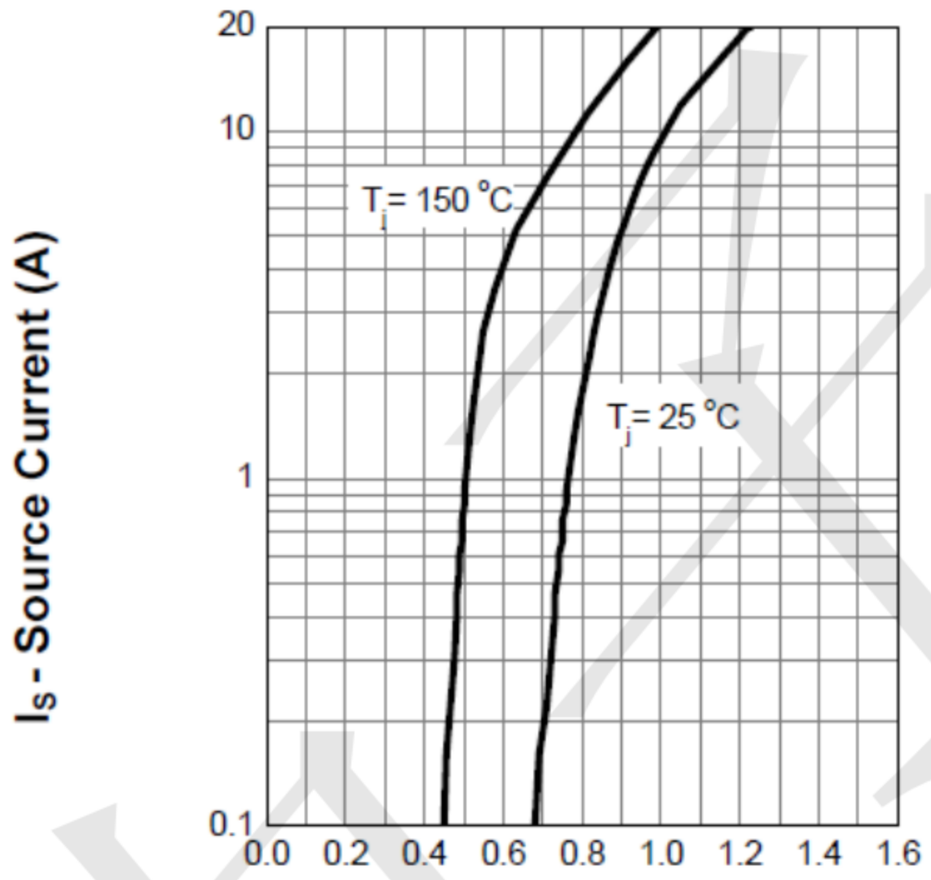


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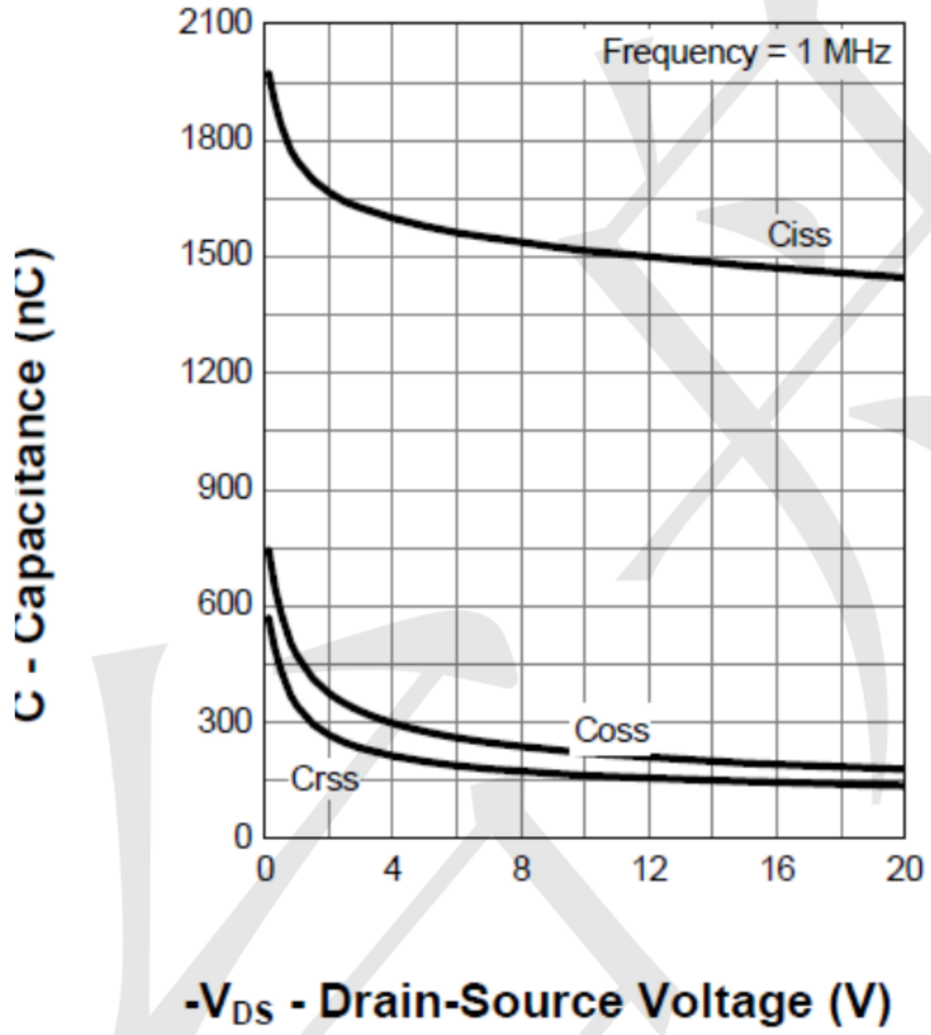
Normalized On Resistance



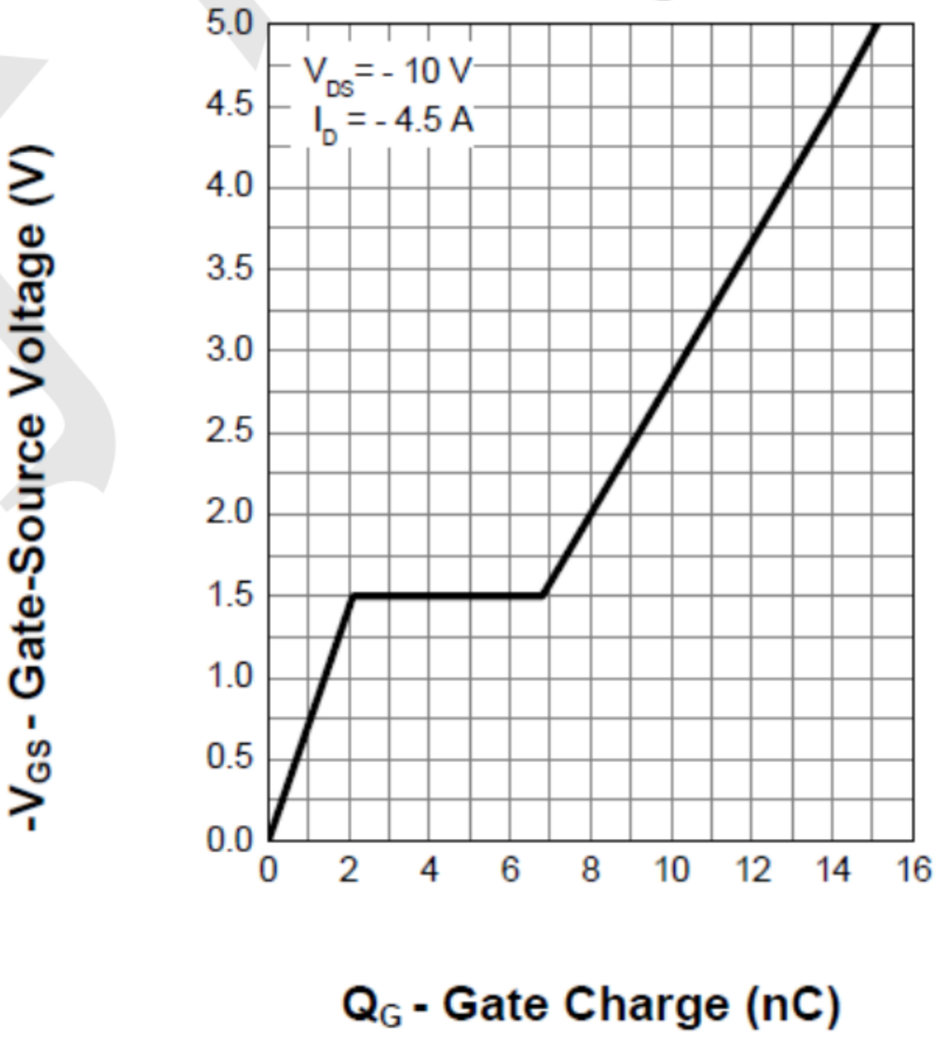
Current Diode Forward



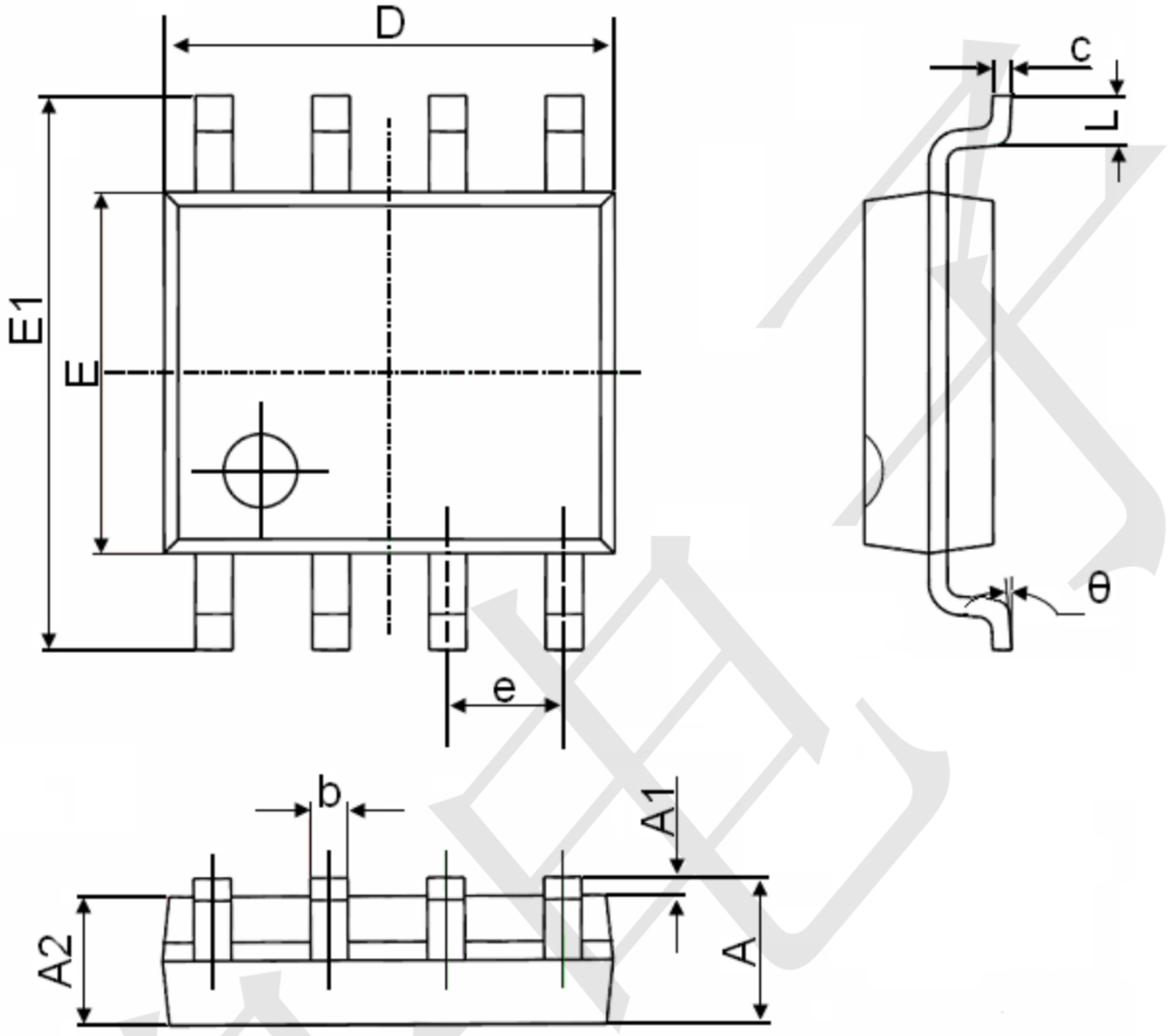
Capacitance



Gate Charge



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°