

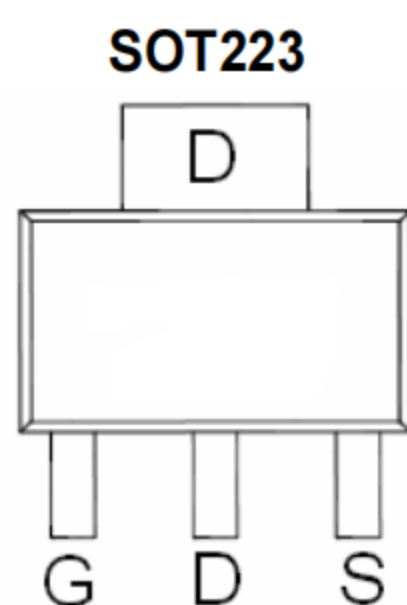
GENERAL FEATURES

V_{DS}	$R_{DS(ON)}$ MAX	I_D MAX
-100V	650mΩ@-10V	-2A
	700mΩ@-4.5V	

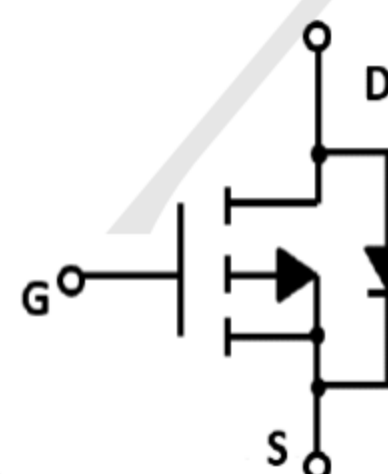
Application

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

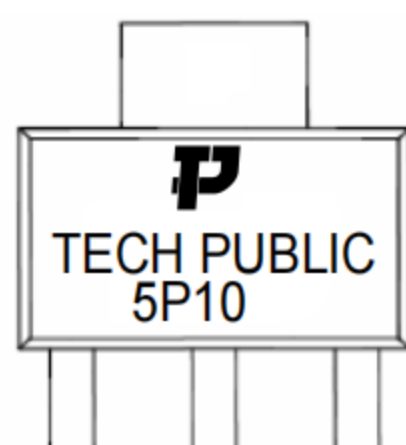
Package and Pin Configuration



Circuit diagram



Marking:

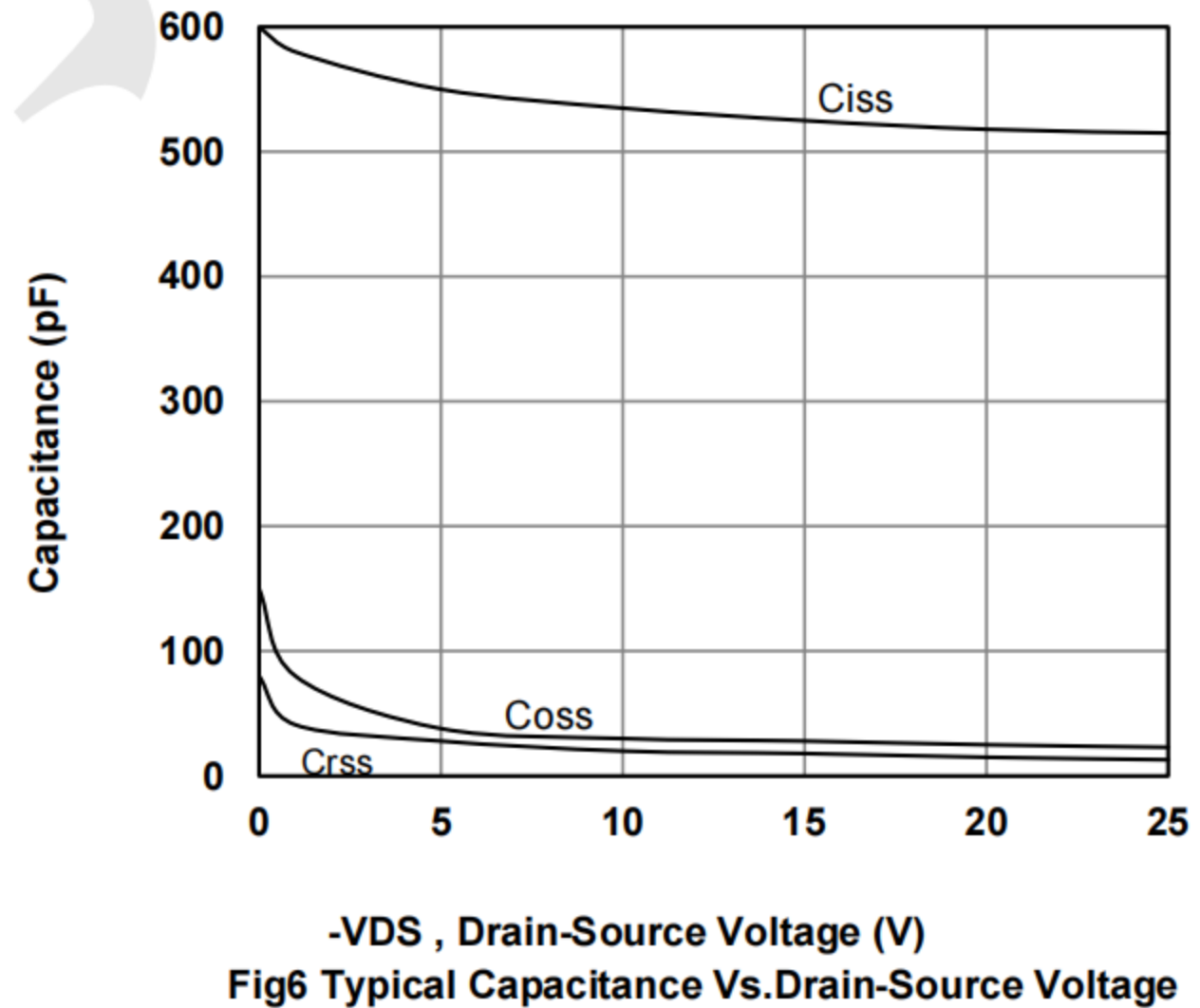
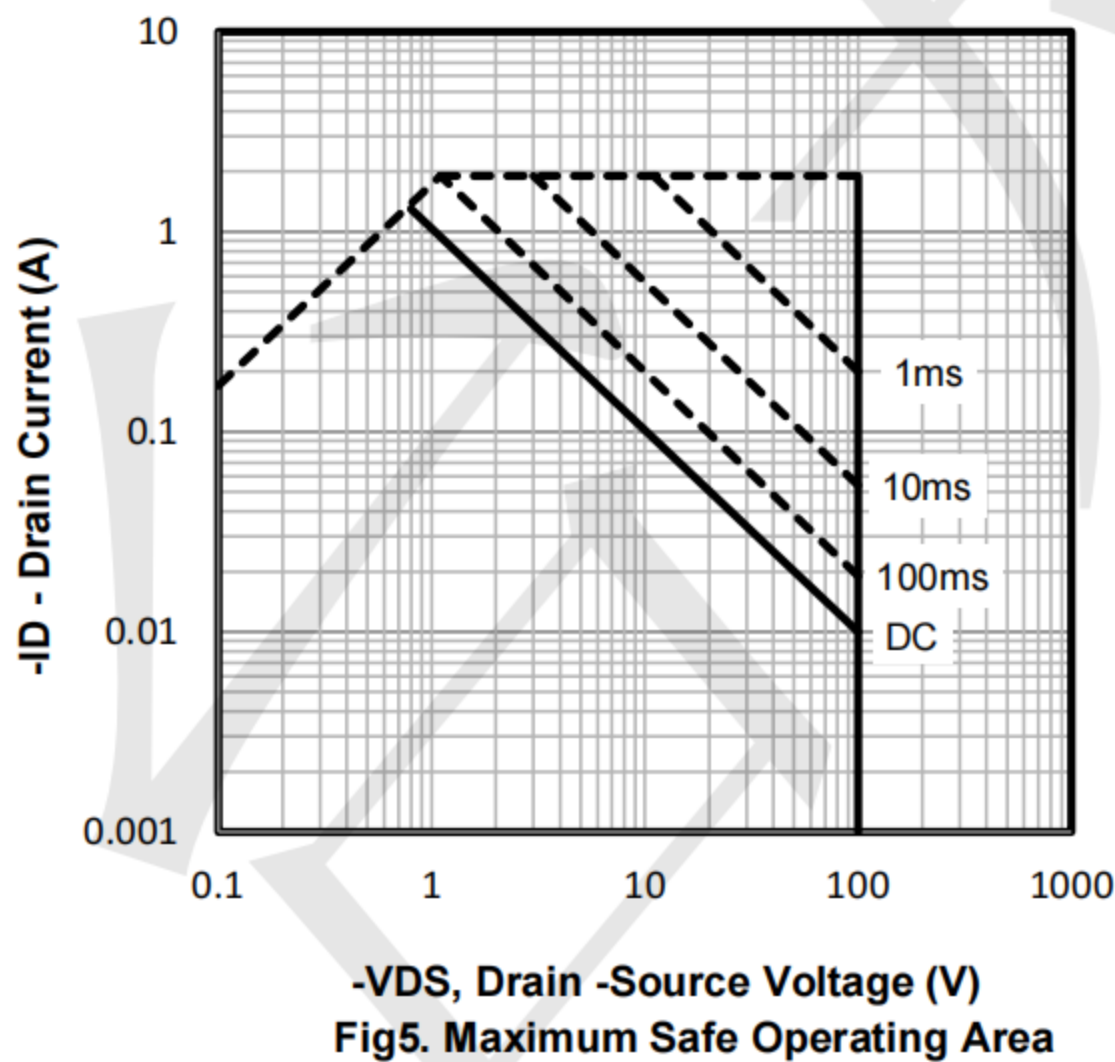
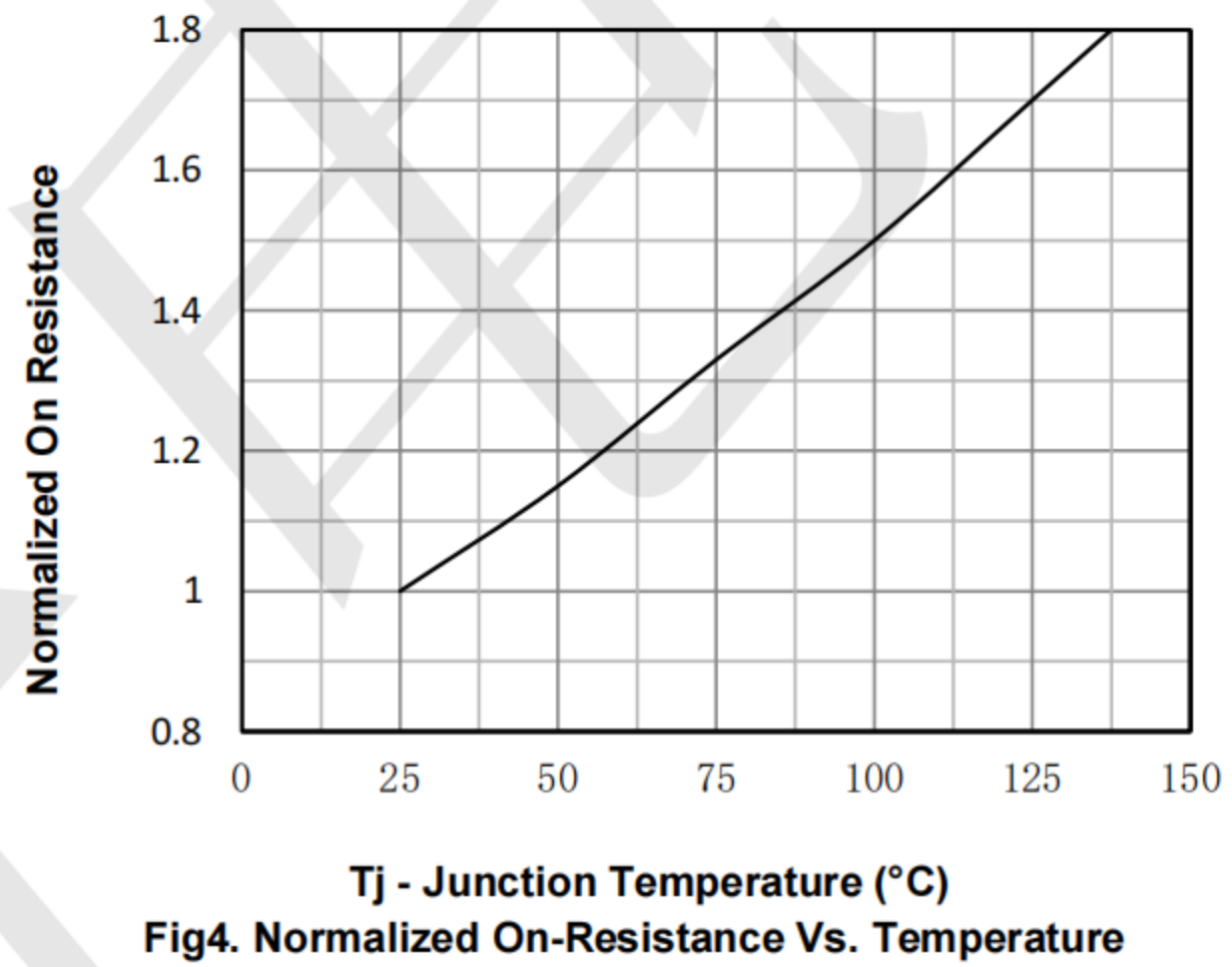
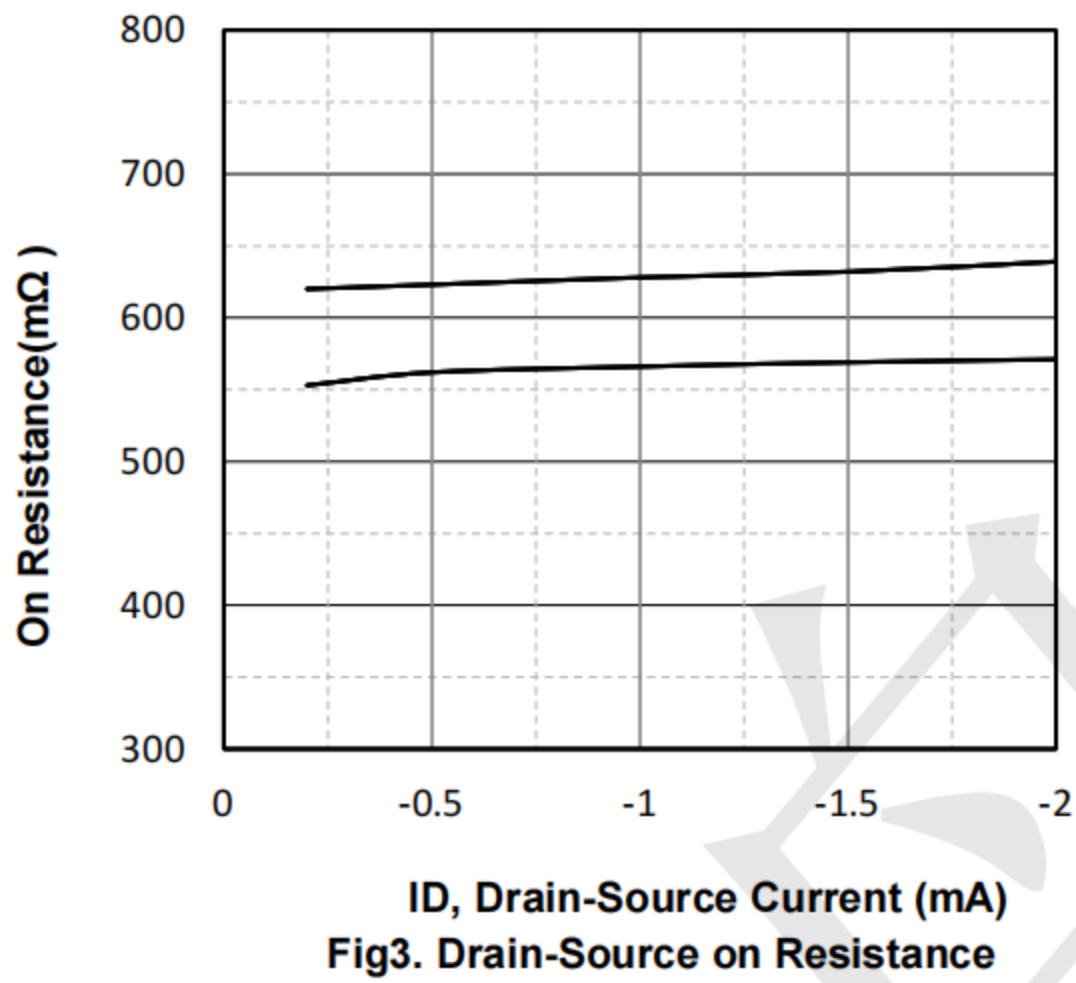
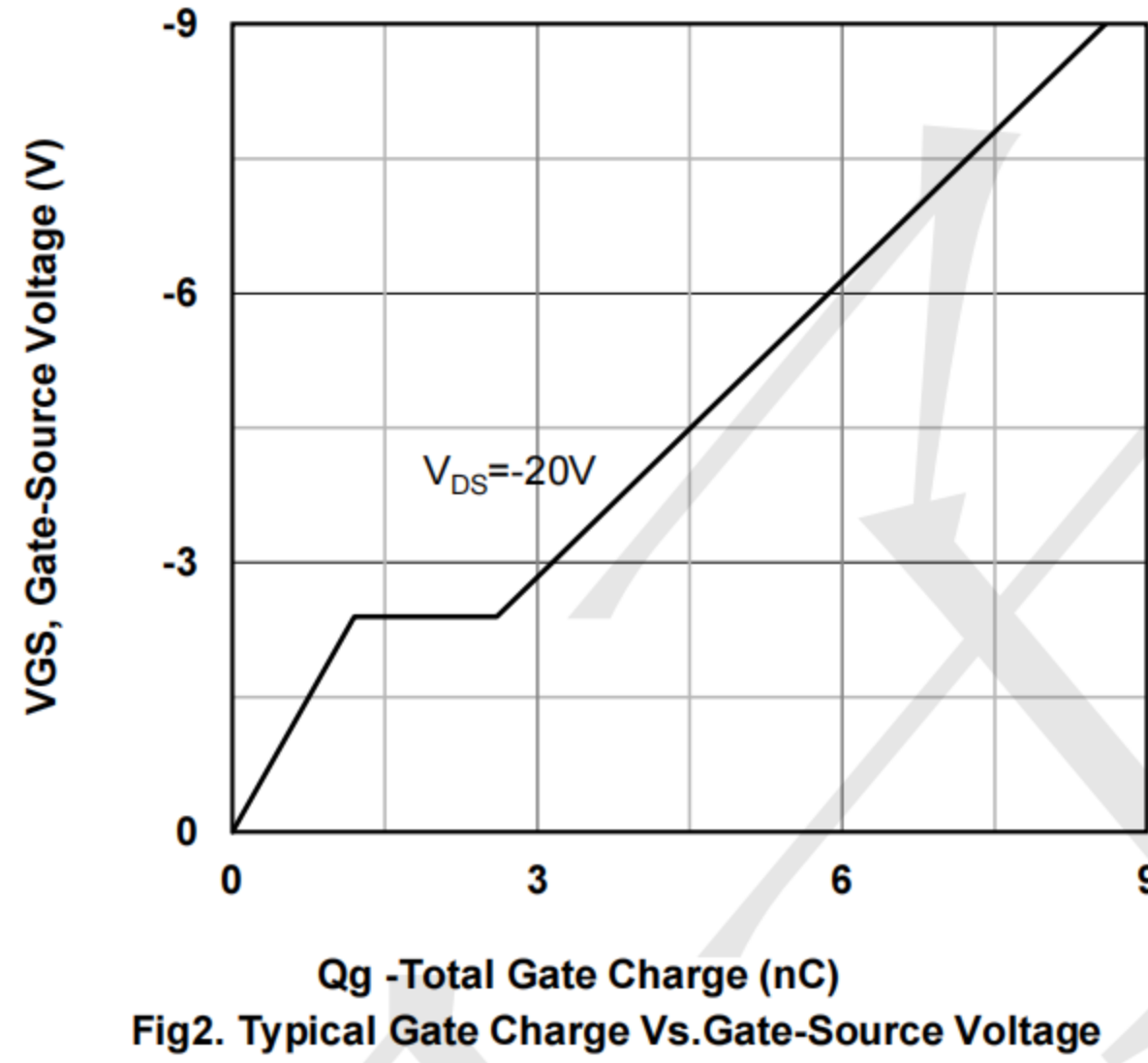
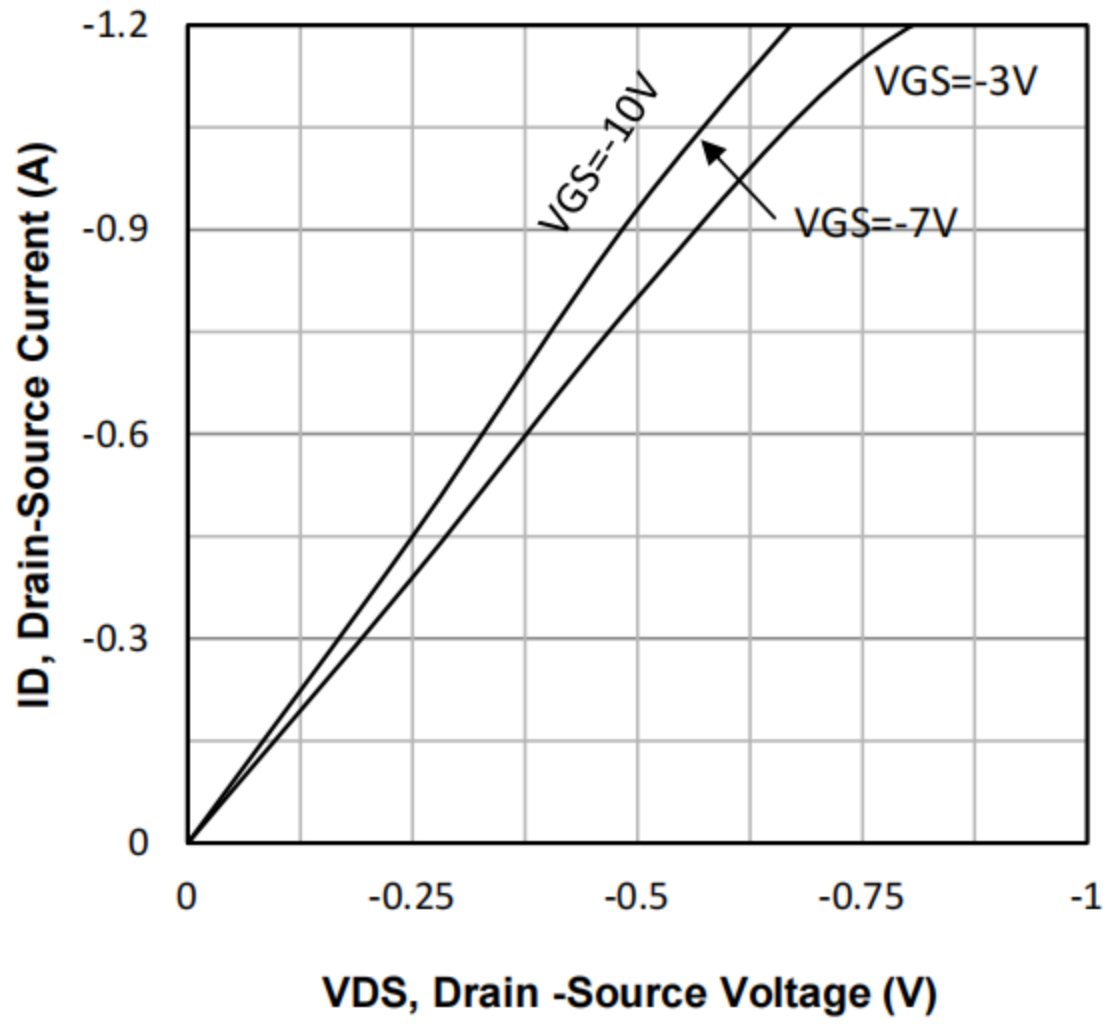


Absolute Maximum Ratings (TA=25°C unless otherwise noted)				
Symbol	Parameter		Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)				
V_{DS}	Drain-Source Breakdown Voltage		-100	V
V_{GS}	Gate-Source Voltage		±20	V
T_J	Maximum Junction Temperature		150	°C
T_{STG}	Storage Temperature Range		-55 to 150	°C
I_S	Diode Continuous Forward Current	$T_c=25^\circ\text{C}$	-2	A
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	$T_c=25^\circ\text{C}$	-5	A
I_D	Continuous Drain Current@GS=10V	$T_c=25^\circ\text{C}$	-2	A
P_D	Maximum Power Dissipation	$T_c=25^\circ\text{C}$	3.5	W
$R_{\theta JA}$	Thermal Resistance Junction-to-Ambient		85	°C/W

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

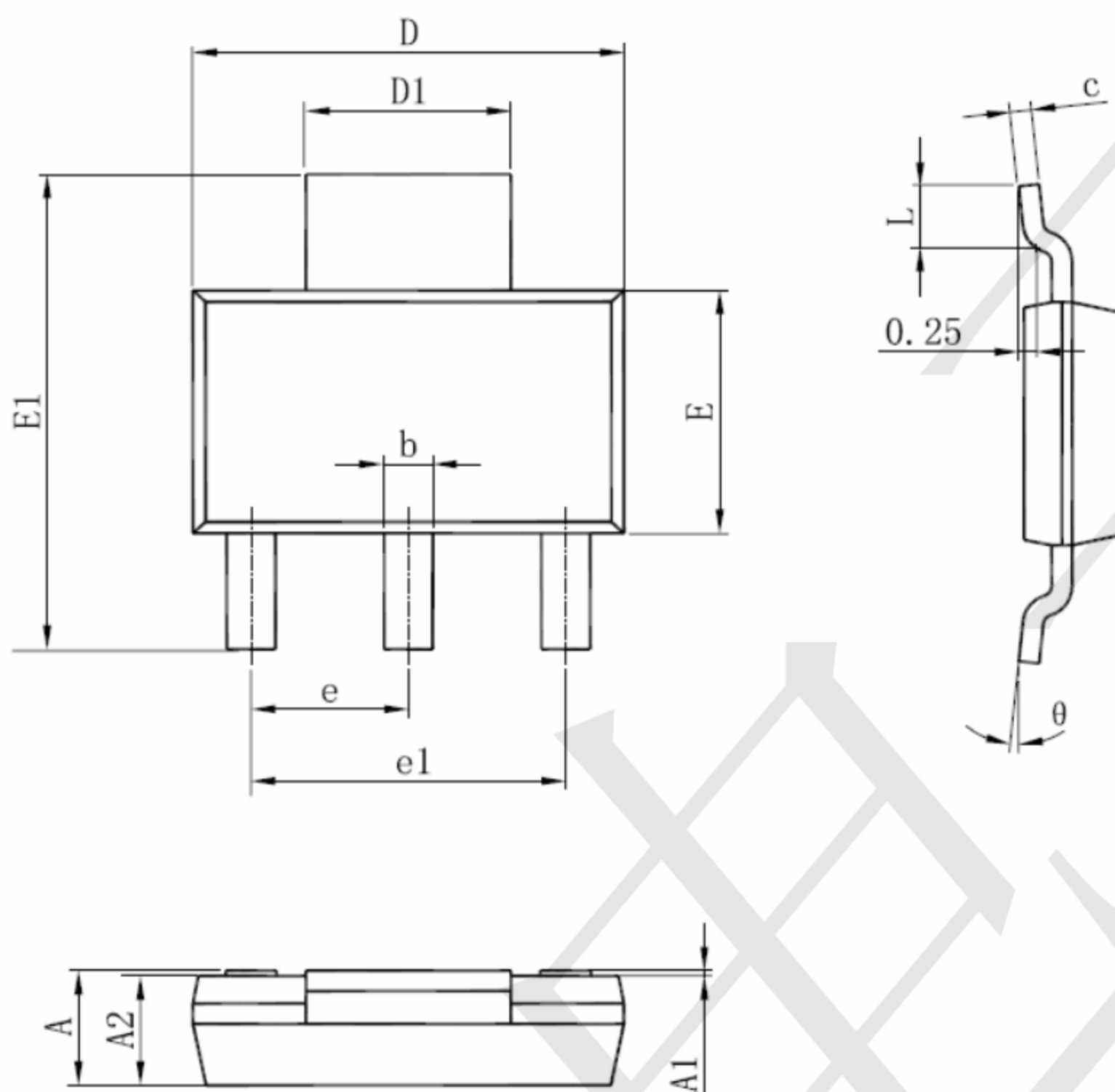
Electrical Characteristics (T _J =25°C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	VGS=0V, ID=-250μA	-100	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	VDS=-100V, VGS=0V	--	--	-1	μA
I _{GSS}	Gate-Body Leakage Current	VGS=±20V, VDS=0V	--	--	±100	nA
V _{GS(th)}	Gate Threshold Voltage	VDS=VGS, ID=-250μA	-1.0	-2.0	-2.5	V
R _{DS(on)}	Drain-Source On-State Resistance	VGS=-10V, ID=-1A	--	560	650	mΩ
		VGS=-4.5V, ID=-0.5A	--	630	700	mΩ
Dynamic Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
C _{ISS}	Input Capacitance	VDS=-15V, VGS=0V, f=1MHz	--	553	--	pF
C _{OSS}	Output Capacitance		--	29	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	20	--	pF
Switching Characteristics						
Q _g	Total Gate Charge	VDS=-15V, ID=-0.5A, VGS=4.5V	--	4.5	--	nC
Q _{gs}	Gate Source Charge		--	1.15	--	nC
Q _{gd}	Gate Drain Charge		--	1.5	--	nC
t _{d(on)}	Turn-on Delay Time	VDD=-50V, ID=-0.5A, VGS=-10V, RG=3.3Ω	--	13.6	--	nS
t _r	Turn-on Rise Time		--	6.8	--	nS
t _{d(off)}	Turn-Off Delay Time		--	34	--	nS
t _f	Turn-Off Fall Time		--	3	--	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	T _J =25°C, I _s =-2A,	--	--	-1.2	V

Typical Electrical and Thermal Characteristics





SOT-223 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°