

FEATURES

- $R_{DS(ON)}$ 14m Ω @ $V_{GS}=-10V$ (Typ)
- $R_{DS(ON)}$ 16m Ω @ $V_{GS}=-4.5V$ (Typ)
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

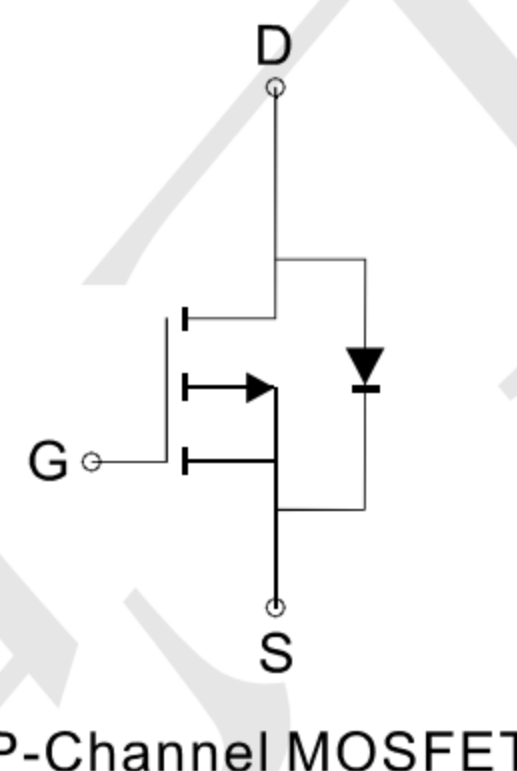
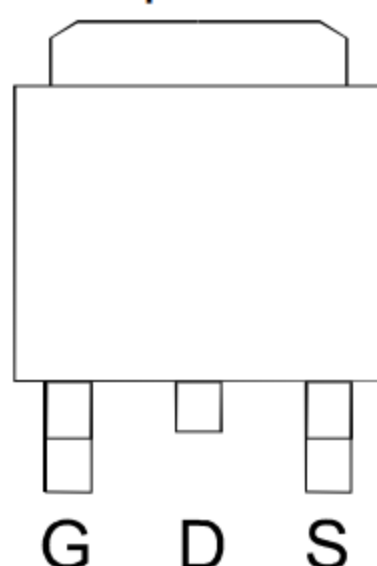
APPLICATIONS

- Power Management in Note book
- DC/DC Converter
- Load Switch
- LCD Display inverter

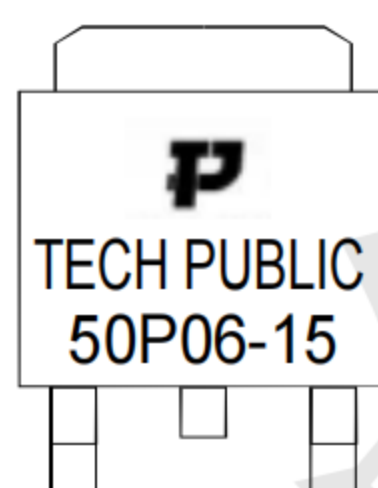
Package and Pin Configuration

(TO-252-3L)

Top View



Marking:



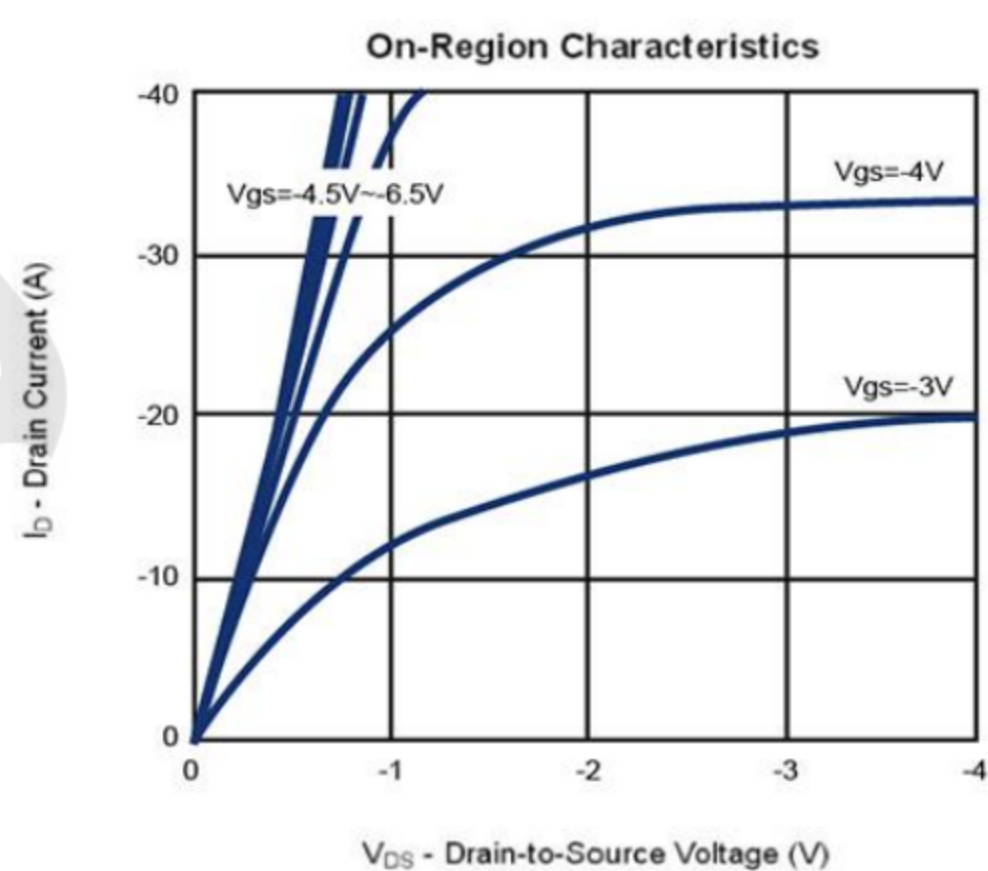
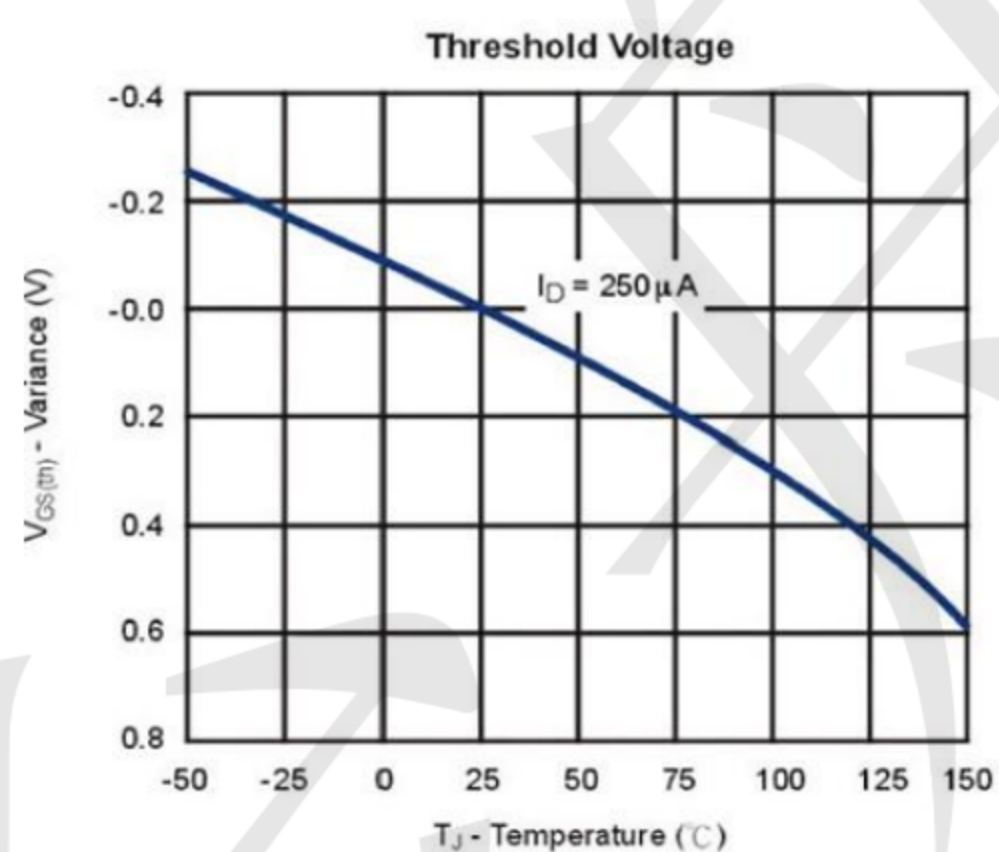
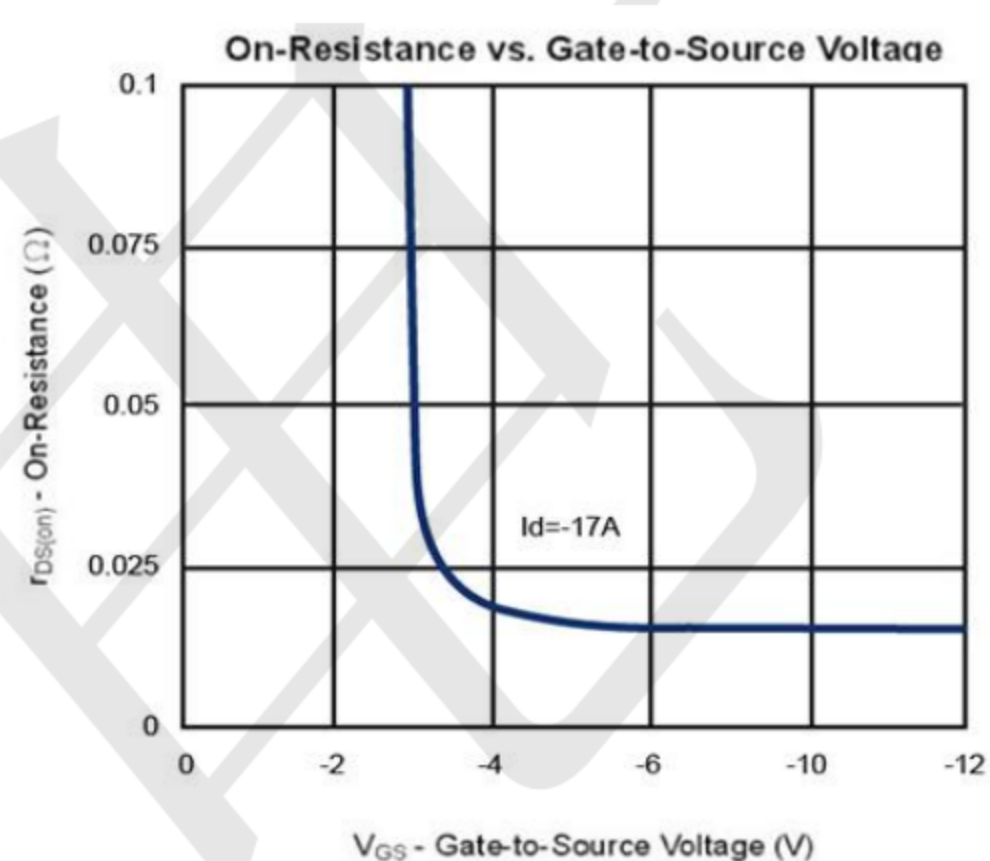
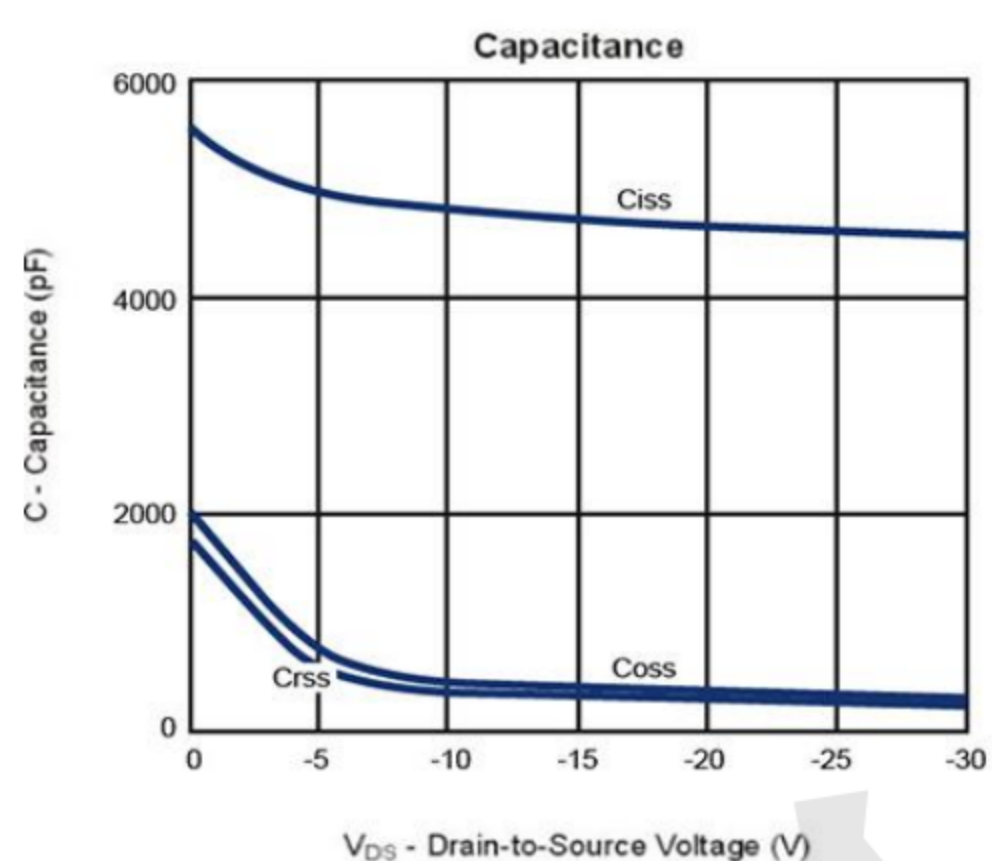
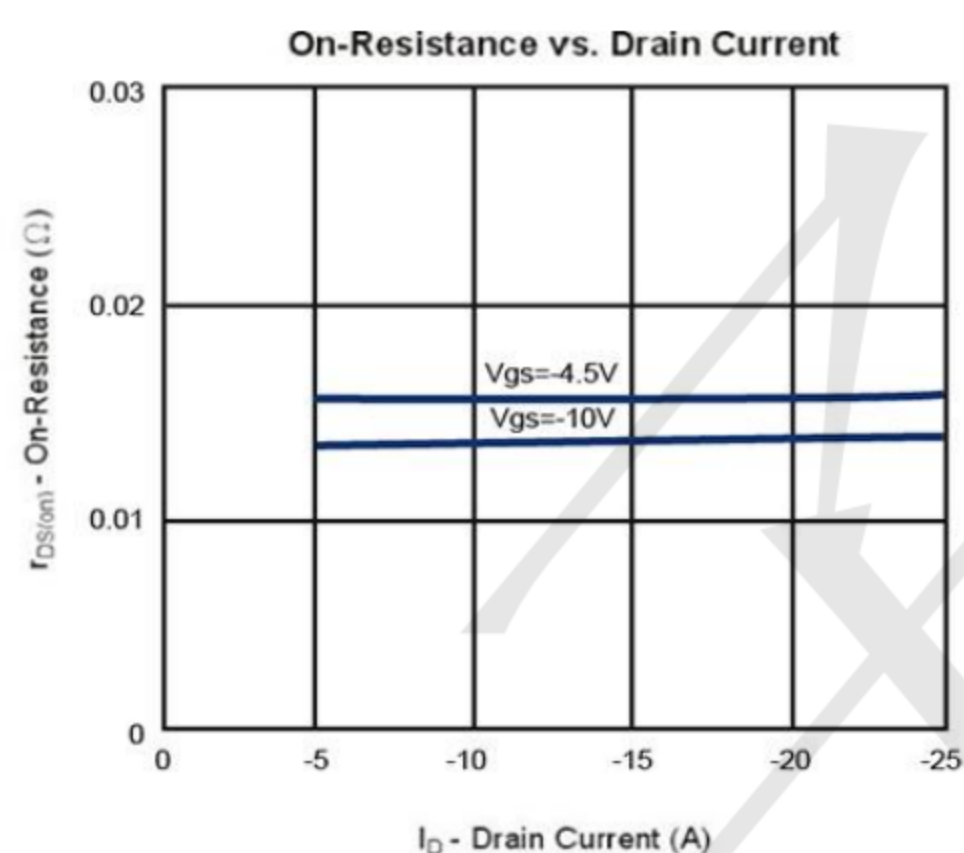
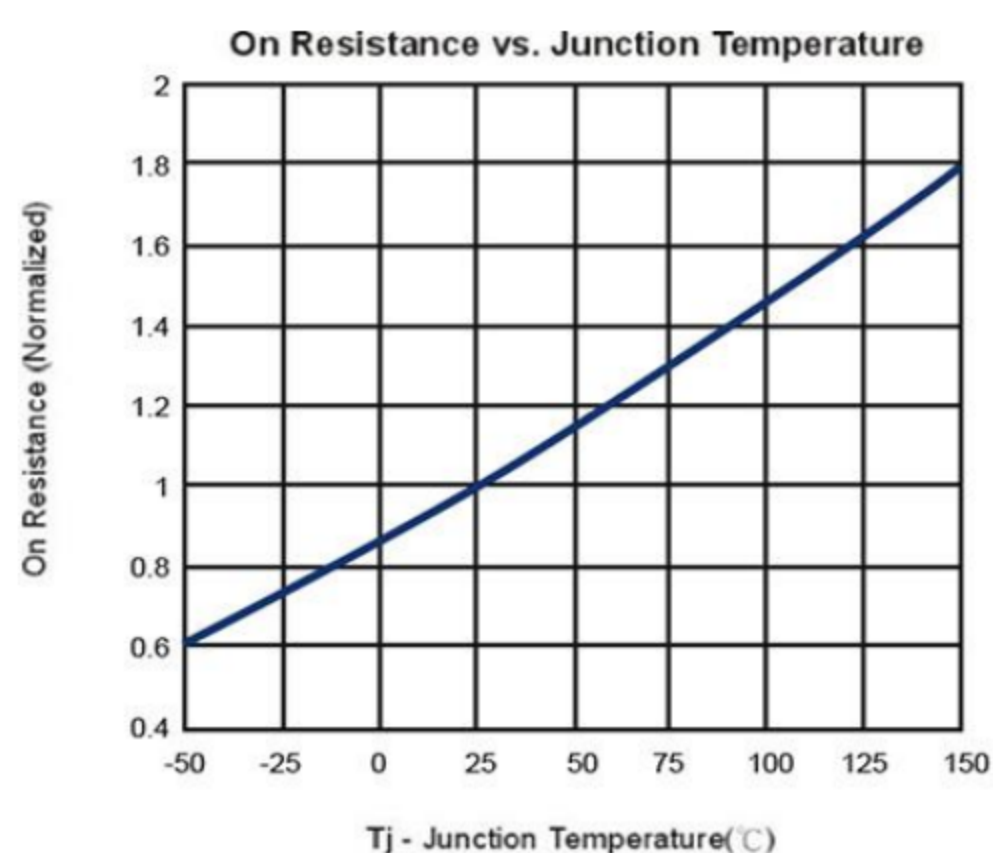
Absolute Maximum Ratings ($T_A=25^{\circ}C$ unless otherwise noted)

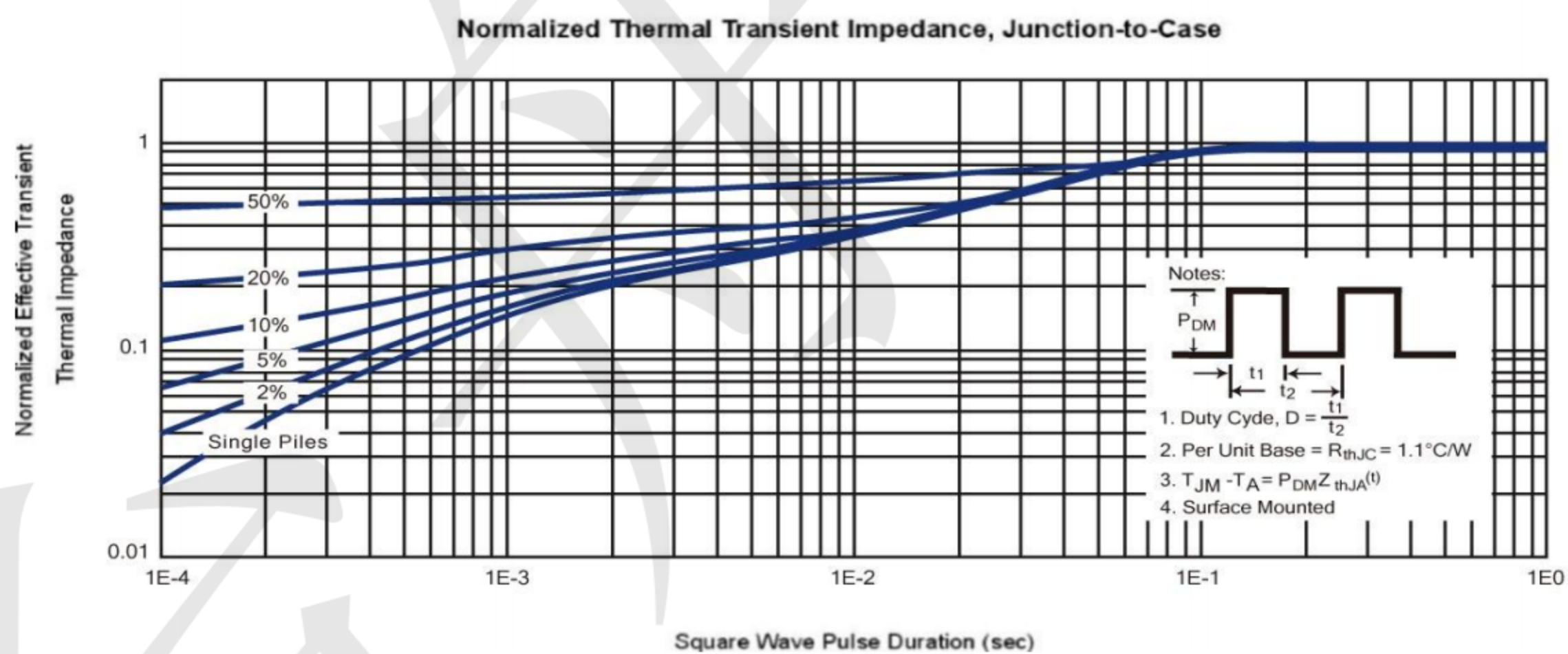
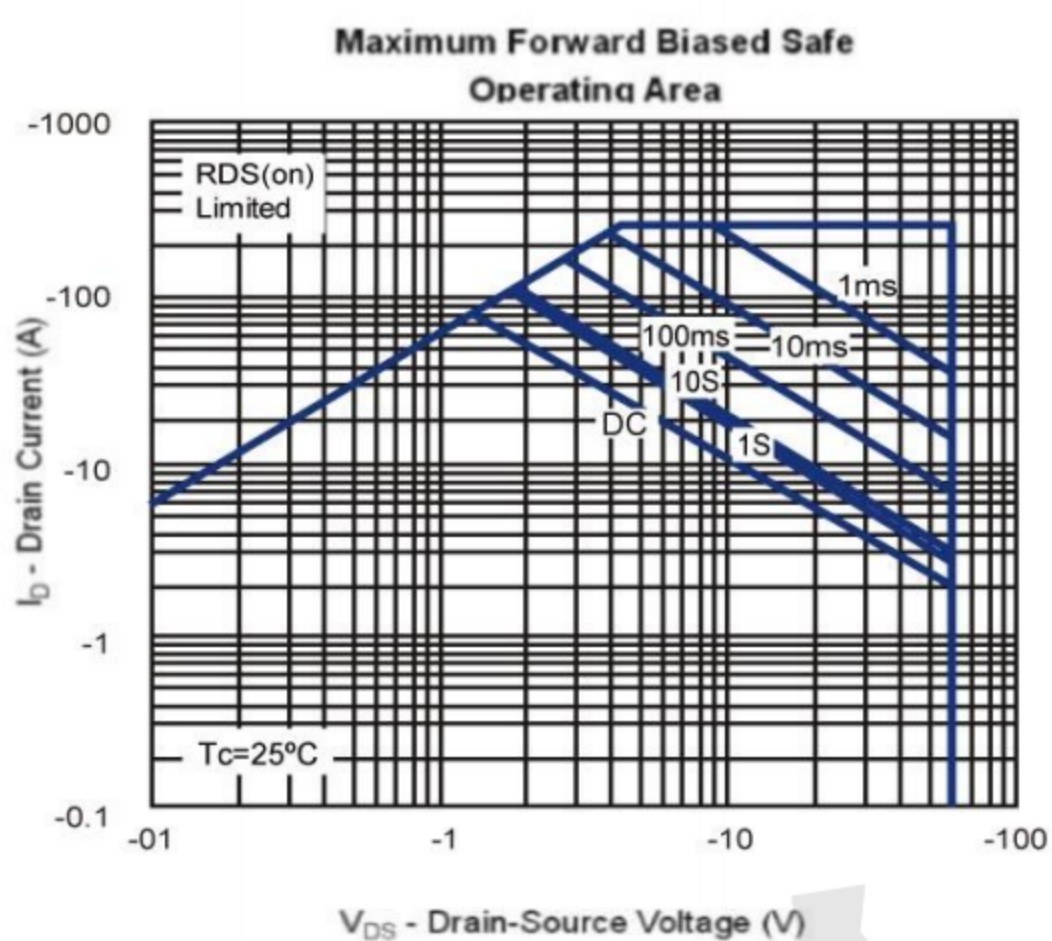
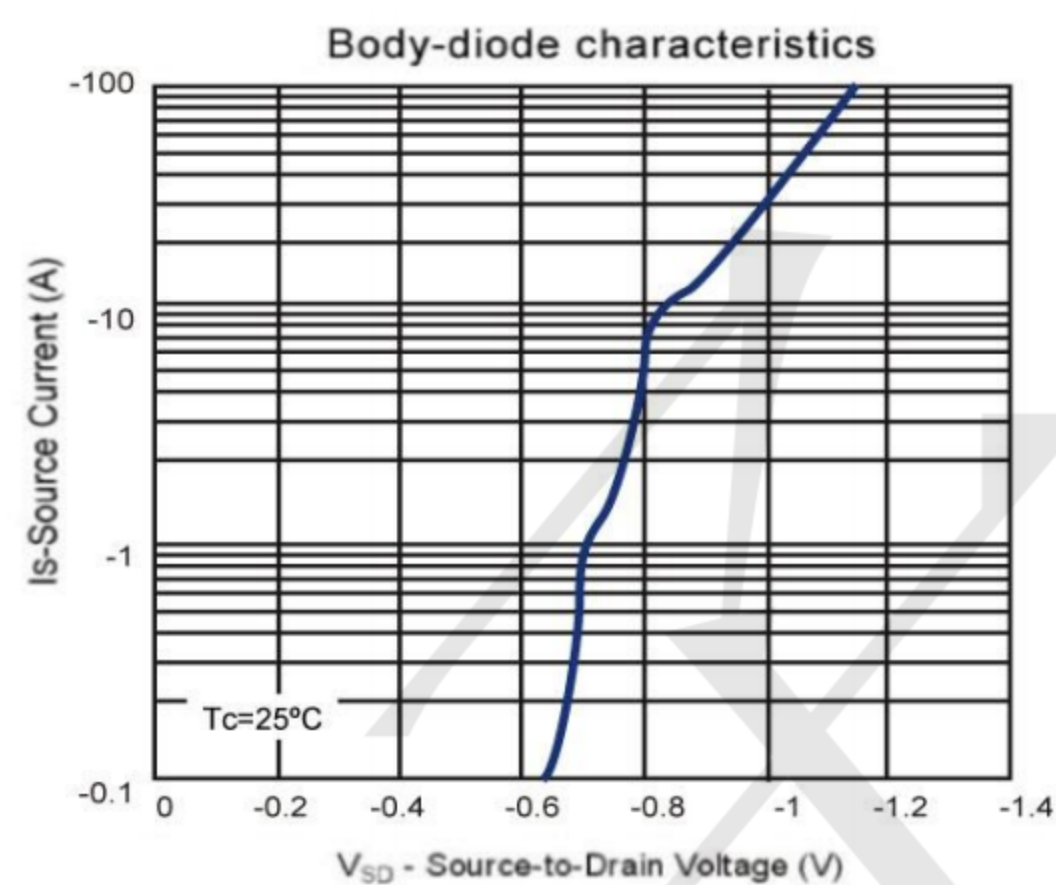
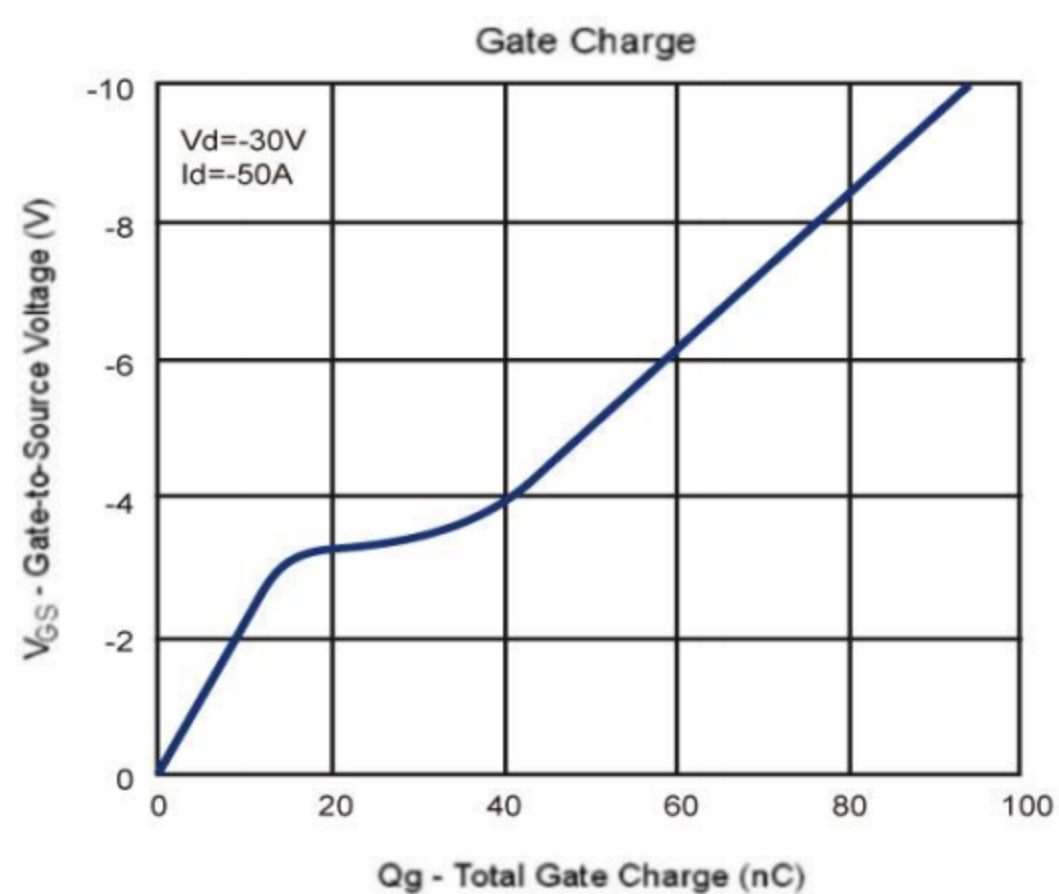
Parameter		Symbol	Maximum Ratings	Unit
Drain-Source Voltage		V_{DS}	-60	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current*	$T_C=25^{\circ}C$	I_D	-61	A
	$T_C=70^{\circ}C$		-49	
Pulsed Drain Current		I_{DM}	-244	A
Maximum Power Dissipation*	$T_C=25^{\circ}C$	P_D	114	W
	$T_C=70^{\circ}C$		73	
Operating Junction Temperature		T_J	-55 to 150	$^{\circ}C$
Thermal Resistance-Junction to Case*		$R_{\theta JC}$	1.1	$^{\circ}C/W$

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

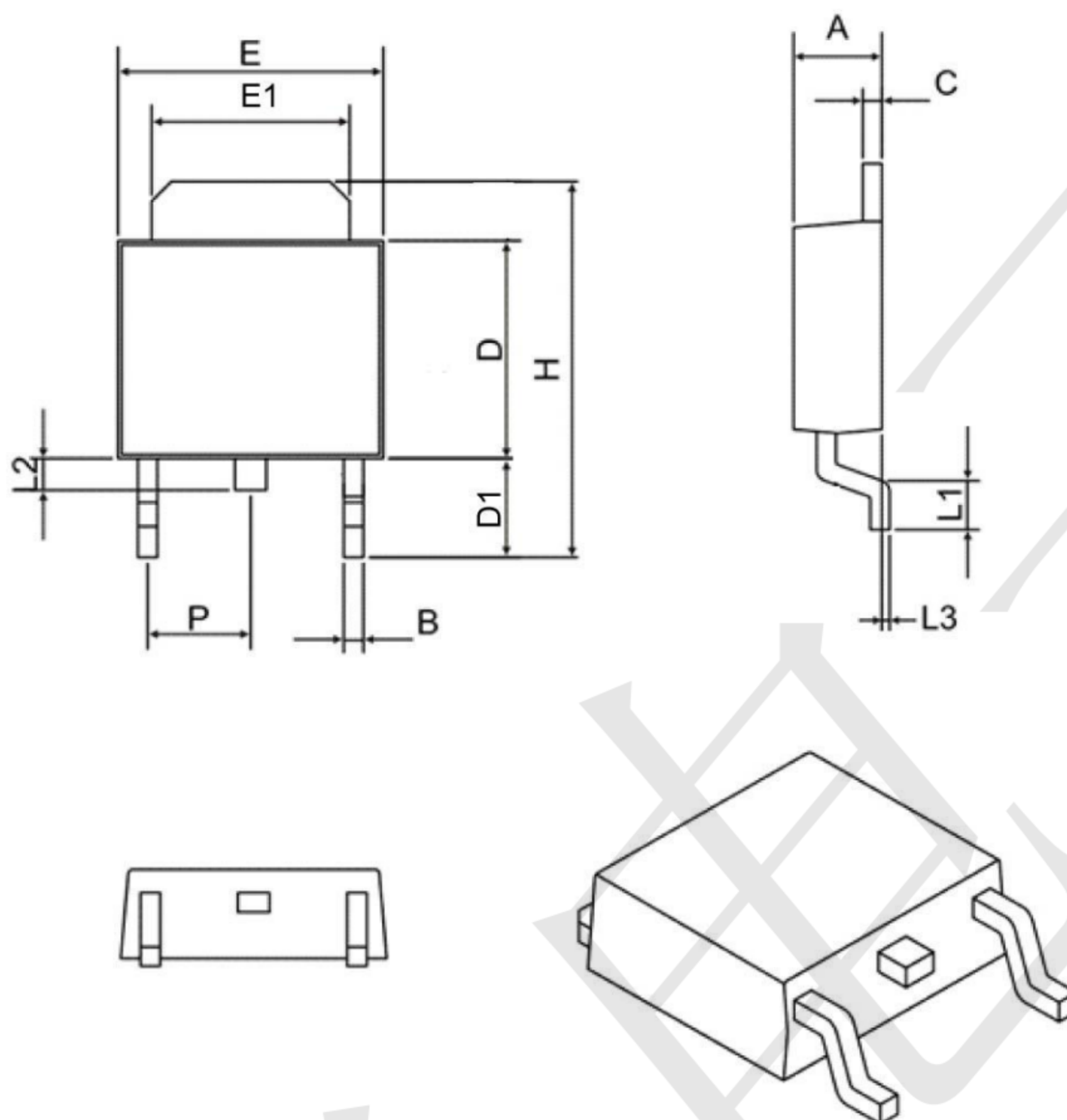
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250 μ A	-60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250 μ A	-1		-3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} = $\pm$ 20V			$\pm$ 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-60V, V _{GS} =0V			-1	μ A
R _{DS(ON)}	Drain-Source On-State Resistance ^a	V _{GS} =-10V, I _D = -17A		14	17	m Ω
		V _{GS} =-4.5V, I _D = -14A		16	20	
V _{SD}	Diode Forward Voltage	I _S =-17A, V _{GS} =0V		-0.9	-1.2	V
DYNAMIC						
Q _g	Total Gate Charge(10V)	V _{DS} =-30V, V _{GS} =-10V, I _D =-50A		94		nC
Q _g	Total Gate Charge(4.5V)	V _{DS} =-30V, V _{GS} =-4.5V, I _D =-50A		46		
Q _{gs}	Gate-Source Charge			18		
Q _{gd}	Gate-Drain Charge			24		
C _{iss}	Input capacitance	V _{DS} =-15V, V _{GS} =0V, F=1MHz		4707		pF
C _{oss}	Output Capacitance			373		
C _{rss}	Reverse Transfer Capacitance			336		
t _{d(on)}	Turn-On Delay Time	V _{DS} =-30V, R _L =30 Ω V _{GEN} =-10V, R _G =6 Ω		53		ns
t _r	Turn-On Rise Time			19		
t _{d(off)}	Turn-Off Delay Time			221		
t _f	Turn-Off Fall Time			61		

Typical Electrical and Thermal Characteristics





TO252-2L Package Information



SYMBOL	MIN	MAX
A	2.10	2.50
B	0.40	0.90
C	0.40	0.90
D	5.30	6.30
D1	2.20	2.90
E	6.30	6.75
E1	4.80	5.50
L1	0.90	1.80
L2	0.50	1.10
L3	0.00	0.20
H	8.90	10.40
P	2.30 BSC	