

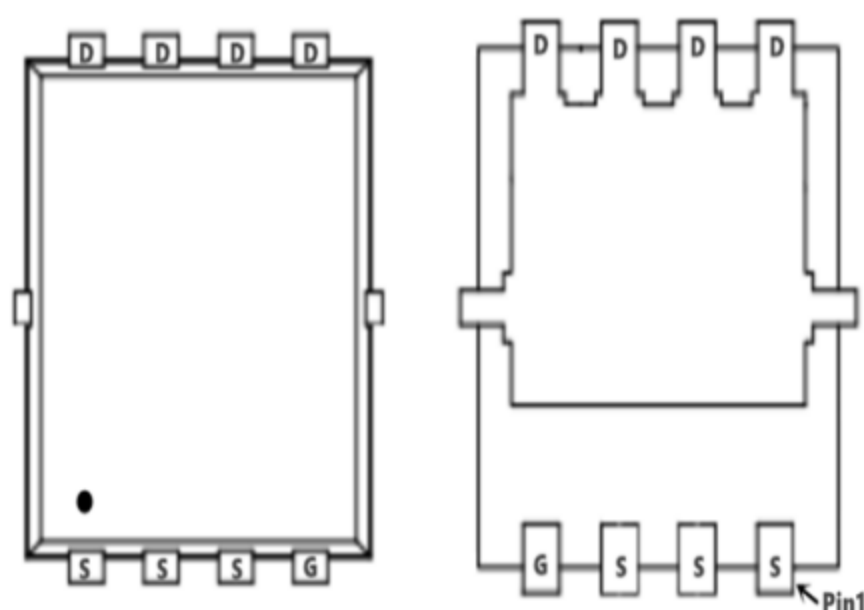
Product Summary

- $R_{DS(ON)} \leq 15m\Omega @ V_{GS} = -10V$
- $R_{DS(ON)} \leq 20m\Omega @ V_{GS} = -4.5V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

Application

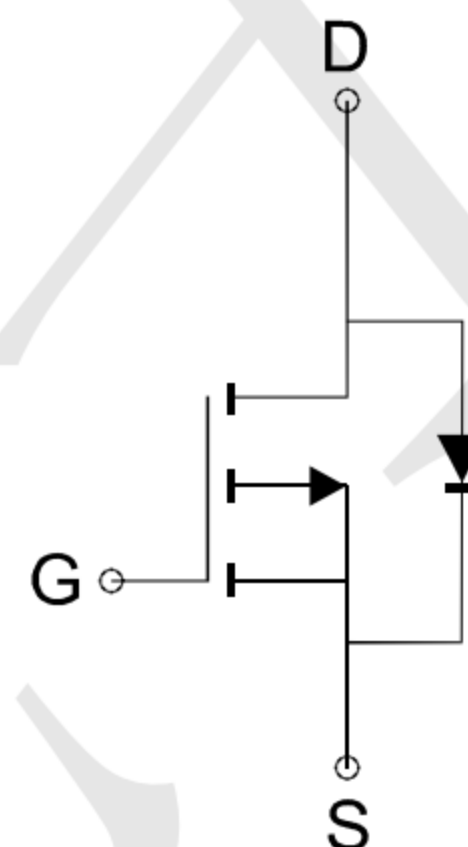
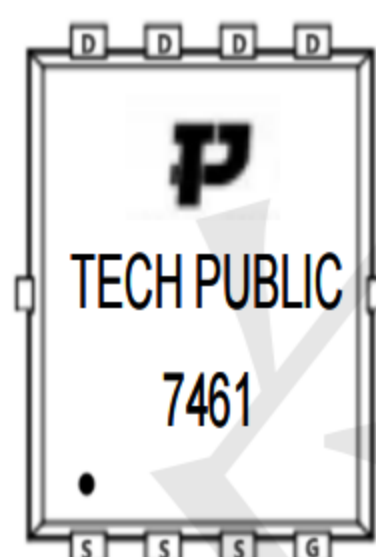
- Power Management in Note book
- DC/DC Converter
- Load Switch
- LCD Display inverter

Package and Pin Configuration



PDFN5x6-8L

Marking



P-Channel MOSFET

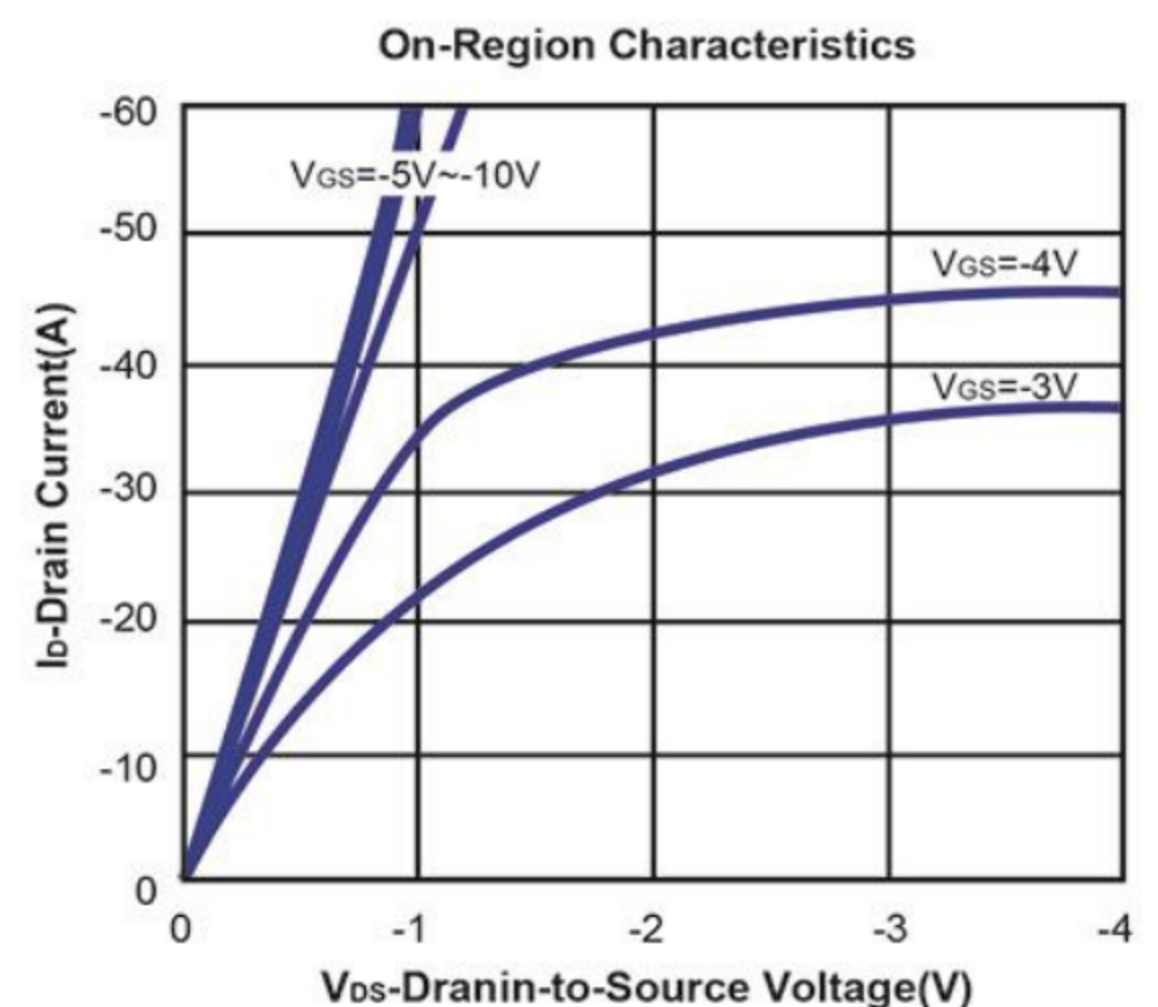
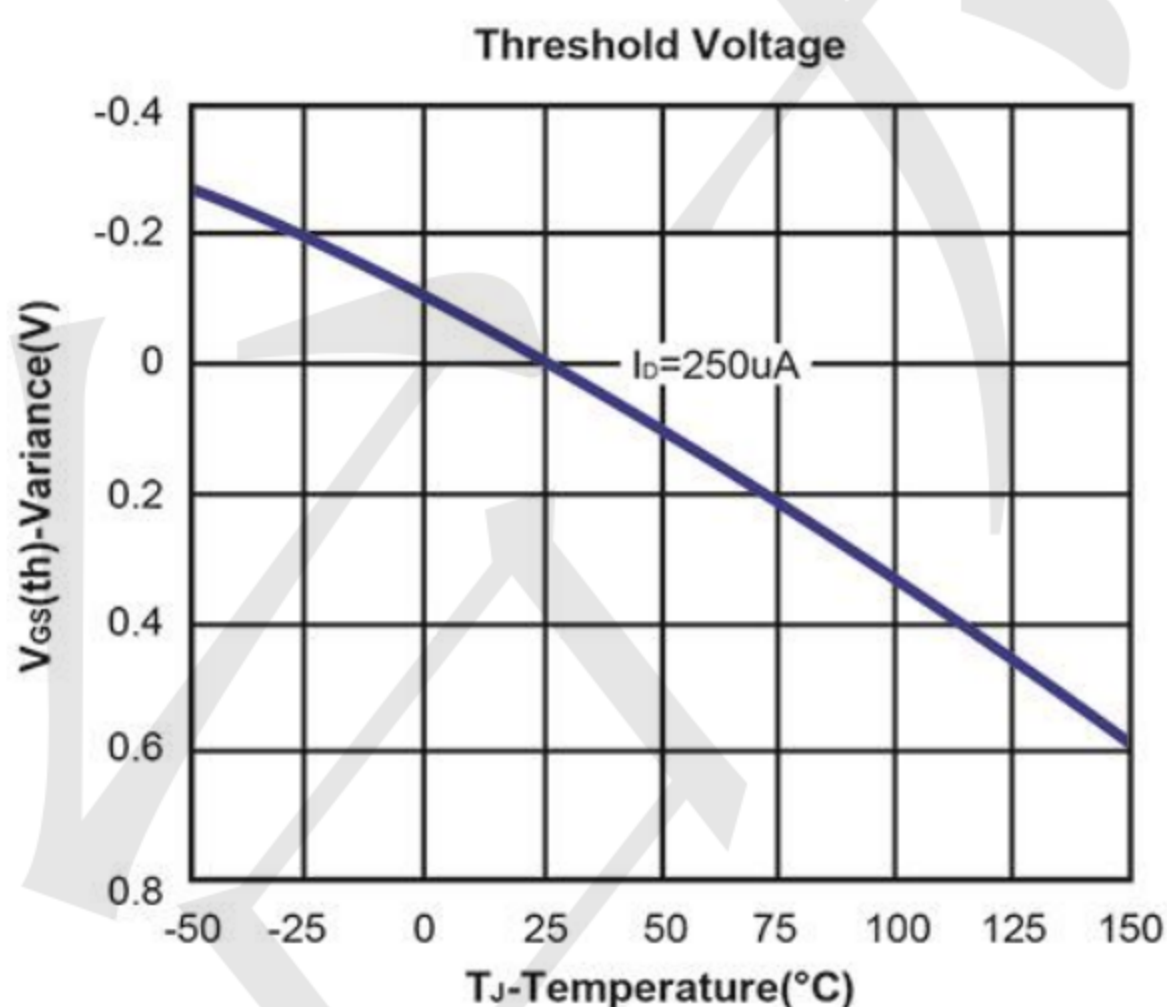
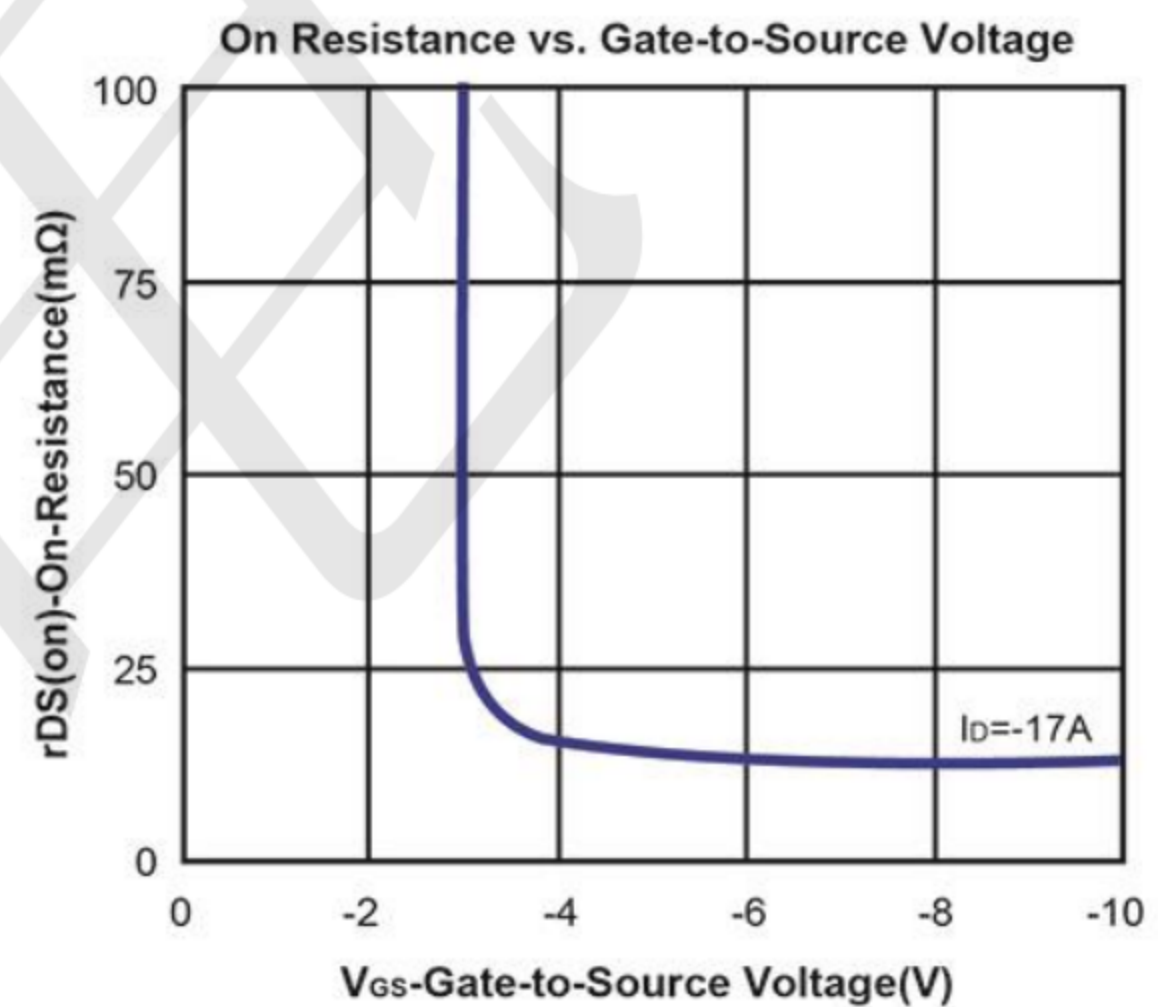
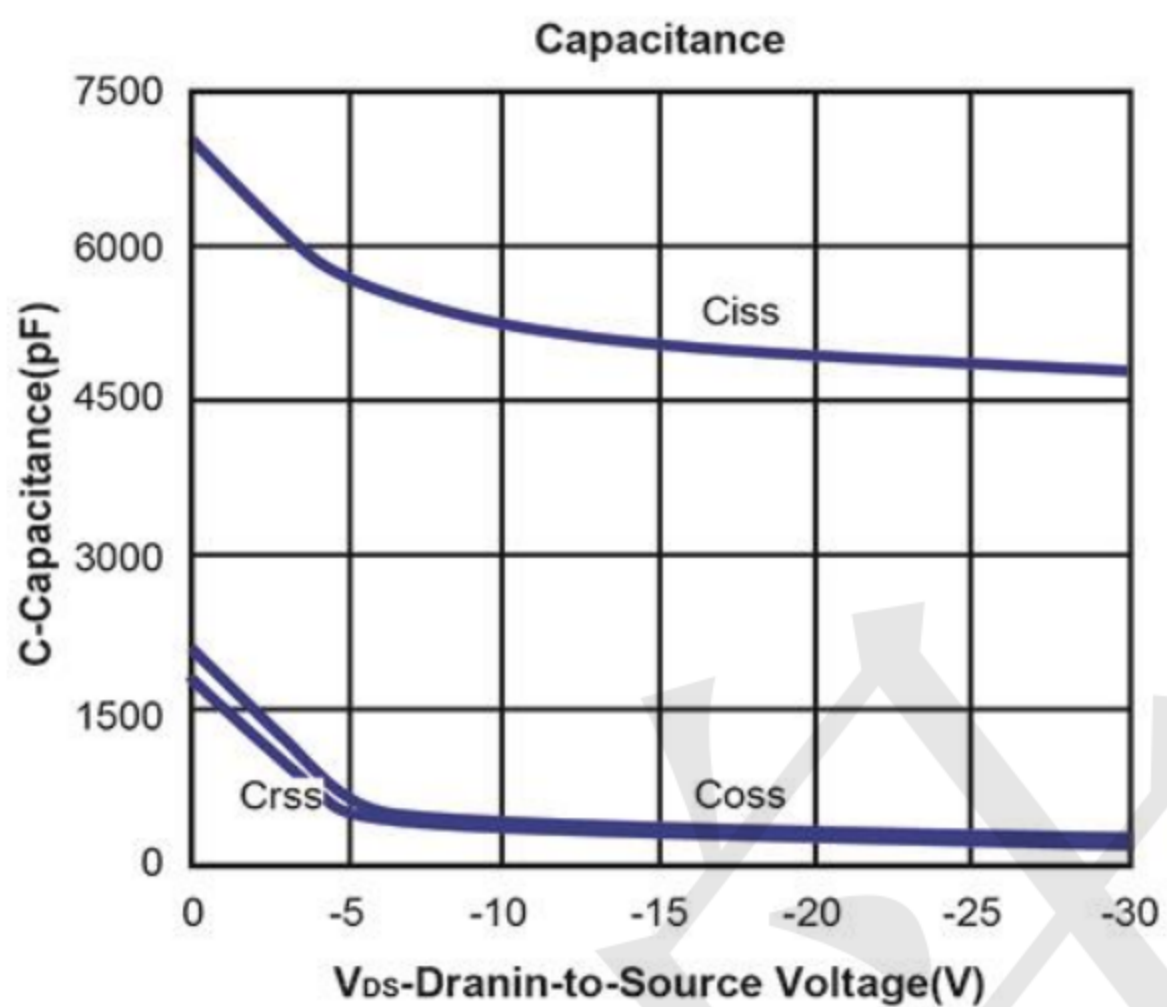
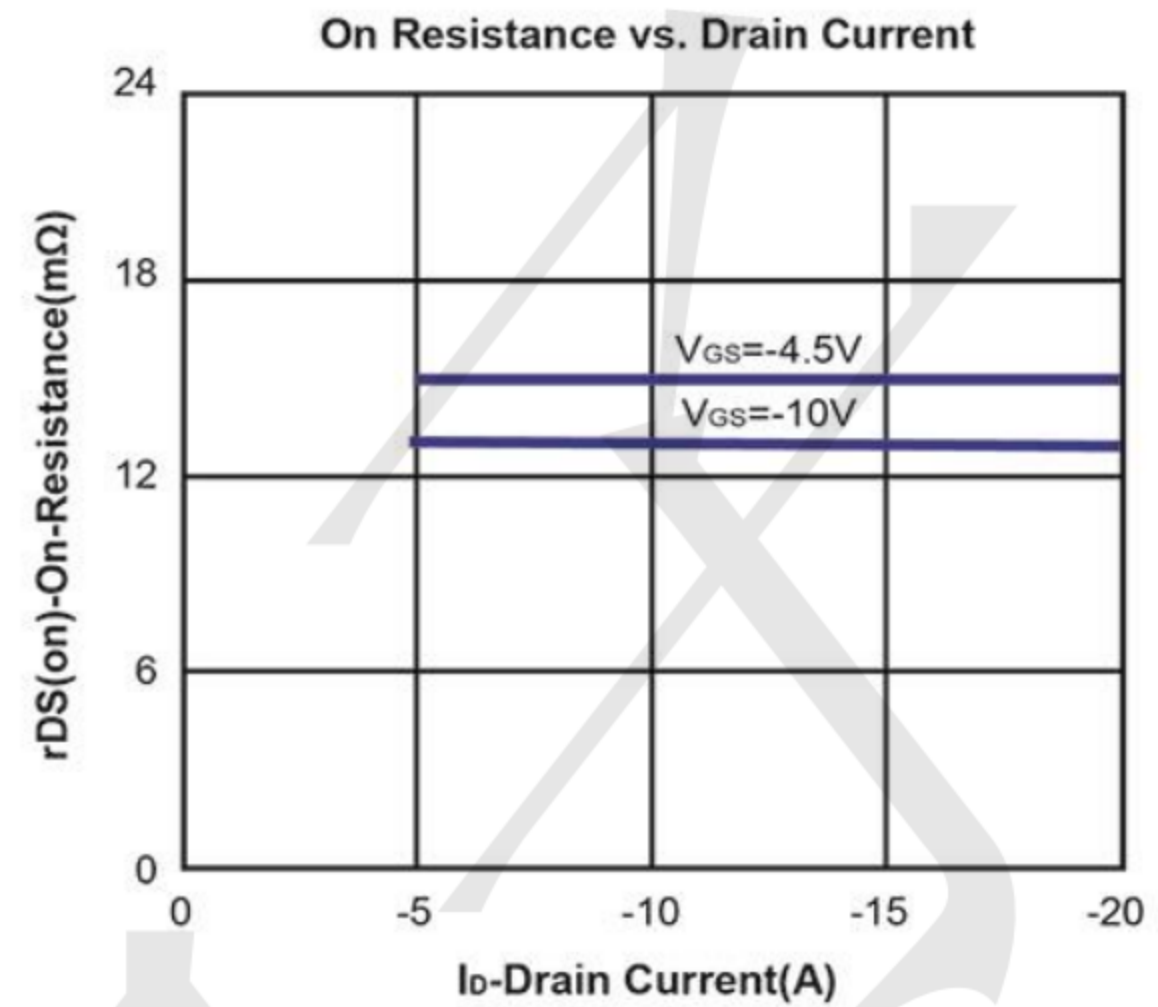
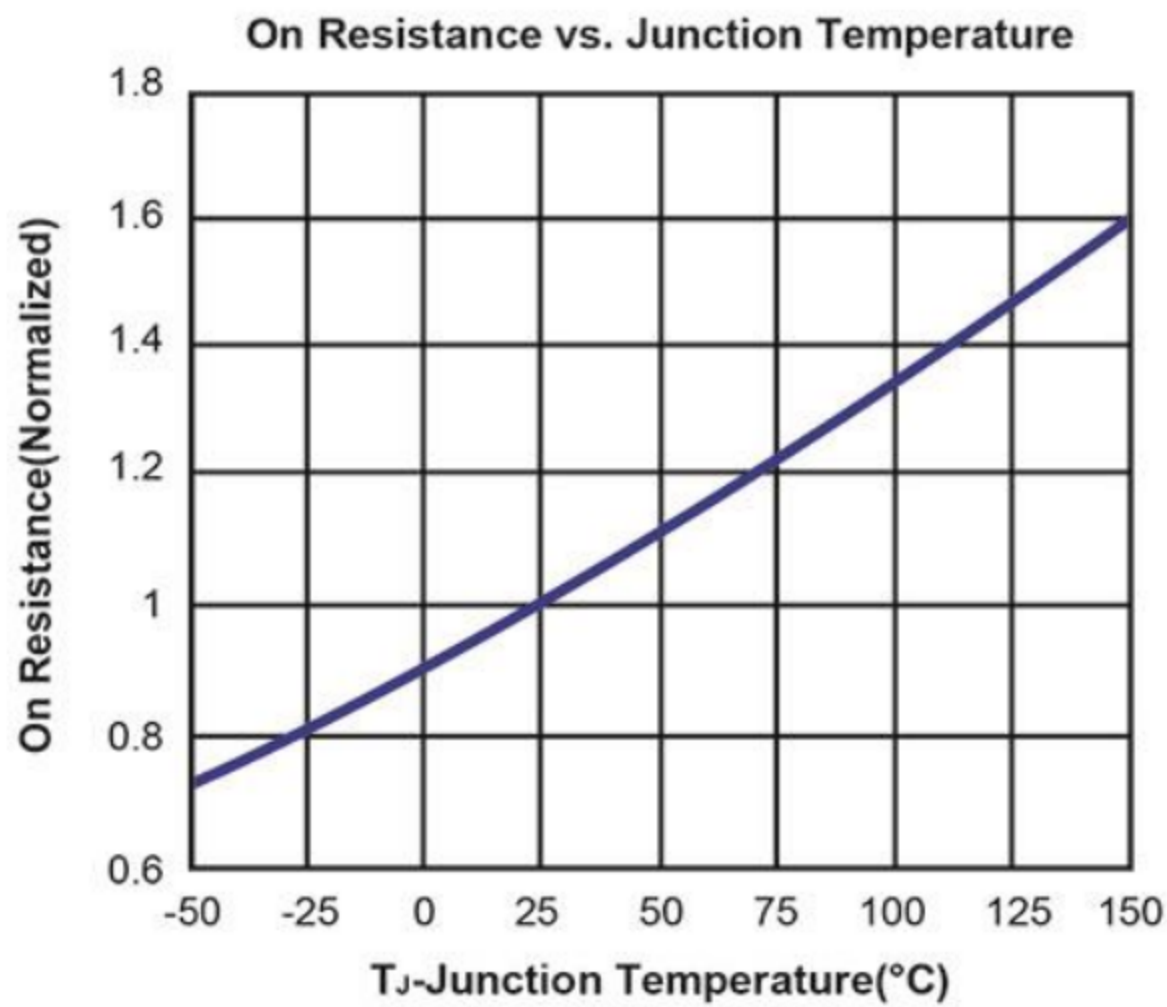
Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise specified)

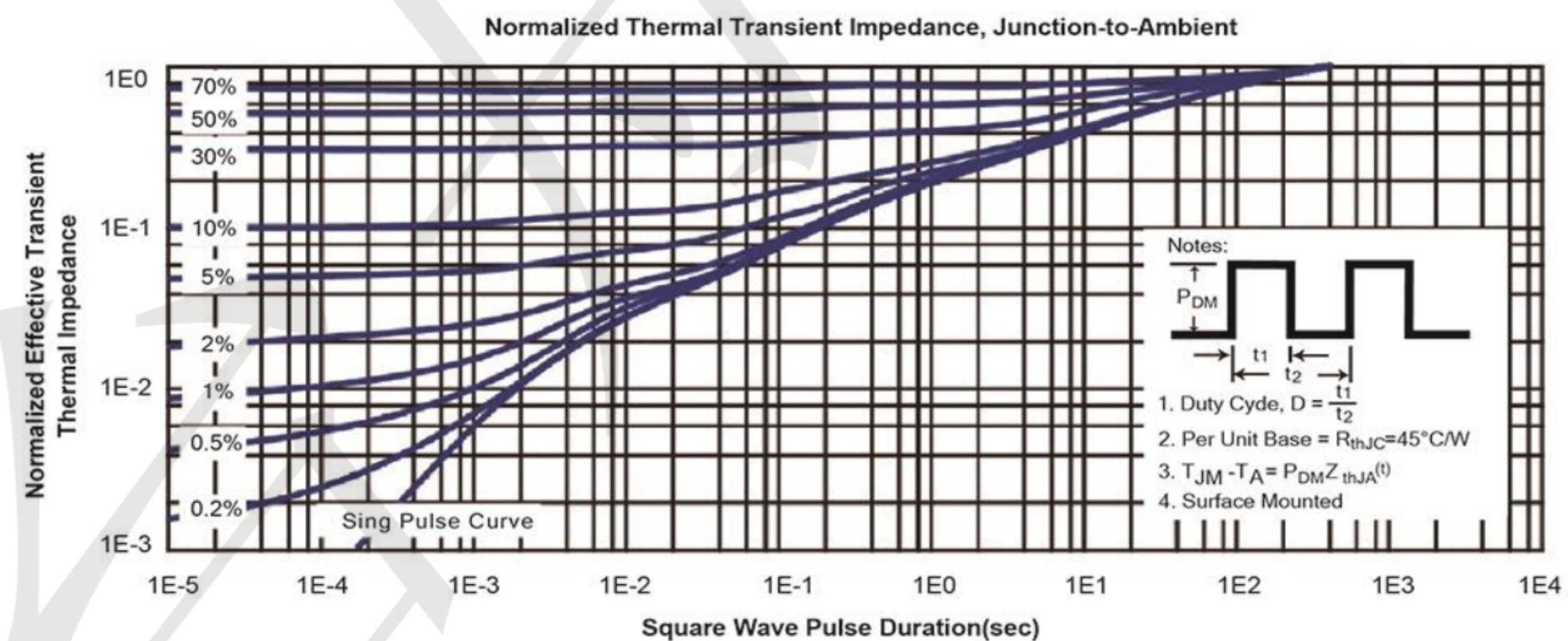
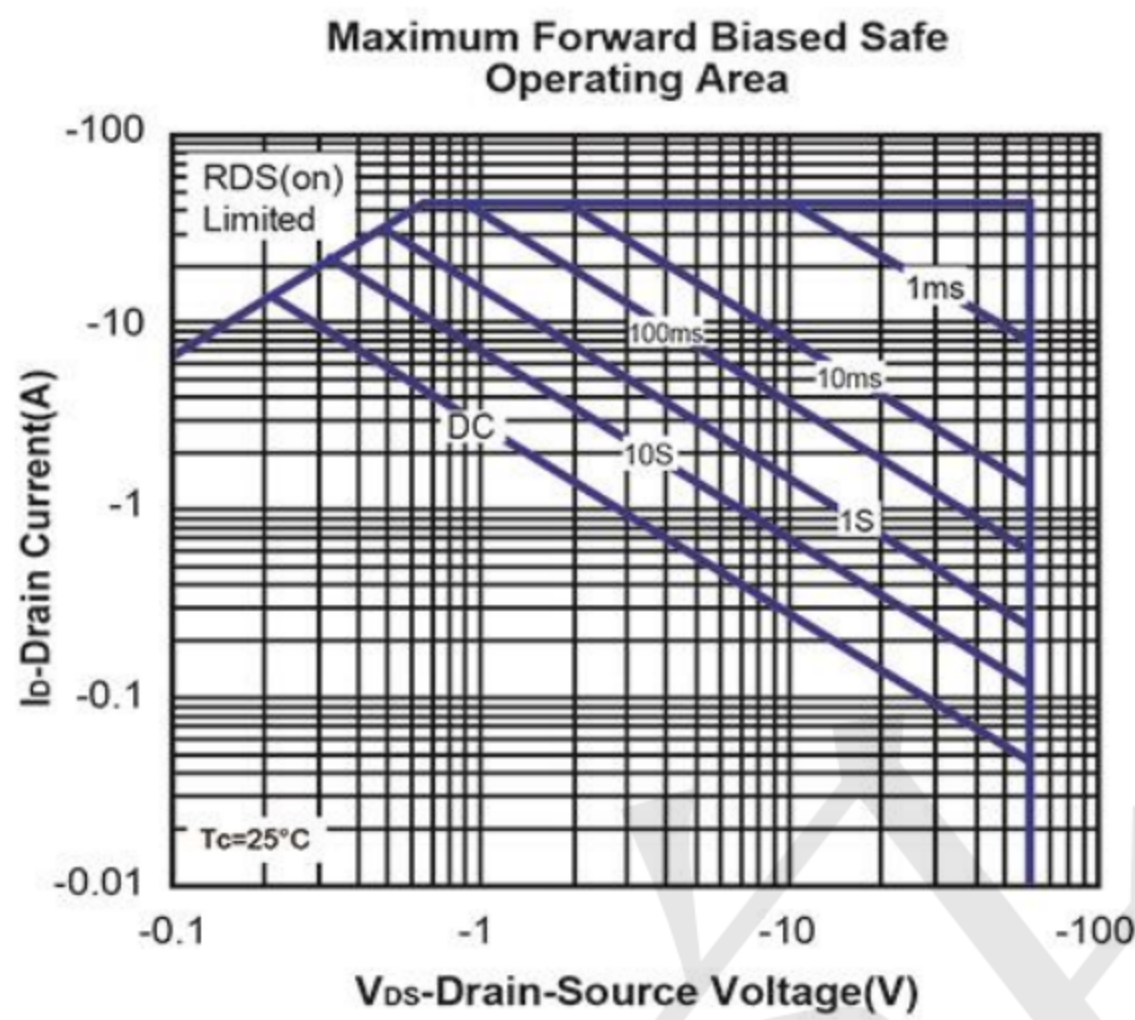
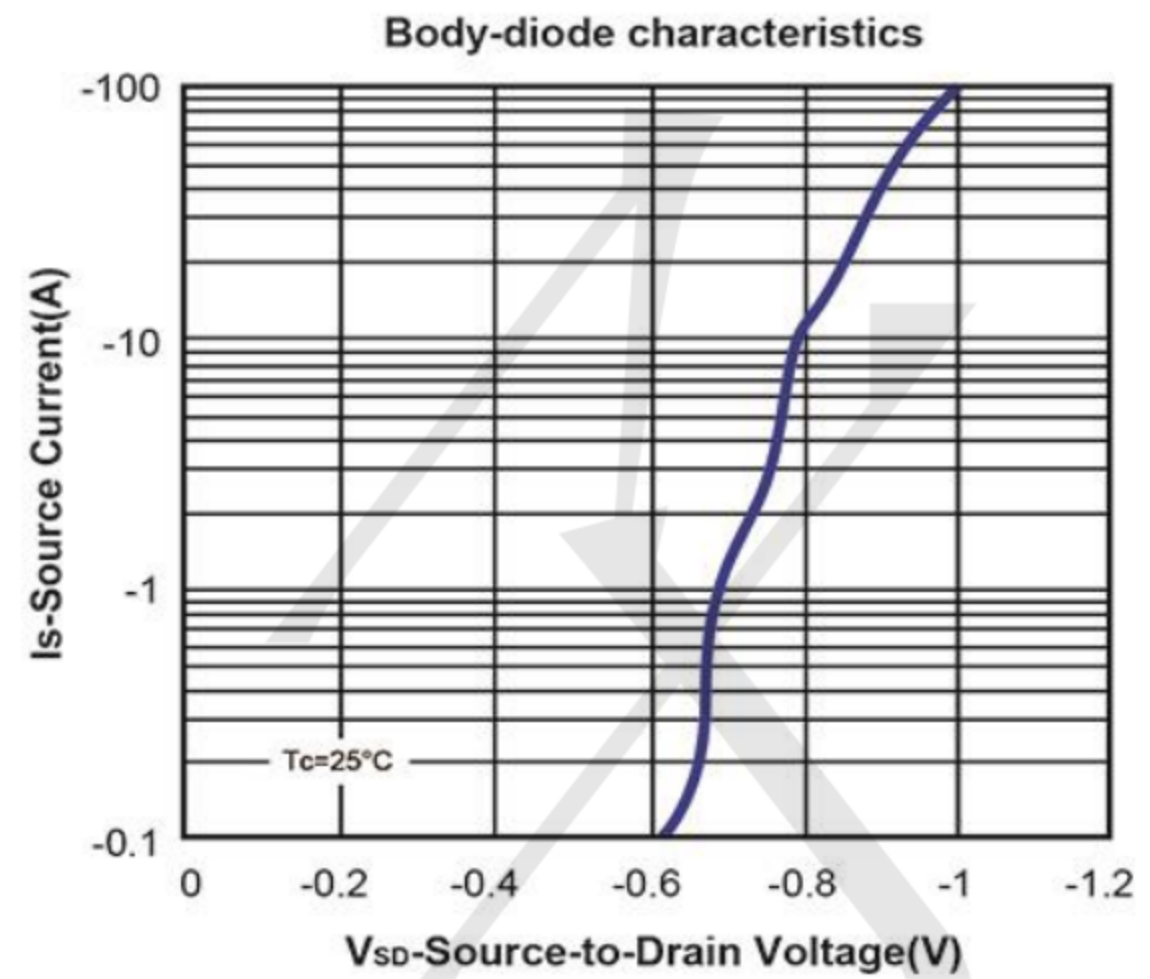
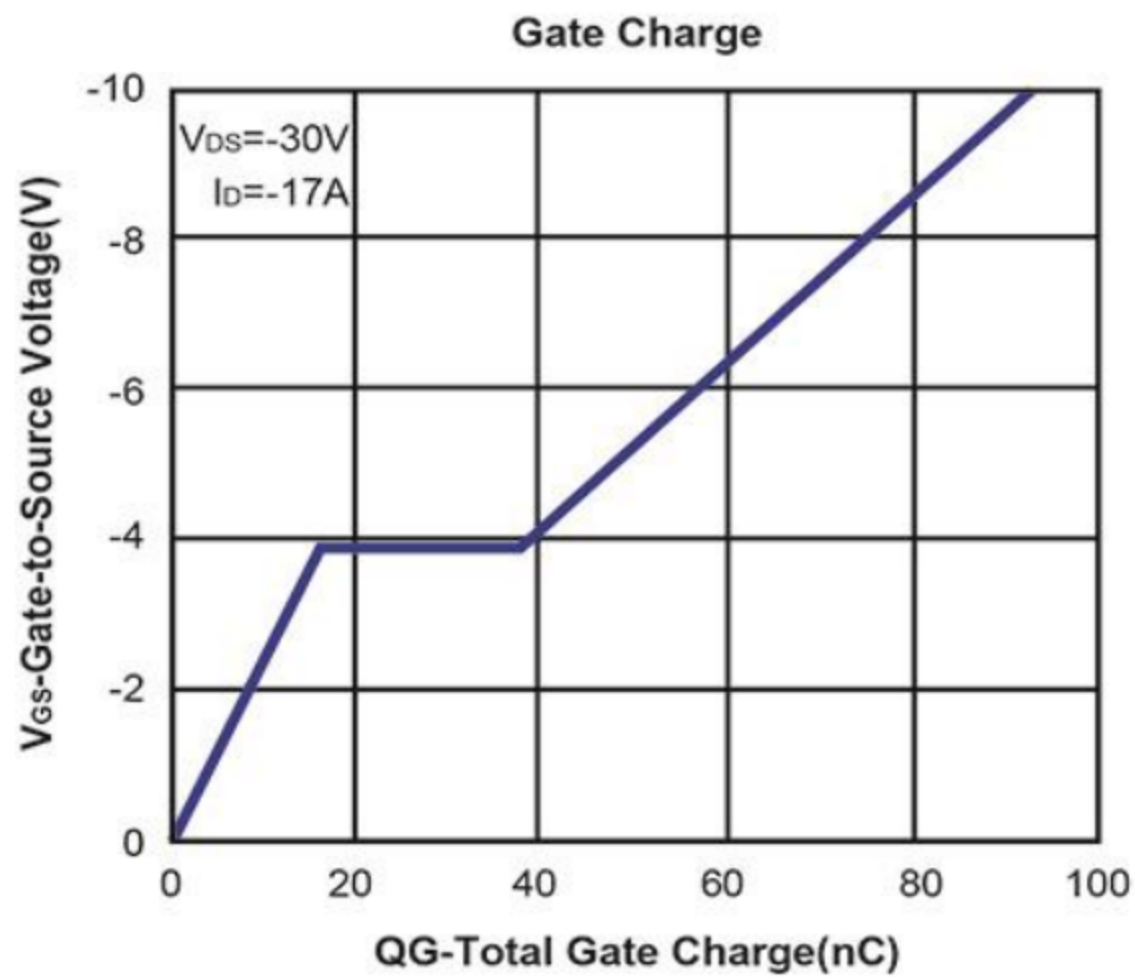
Parameter		Symbol	Maximum Ratings	Unit
Drain-Source Voltage		V_{DS}	-60	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current*	$T_c = 25^\circ\text{C}$	I_D	-11	A
	$T_c = 70^\circ\text{C}$		-8.6	
Pulsed Drain Current		I_{DM}	-43	A
Maximum Power Dissipation*	$T_c = 25^\circ\text{C}$	P_D	2.8	W
	$T_c = 70^\circ\text{C}$		1.8	
Operating Junction Temperature		T_J	-55 to 150	$^\circ\text{C}$
Thermal Resistance-Junction to Case*		$R_{\theta JC}$	45	$^\circ\text{C/W}$

Electrical Characteristics (T = 25°C unless otherwise specified)

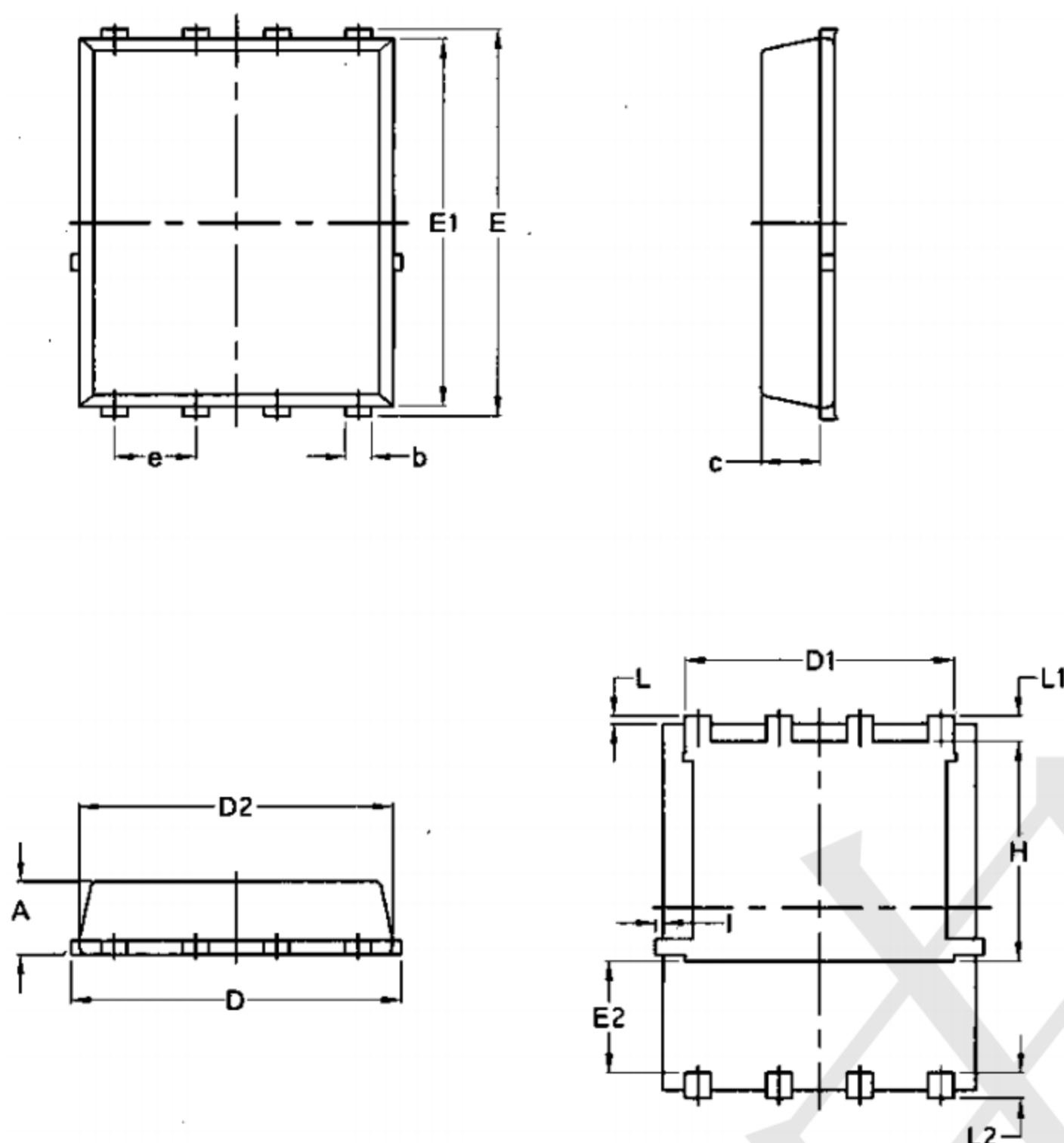
Symbol	TECH PUBLIC Parameter	Limit	Min	Typ	Max	Unit
STATIC						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250 μ A	-60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250 μ A	-1		-3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} = $\pm$ 20V			$\pm$ 100	nA
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		13	15	m Ω
		V _{GS} =-4.5V, I _D = -14A		15	20	
V _{SD}	Diode Forward Voltage	I _S =-17A, V _{GS} =0V		-0.8	-1.2	V
DYNAMIC						
Q _g	Total Gate Charge	V _{DS} =-30V, V _{GS} =-10V, I _D =-17A		92.6		nC
Q _g	Total Gate Charge	V _{DS} =-30V, V _{GS} =-4.5V, I _D =-17A		44.6		
Q _{gs}	Gate-Source Charge			15.9		
Q _{gd}	Gate-Drain Charge			20.3		
C _{iss}	Input capacitance	V _{DS} =-30V, V _{GS} =0V, F=1MHz		4765		pF
C _{oss}	Output Capacitance			270		
C _{rss}	Reverse Transfer Capacitance			234		
t _{d(on)}	Turn-On Delay Time	V _{DS} =-30V, R _L =1.8 Ω V _{GS} =-10V, R _G =6 Ω I _D =-17A		127		ns
t _r	Turn-On Rise Time			103		
t _{d(off)}	Turn-Off Delay Time			175		
t _f	Turn-Off Fall Time			57.1		

Typical Electrical and Thermal Characteristic Curves





Package Outline Dimensions PDFN5x6-8L



Symbol	Common			
	mm		Inch	
	Mim	Max	Min	Max
A	1.03	1.17	0.0406	0.0461
b	0.34	0.48	0.0134	0.0189
c	0.824	0.0970	0.0324	0.082
D	4.80	5.40	0.1890	0.2126
D1	4.11	4.31	0.1618	0.1697
D2	4.80	5.00	0.1890	0.1969
E	5.95	6.15	0.2343	0.2421
E1	5.65	5.85	0.2224	0.2303
E2	1.60	/	0.0630	/
e	1.27 BSC		0.05 BSC	
L	0.05	0.25	0.0020	0.0098
L1	0.38	0.50	0.0150	0.0197
L2	0.38	0.50	0.0150	0.0197
H	3.30	3.50	0.1299	0.1378
I	/	0.18	/	0.0070