

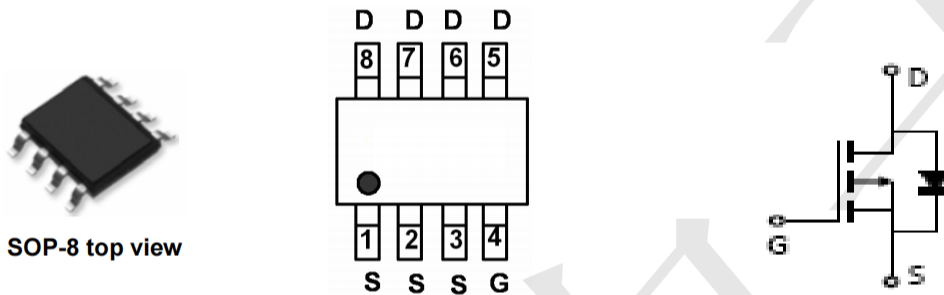
FEATURES

BV_{DSS}	-150V
$I_D @ V_{GS} = -10V, T_C = 25^\circ C$	-4.4A
$I_D @ V_{GS} = -10V, T_A = 25^\circ C$	-1.8A
$R_{DS(ON) Typ. @ V_{GS} = -10V, I_D = -1.5A}$	270m Ω

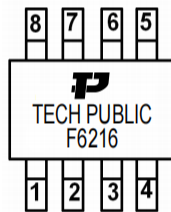
APPLICATIONS

- Low Gate Charge
- Fast Switching Characteristic
- ESD protected gate

Package and Pin Configuration



Marking:



Absolute Maximum Ratings ($T_A = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DS}	-150	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current @ $V_{GS} = -10V, T_C = 25^\circ C$	I_D	-4.4	A
Continuous Drain Current @ $V_{GS} = -10V, T_C = 100^\circ C$		-2.8	
Continuous Drain Current @ $V_{GS} = -10V, T_A = 25^\circ C$		-1.8	
Continuous Drain Current @ $V_{GS} = -10V, T_A = 70^\circ C$		-1.4	
Pulsed Drain Current	I_{DM}	-17	
Continuous Body Diode Forward Current @ $T_C = 25^\circ C$	I_S	-4.4	
Pulsed Body Diode Forward Current @ $T_C = 25^\circ C$	I_{SM}	-17	
Avalanche Current @ $L = 0.1mH$	I_{AS}	-15	mJ
Avalanche Energy @ $L = 0.5mH$	E_{AS}	25	
Total Power Dissipation	$T_C = 25^\circ C$	14	W
	$T_C = 100^\circ C$	5.6	
	$T_A = 25^\circ C$	2.3	
	$T_A = 70^\circ C$	1.5	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^\circ C$

Thermal Data

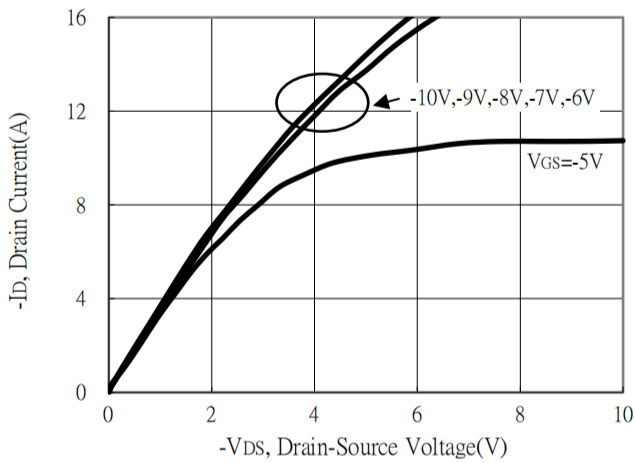
Parameter	Symbol	Steady State	Unit
Thermal Resistance, Junction-to-case	R _{θJC}	9.2	°C/W
Thermal Resistance, Junction-to-ambient *b	R _{θJA}	55	

Electrical Characteristics (T_A=25°C, unless otherwise specified)

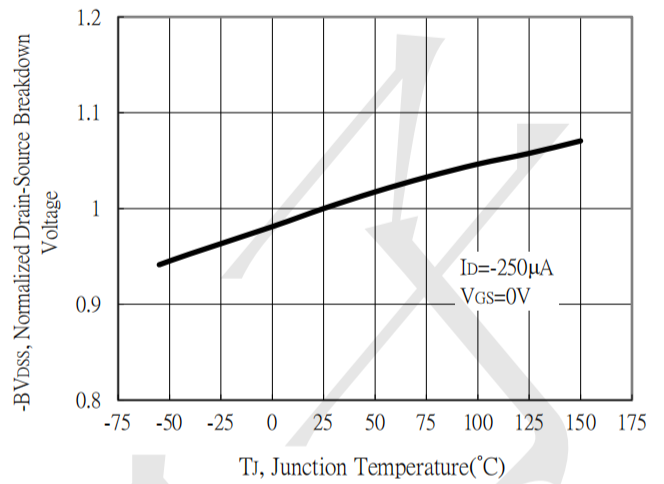
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS}	-150	-	-	V	V _{GS} =0V, I _D =-250μA
V _{GS(th)}	-2	-	-4		V _{DS} =V _{GS} , I _D =-250μA
G _{FS}	-	4.2	-	S	V _{DS} =-10V, I _D =-1.5A
I _{GSS}	-	-	±10	μA	V _{GS} =±16V, V _{DS} =0V
I _{DSS}	-	-	-1		V _{DS} =-120V, V _{GS} =0V
R _{DS(ON)}	-	270	350	mΩ	V _{GS} =-10V, I _D =-1.5A
Dynamic					
C _{iss}	-	930	-	pF	V _{DS} =-75V, V _{GS} =0V, f=1MHz
C _{oss}	-	55	-		
C _{rss}	-	25	-		
Q _g *1,2	-	20	-	nC	V _{DS} =-75V, I _D =-1.3A, V _{GS} =-10V
Q _{gs} *1,2	-	4	-		
Q _{gd} *1,2	-	5	-		
t _{d(ON)} *1,2	-	80	-	ns	V _{DS} =-75V, I _D =-1.3A, V _{GS} =-10V, R _{GS} =6.5Ω
t _r *1,2	-	46	-		
t _{d(OFF)} *1,2	-	203	-		
t _f *1,2	-	525	-		
Source-Drain Diode					
V _{SD} *1	-	-0.77	-1.2	V	I _S =-1.5A, V _{GS} =0V
t _{rr}	-	34	-	ns	I _F =-1.3A, dI _F /dt=100A/μs
Q _{rr}	-	50	-	nC	

Typical Characteristics

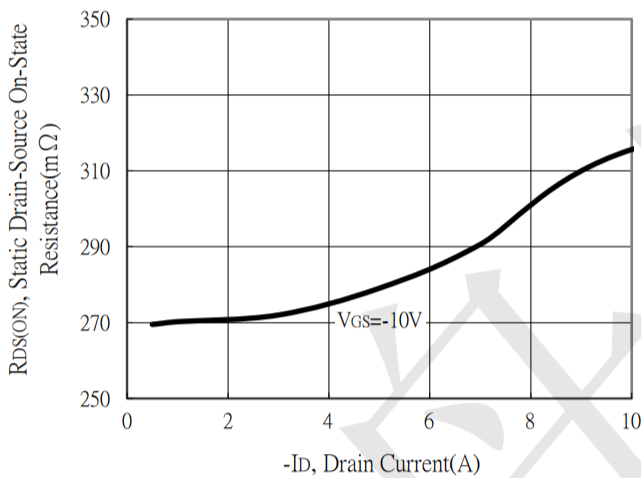
Typical Output Characteristics



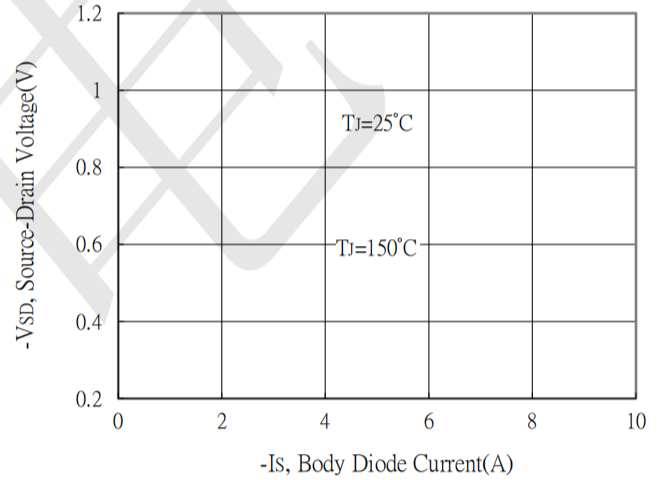
Breakdown Voltage vs Ambient Temperature



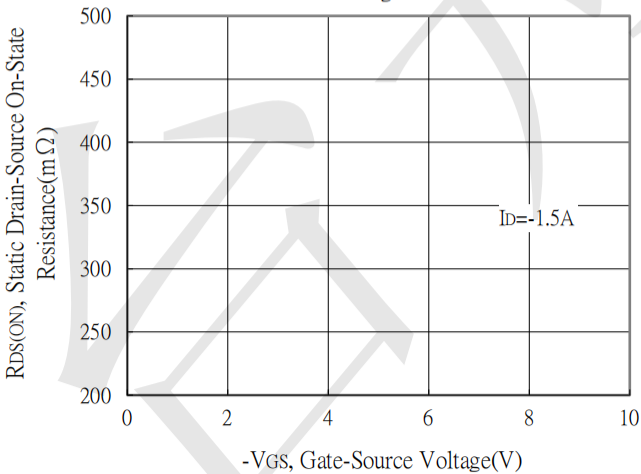
Static Drain-Source On-State resistance vs Drain Current



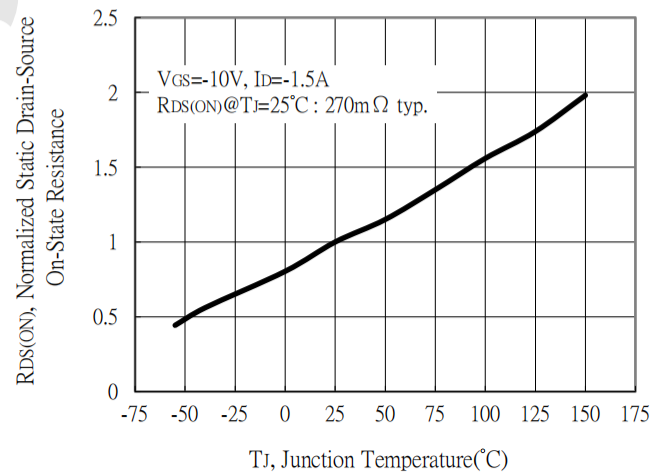
Body Diode Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage

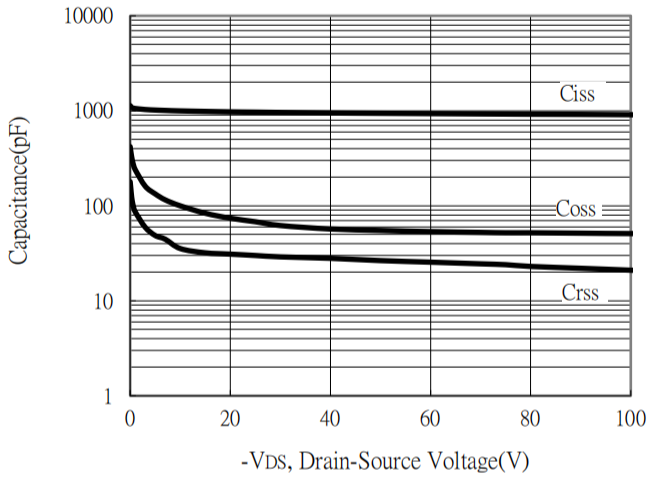


Drain-Source On-State Resistance vs Junction Temperature

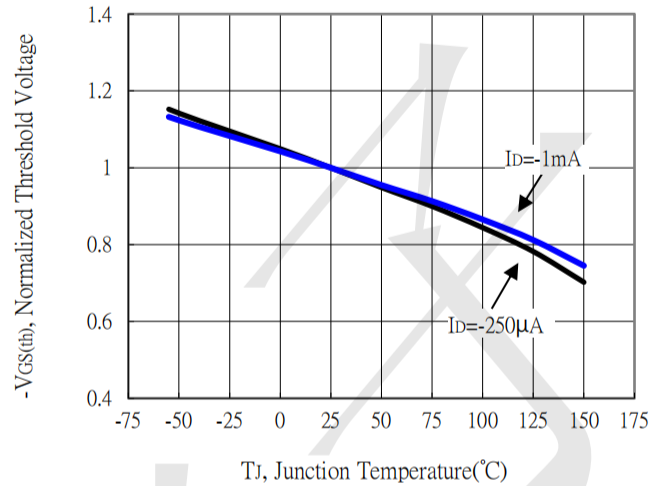


Typical Characteristics (Cont.)

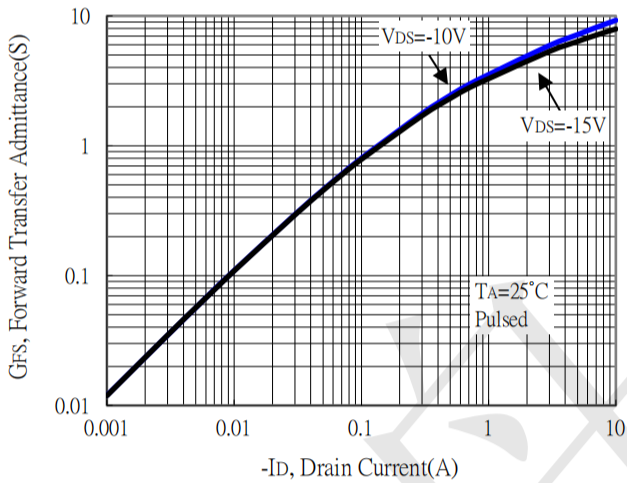
Capacitance vs Drain-to-Source Voltage



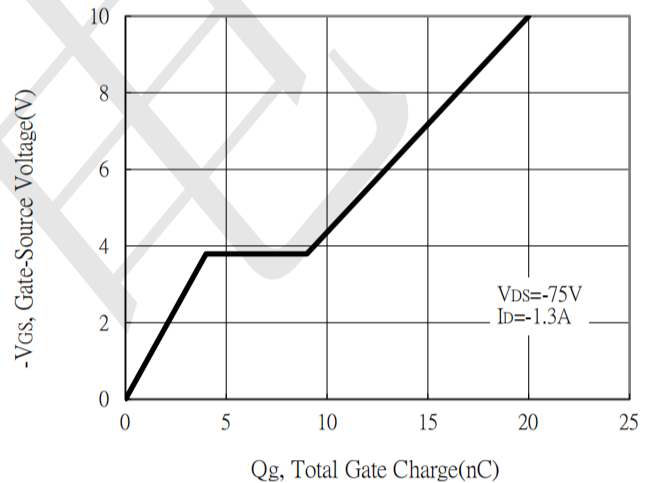
Threshold Voltage vs Junction Temperature



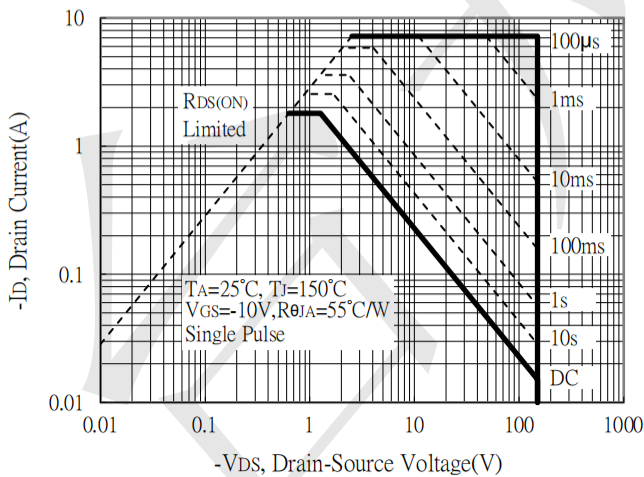
Forward Transfer Admittance vs Drain Current



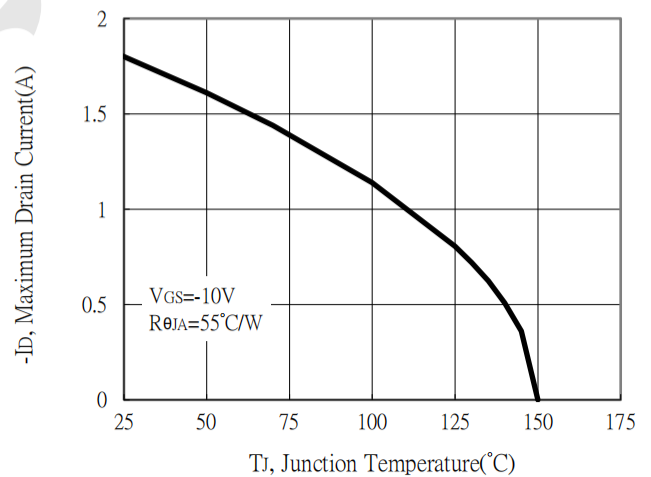
Gate Charge Characteristics



Maximum Safe Operating Area

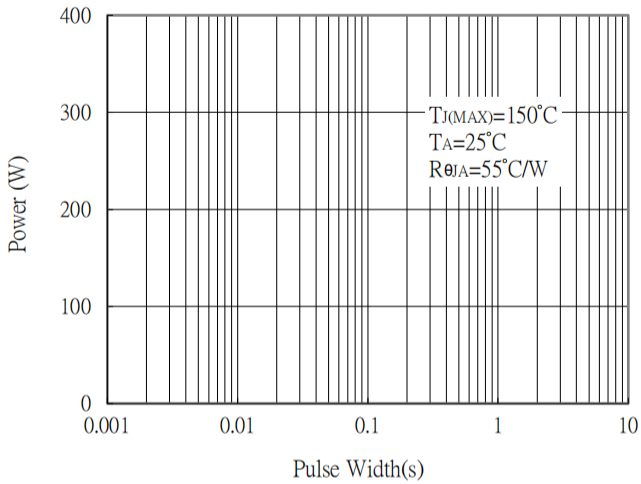


Maximum Drain Current vs Junction Temperature

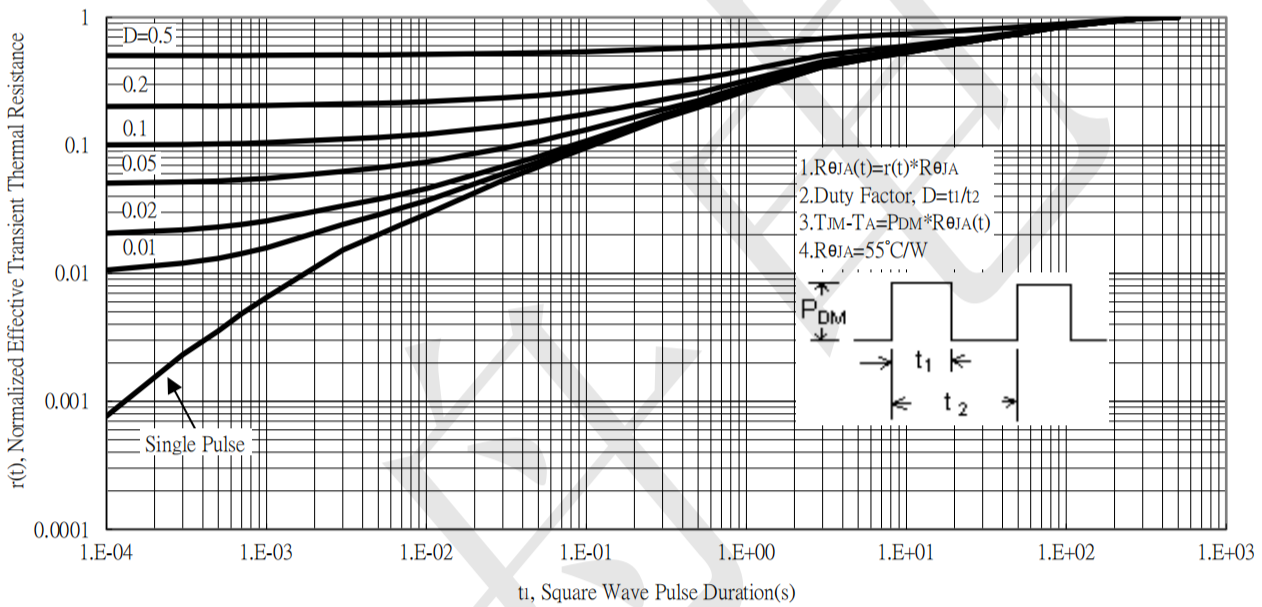


Typical Characteristics (Cont.)

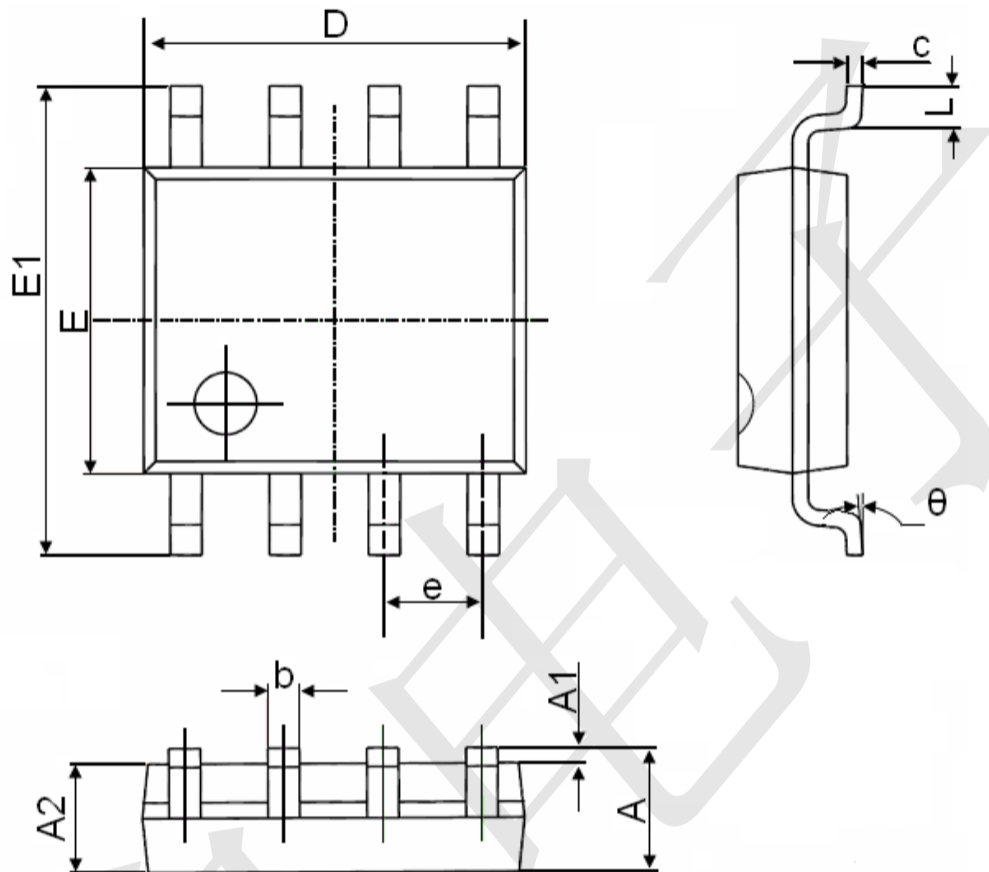
Single Pulse Power Rating, Junction to Ambient



Transient Thermal Response Curves



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°