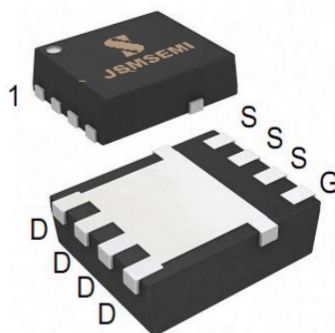


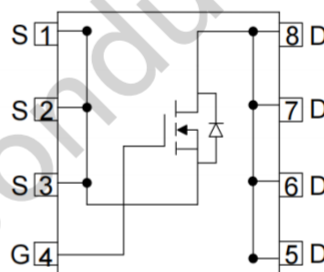
Features

- 30V/150A,
 $R_{DS(ON)} = 1.5m\Omega$ (Typ.) @ $V_{GS} = 10V$
 $R_{DS(ON)} = 2.2m\Omega$ (Typ.) @ $V_{GS} = 4.5V$
- Reliable and Rugged
- Lower Q_g and Q_{gd} for high-speed switching
- Lower $R_{DS(ON)}$ to Minimize Conduction Losses
- 100% UIS + R_g Tested
- Lead Free and Green Devices Available
 (RoHS Compliant)



Applications

- Power Management in Desktop Computer or DC/DC Converters.
- Power Load Switch.
- Notebook Battery Management.



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Symbol	Parameter		Rating	Unit
Common Ratings				
V _{DSS}	Drain-Source Voltage		30	V
V _{GSS}	Gate-Source Voltage		±20	
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	
I _D	Continuous Drain Current	T _C =25°C	150	A
		T _C =100°C	100	
P _D	Maximum Power Dissipation	T _C =25°C	75	W
		T _C =100°C	32	
R _{θJC}	Thermal Resistance-Junction to Case	Steady State	2.2	°C/W
I _{DM}	Pulsed Drain Current	T _C =25°C	400	A
I _{AS} ^c	Avalanche Current, Single pulse	L=0.1mH	80	A
E _{AS} ^c	Avalanche Energy, Single pulse	L=0.1mH	320	mJ

Note a : Surface Mounted on 1in^2 pad area, $t \leq 10\text{sec}$. $R_{\theta JA}$ steady state $t = 999\text{s}$.

Note b : Pulse width is limited by max. junction temperature.

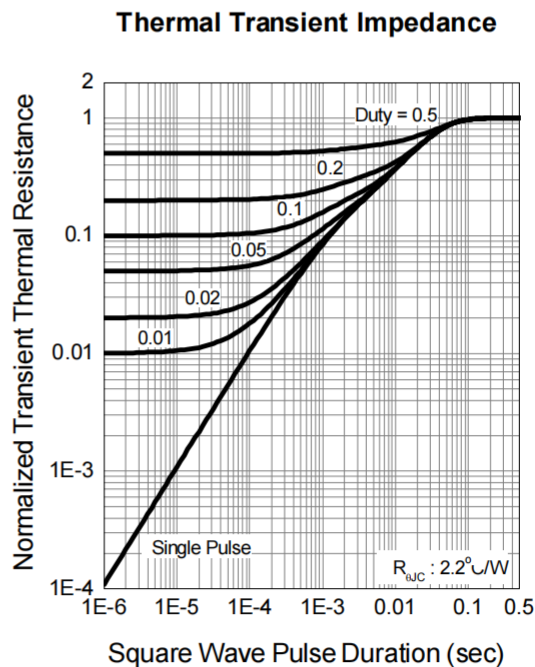
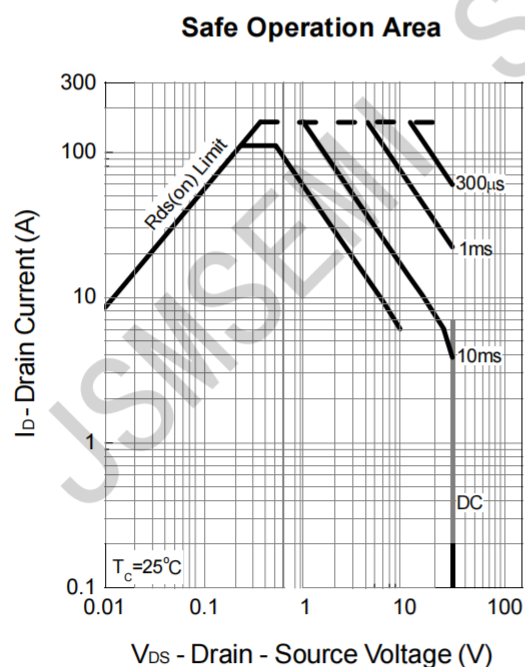
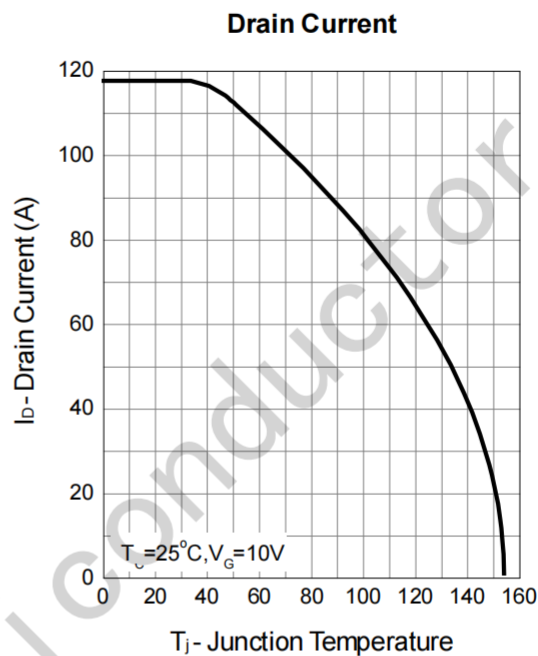
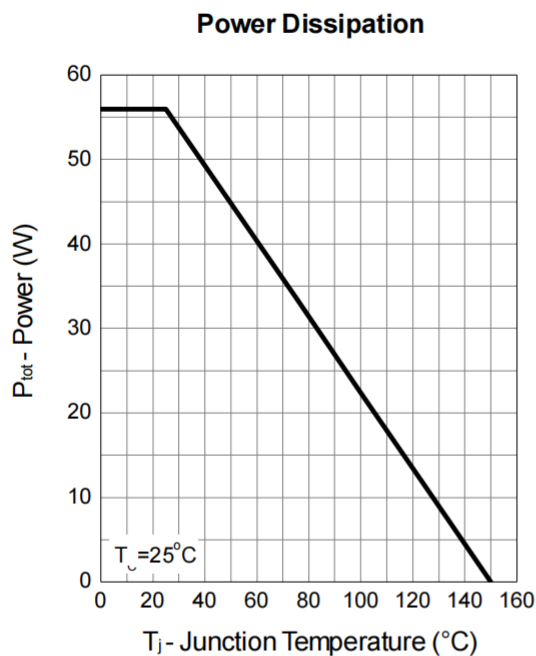
Note c : UIS tested and pulse width limited by maximum junction temperature 150°C (initial temperature $T_J = 25^\circ\text{C}$).

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

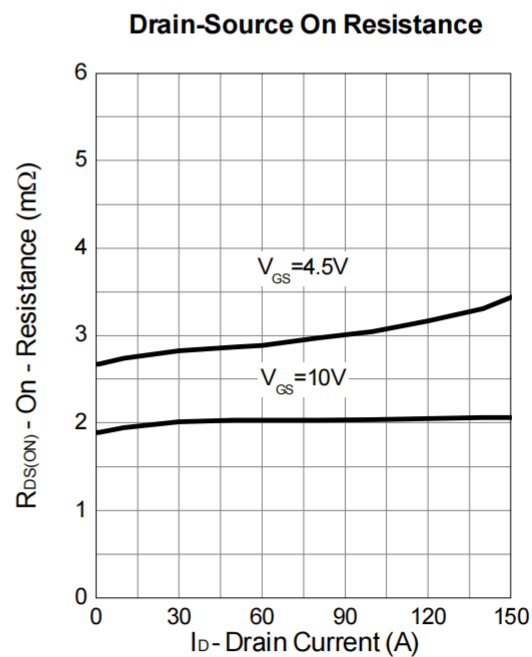
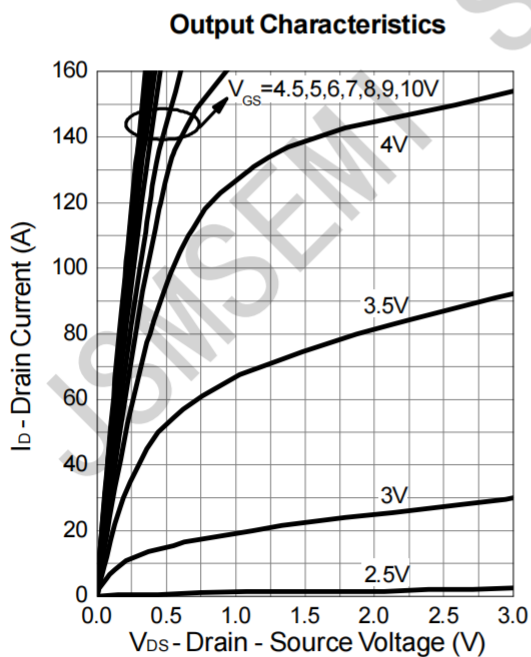
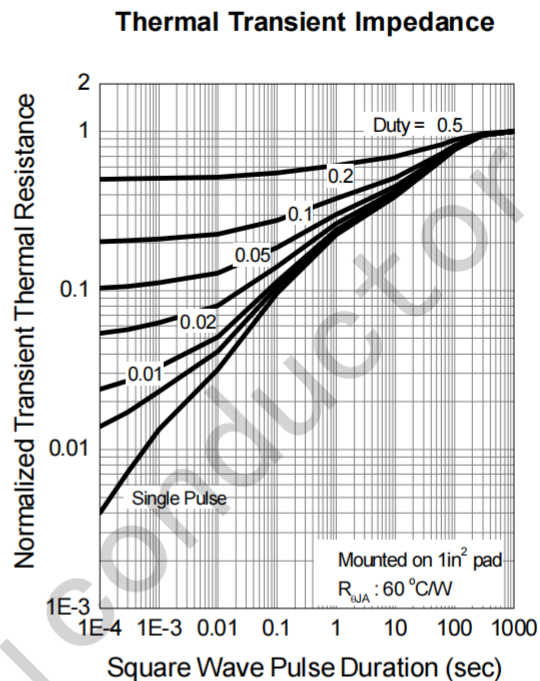
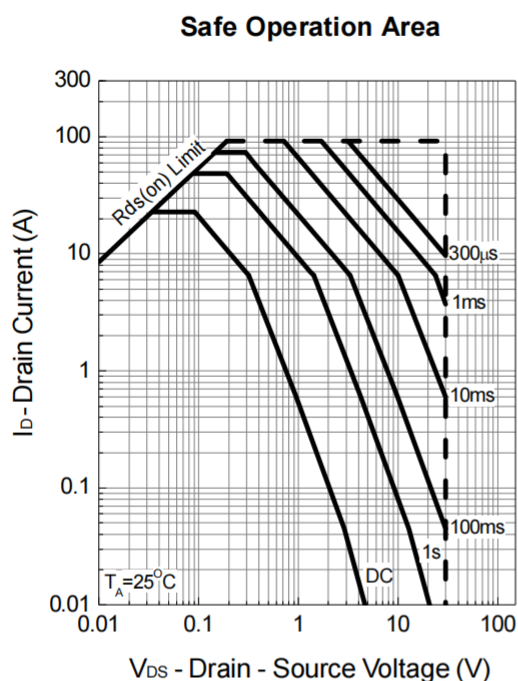
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	30	-	-	V
BV _{DSS(t)}	Drain-Source Breakdown Voltage (transient)	V _{GS} =0V, I _{D(av)} =36A T _{case} =25°C, t _{transient} =100ns	34	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =30V, V _{GS} =0V T _J =85°C	-	-	1 30	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =250μA	1.4	1.7	2.5	V
I _{GSS}	Gate Leakage Current	V _{GS} =±20V, V _{DS} =0V	-	-	±12	μA
R _{DS(ON)} ^d	Drain-Source On-state Resistance	V _{GS} =10V, I _{DS} =20A T _J =125°C	-	1.5 2.2	2.5 -	mΩ
		V _{GS} =4.5V, I _{DS} =15A	-	2.2	3.5	
Gfs	Forward Transconductance	V _{DS} =5V, I _{DS} =15A	-	30	-	S
Diode Characteristics						
V _{SD} ^d	Diode Forward Voltage	I _{SD} =20A, V _{GS} =0V	-	0.8	1.1	V
t _{rr}	Reverse Recovery Time	I _{SD} =5A, di _{SD} /dt=100A/μs	-	39	-	ns
t _a	Charge Time		-	23	-	
t _b	Discharge Time		-	16	-	
Q _{rr}	Reverse Recovery Charge		-	33	-	nC
Dynamic Characteristics						
R _G	Gate Resistance	V _{GS} =0V, V _{DS} =0V, F=1MHz	-	4.9	5.1	Ω
C _{iss}	Input Capacitance	V _{GS} =0V, V _{DS} =15V, Frequency=1.0MHz	-	5860	7400	pF
C _{oss}	Output Capacitance		-	3220	3586	
C _{rss}	Reverse Transfer Capacitance		-	92	120	
t _{d(ON)}	Turn-on Delay Time	V _{DD} =15V, R _L =15Ω, I _{DS} =1A, V _{GEN} =10V, R _G =6Ω	-	15	-	ns
t _r	Turn-on Rise Time		-	8	-	
t _{d(OFF)}	Turn-off Delay Time		-	68	-	
t _f	Turn-off Fall Time		-	94	-	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} =15V, V _{GS} =10V, I _{DS} =20A	-	30	45	nC
Q _g	Total Gate Charge	V _{DS} =15V, V _{GS} =4.5V, I _{DS} =20A	-	14	-	
Q _{gth}	Threshold Gate Charge		-	3	-	
Q _{gs}	Gate-Source Charge		-	5.3	-	
Q _{gd}	Gate-Drain Charge		-	3.6	-	

 Note d : Pulse test ; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

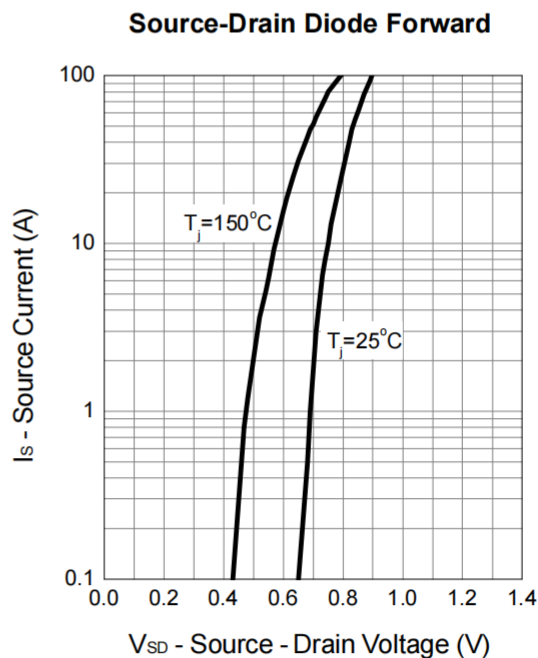
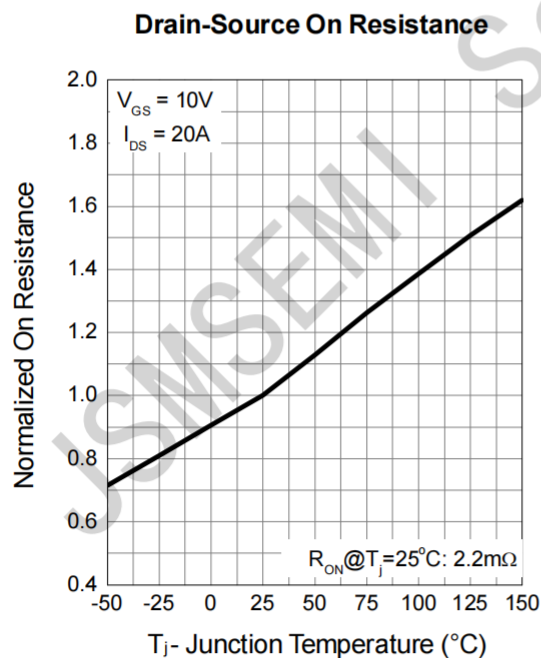
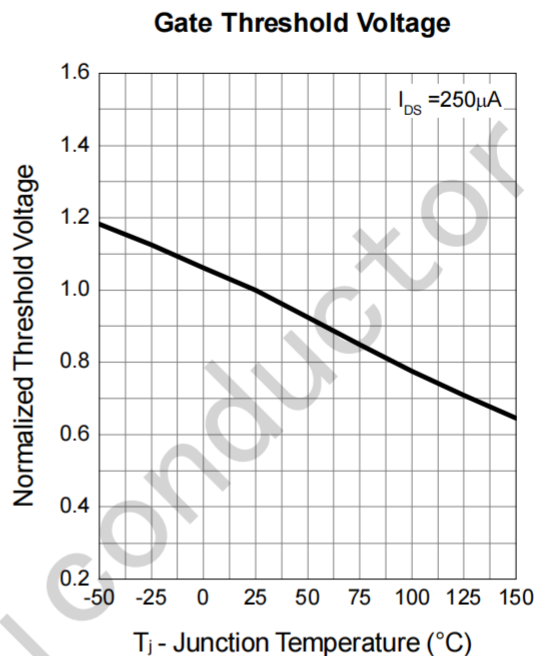
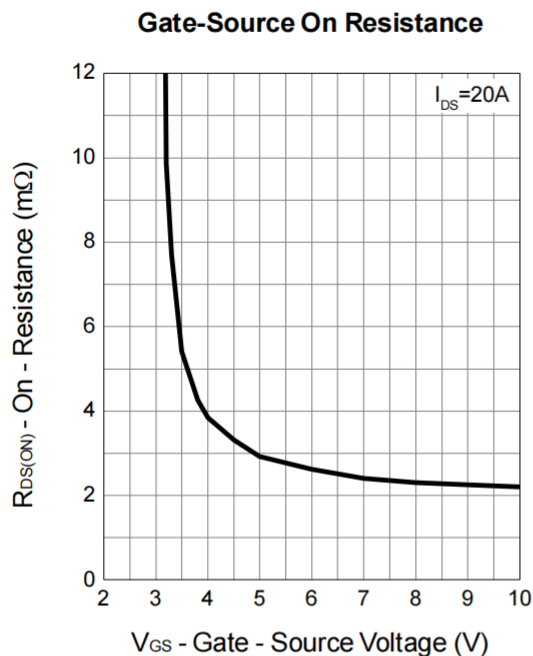
Typical Operating Characteristics



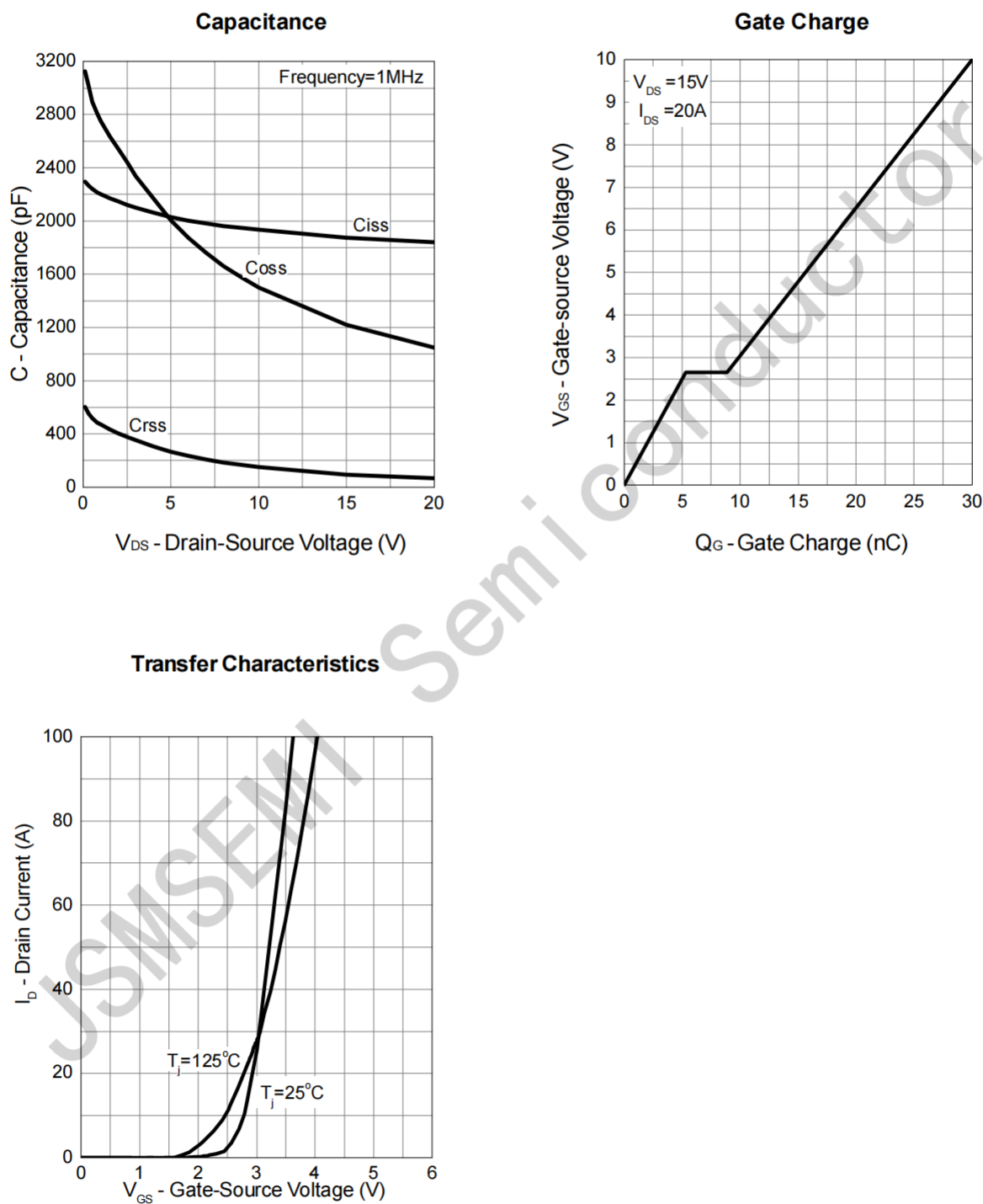
Typical Operating Characteristics (Cont.)



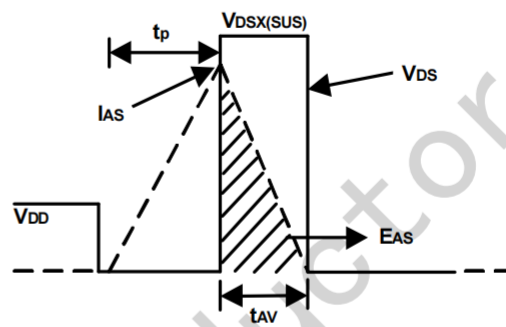
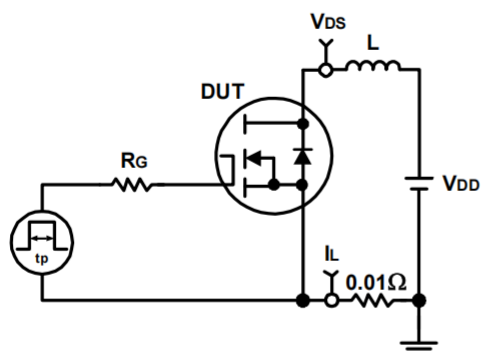
Typical Operating Characteristics (Cont.)



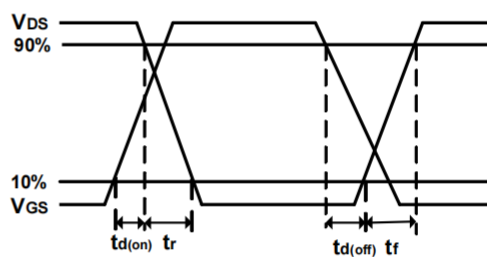
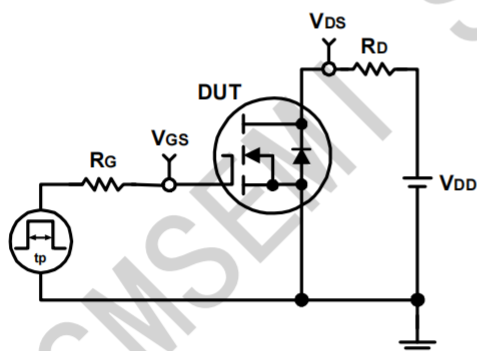
Typical Operating Characteristics (Cont.)



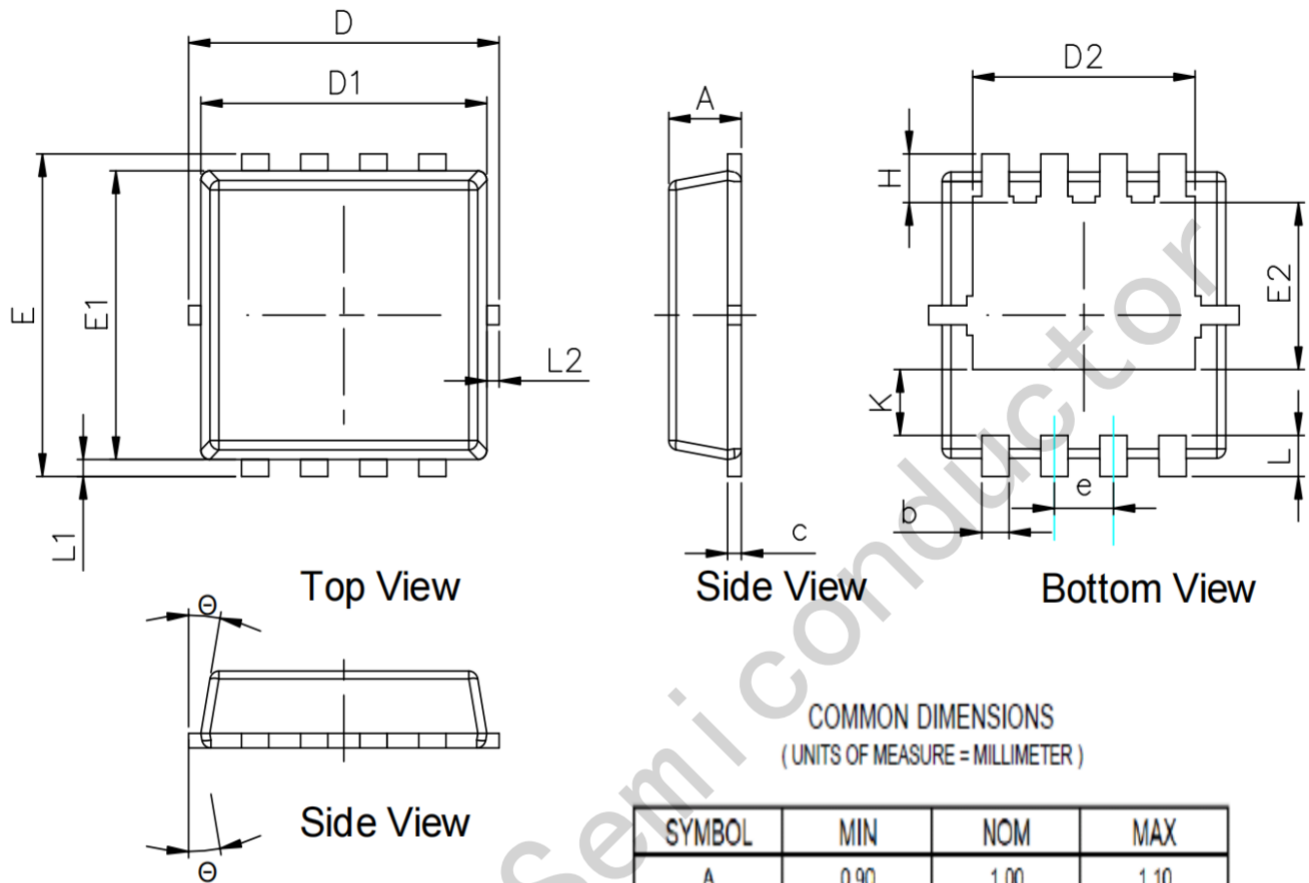
Avalanche Test Circuit and Waveforms



Switching Time Test Circuit and Waveforms



Package Outlines



SYMBOL	MIN	NOM	MAX
A	0.90	1.00	1.10
b	0.35	0.40	0.45
c	0.21	0.25	0.34
D	-	-	5.1
D1	4.85	4.90	4.95
D2	3.96	4.01	4.06
e	1.27 BSC		
E	5.95	6.00	6.05
E1	5.70	5.75	5.80
E2	3.425	3.475	3.525
H	0.60	0.65	0.70
K	1.29	-	-
L	0.60	0.65	0.70
L1	0.05	0.15	0.25
L2	-	-	0.12
θ	8°	10°	12°
P	1.05	1.10	1.15

单击下面可查看定价，库存，交付和生命周期等信息

[>>JSMSEMI\(杰盛微\)](#)