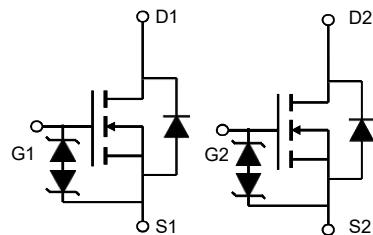
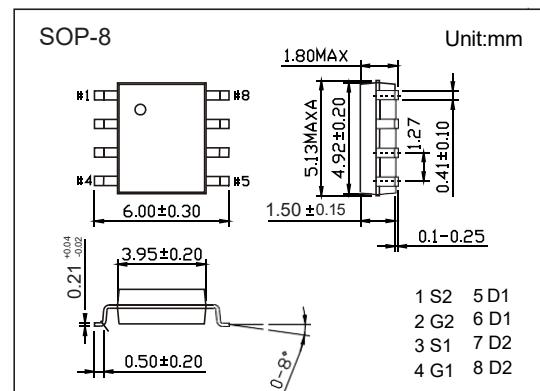


**■ Features**

- $V_{DS} (V) = 30V$
- $I_D = 8A$  ( $V_{GS} = 10V$ )
- $R_{DS(ON)} < 15m\Omega$  ( $V_{GS} = 10V$ )
- $R_{DS(ON)} < 22m\Omega$  ( $V_{GS} = 4.5V$ )


**■ Absolute Maximum Ratings  $T_a = 25^\circ C$** 

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	
Continuous Drain Current	$I_D$	8	A
		6.5	
Pulsed Drain Current	$I_{DM}$	48	
Avalanche Current	$I_{AS}, I_{AR}$	19	
Avalanche Energy	$E_{AS}, E_{AR}$	18	mJ
Power Dissipation	$P_D$	2	W
		1.3	
Thermal Resistance.Junction- to-Ambient	$R_{thJA}$	62.5	$^\circ C/W$
		90	
Thermal Resistance.Junction- to-Lead	$R_{thJL}$	40	$^\circ C$
Junction Temperature	$T_J$	150	
Storage Temperature Range	$T_{stg}$	-55 to 150	

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D=250 \mu A, V_{GS}=0V$	30			V
Zero Gate Voltage Drain Current	$I_{DS(0)}$	$V_{DS}=30V, V_{GS}=0V$			1	uA
		$V_{DS}=30V, V_{GS}=0V, T_J=55^\circ C$			5	
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 10$	uA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.2		2.4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=8A$			15	mΩ
		$V_{GS}=10V, I_D=8A, T_J=125^\circ C$			21	
		$V_{GS}=4.5V, I_D=6A$			22	
On State Drain Current	$I_D(on)$	$V_{GS}=10V, V_{DS}=5V$	48			A
Forward Transconductance	$g_{FS}$	$V_{DS}=5V, I_D=8A$		30		S
Input Capacitance	$C_{iss}$	$V_{GS}=0V, V_{DS}=15V, f=1MHz$	600		888	pF
Output Capacitance	$C_{oss}$		77		145	
Reverse Transfer Capacitance	$C_{rss}$		50		115	
Gate Resistance	$R_g$	$V_{GS}=0V, V_{DS}=0V, f=1MHz$	0.5		1.7	Ω
Total Gate Charge (10V)	$Q_g$	$V_{GS}=10V, V_{DS}=15V, I_D=8A$	12		18	nC
Total Gate Charge (4.5V)			6		9	
Gate Source Charge	$Q_{gs}$			2.5		
Gate Drain Charge	$Q_{gd}$			3		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V, V_{DS}=15V, R_L=1.8\Omega, R_{GEN}=3\Omega$		5		ns
Turn-On Rise Time	$t_r$			3.5		
Turn-Off Delay Time	$t_{d(off)}$			19		
Turn-Off Fall Time	$t_f$			3.5		
Body Diode Reverse Recovery Time	$t_{rr}$	$I_F= 8A, dI/dt= 500A/us$	6		10	nC
Body Diode Reverse Recovery Charge	$Q_{rr}$		14		22	
Maximum Body-Diode Continuous Current	$I_S$				2.5	A
Diode Forward Voltage	$V_{SD}$	$I_S=1A, V_{GS}=0V$			1	V

Note. The static characteristics in Figures 1 to 6 are obtained using <300us pulses, duty cycle 0.5% max.

■ Typical Characteristics

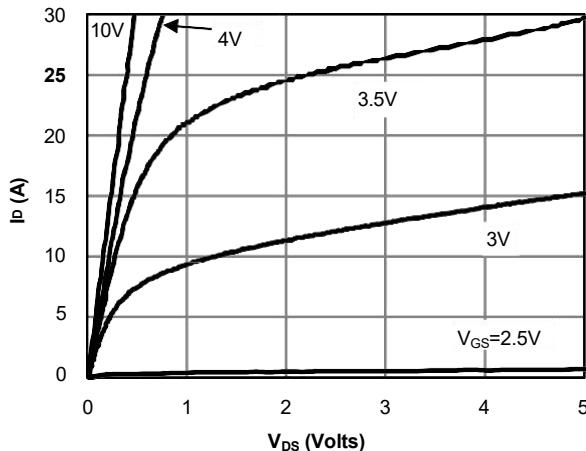


Fig 1: On-Region Characteristics (Note E)

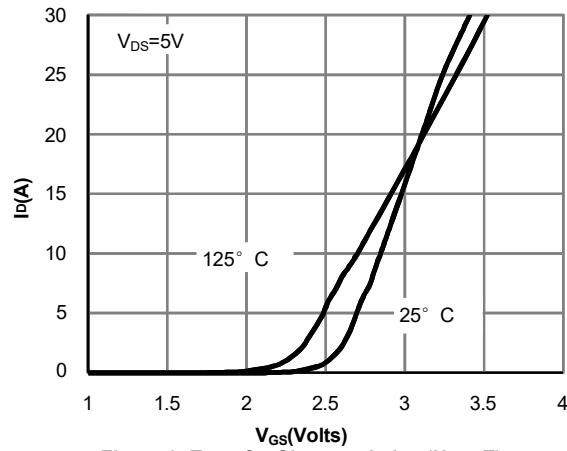


Figure 2: Transfer Characteristics (Note E)

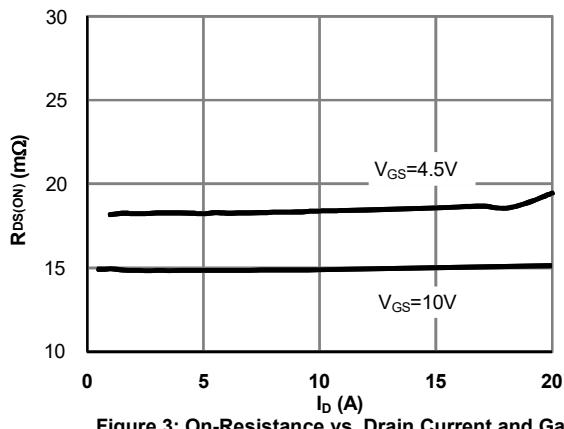


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

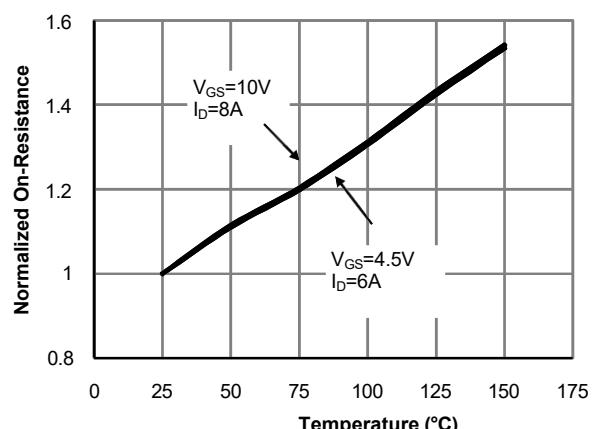


Figure 4: On-Resistance vs. Junction Temperature (Note E)

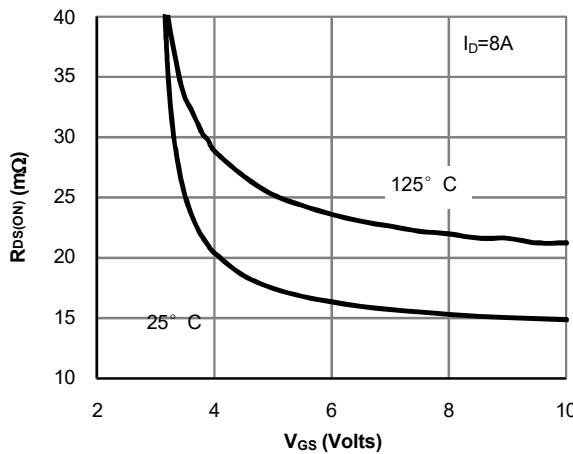


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

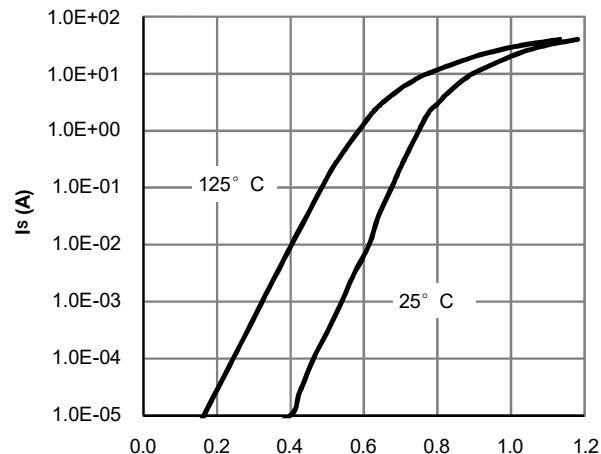
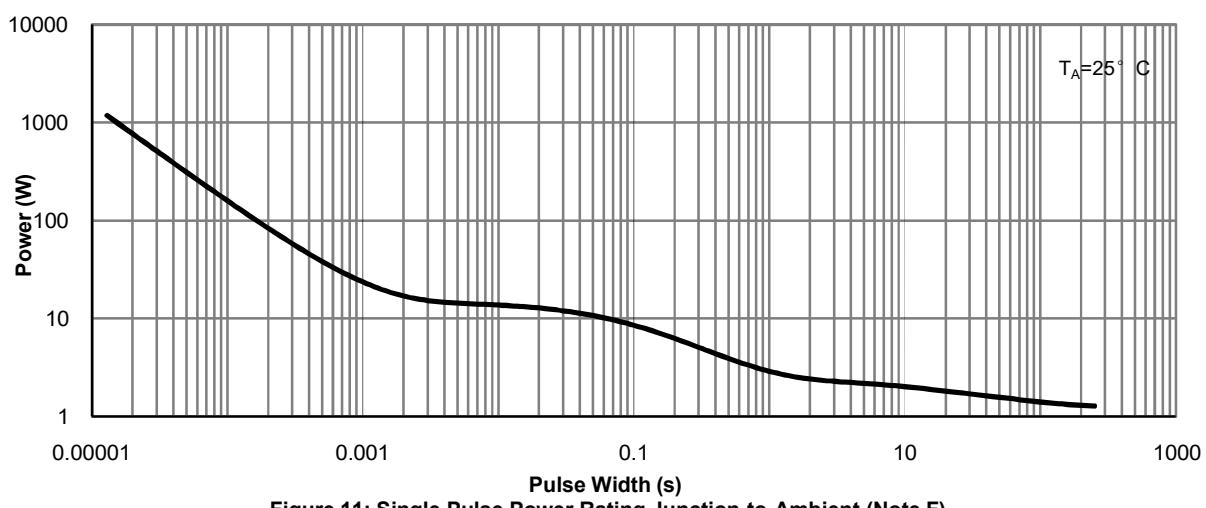
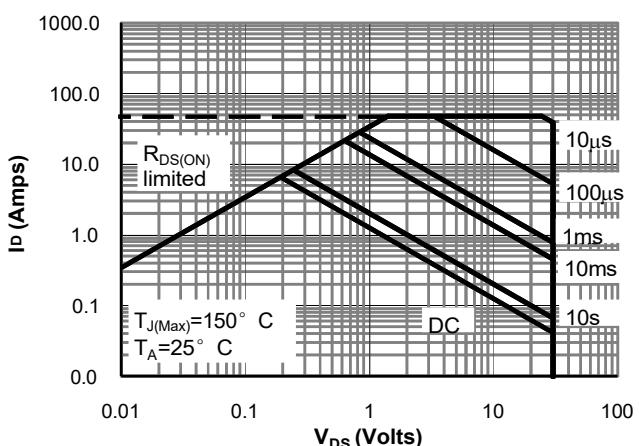
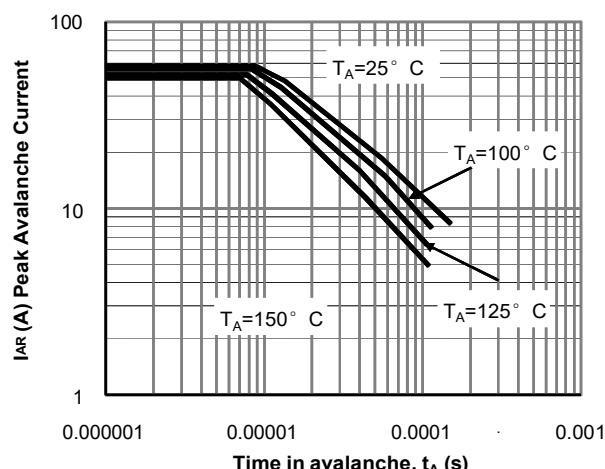
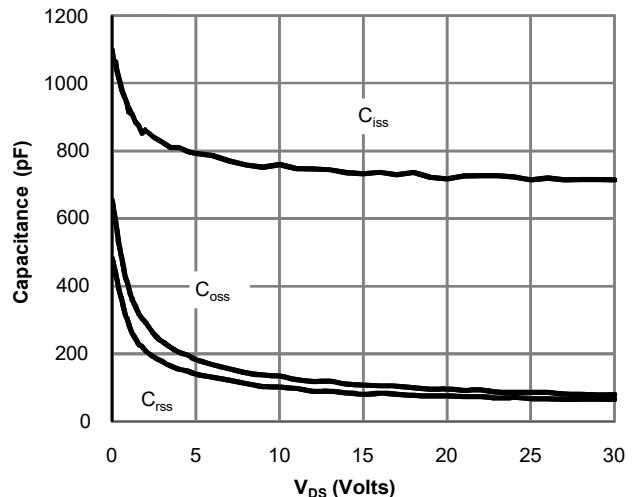
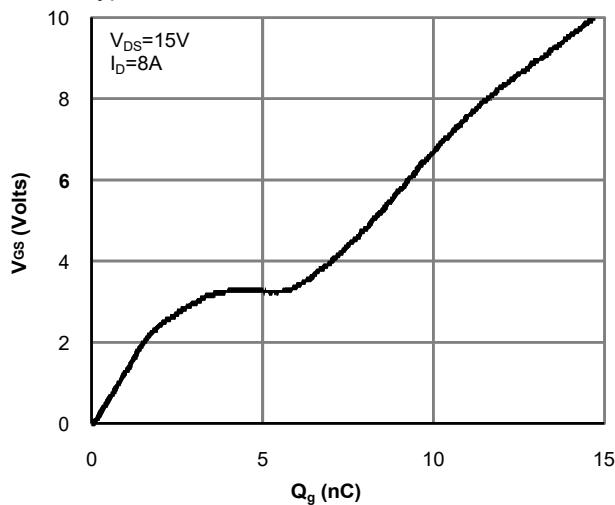


Figure 6: Body-Diode Characteristics (Note E)

**■ Typical Characteristics**


■ Typical Characteristics

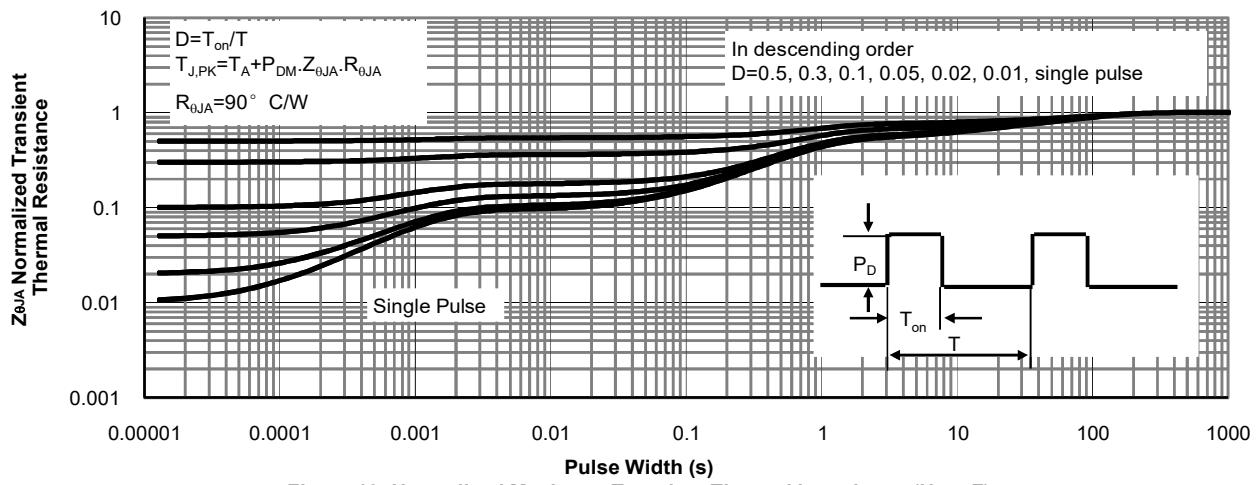


Figure 12: Normalized Maximum Transient Thermal Impedance (Note F)