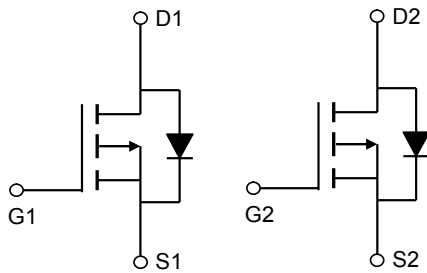
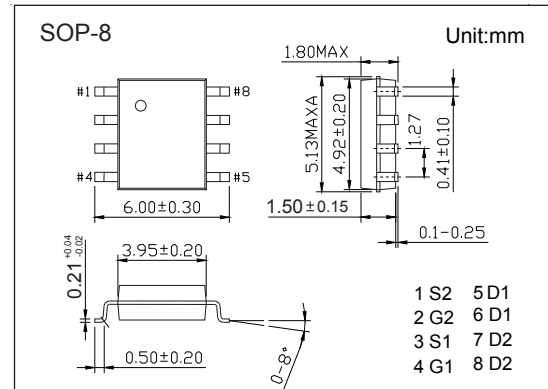


■ Features

- $V_{DS} (V) = -30V$
- $I_D = -9 A (V_{GS} = -20V)$
- $R_{DS(ON)} < 15m\Omega (V_{GS} = -20V)$
- $R_{DS(ON)} < 18m\Omega (V_{GS} = -10V)$



■ Absolute Maximum Ratings $T_A = 25^\circ C$

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±25	
Continuous Drain Current	$T_A = 25^\circ C$	I_D	-9	A
	$T_A = 70^\circ C$		-7	
Pulsed Drain Current		I_{DM}	-50	
Avalanche Current		I_{AS}, I_{AR}	-33	
Avalanche Energy	$L = 0.1mH$	E_{AS}, E_{AR}	54	mJ
Power Dissipation	$T_A = 25^\circ C$	P_D	2	W
	$T_A = 70^\circ C$		1.3	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	62.5	$^\circ C/W$
	Steady-State		90	
Thermal Resistance.Junction- to-Lead		R_{thJL}	40	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V, T _J =55°C			-5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±25V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1.7		-2.8	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-20V, I _D =-9A			15	mΩ
		V _{GS} =-10V, I _D =-8A			18	
		V _{GS} =-10V, I _D =-8A T _J =125°C			20	
		V _{GS} =-4.5V, I _D =-5A		29		
On State Drain Current	I _{D(ON)}	V _{GS} =-10V, V _{DS} =-5V	-50			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-9A		27		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-15V, f=1MHz		2060	2600	pF
Output Capacitance	C _{oss}			370		
Reverse Transfer Capacitance	C _{rss}			295		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	1.2		3.6	Ω
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-15V, I _D =-9A		30	39	nC
Gate Source Charge	Q _{gs}			4.6		
Gate Drain Charge	Q _{gd}			10		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-10V, V _{DS} =-15V, R _L =1.67Ω, R _{GEN} =3Ω		11		ns
Turn-On Rise Time	t _r			9.4		
Turn-Off DelayTime	t _{d(off)}			24		
Turn-Off Fall Time	t _f			12		
Body Diode Reverse Recovery Time	t _{rr}	I _F = -9A, di/dt= 100A/us		30	40	nC
Body Diode Reverse Recovery Charge	Q _{rr}			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

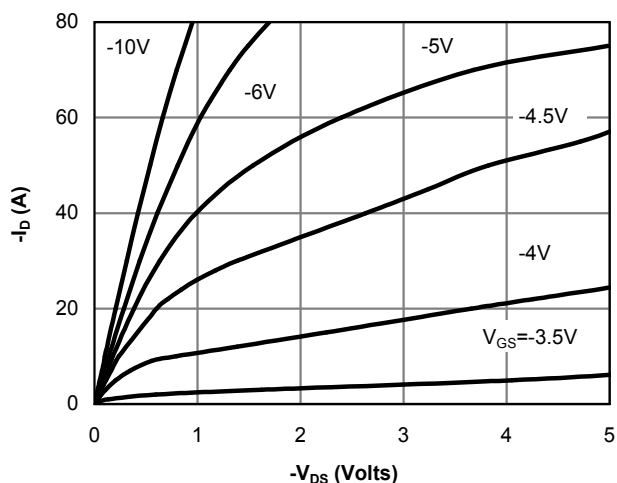


Fig 1: On-Region Characteristics

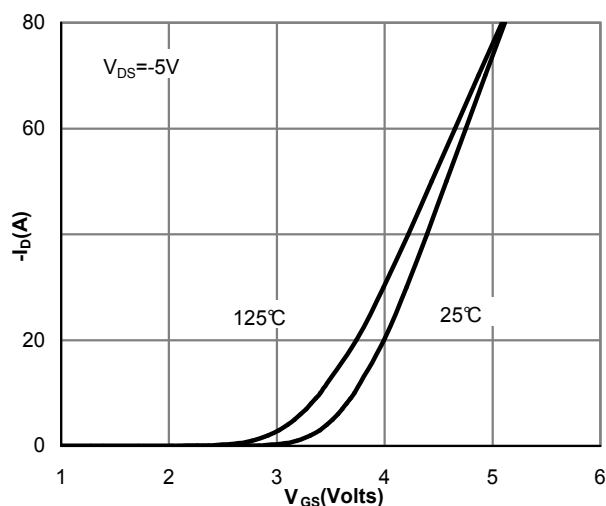


Figure 2: Transfer Characteristics

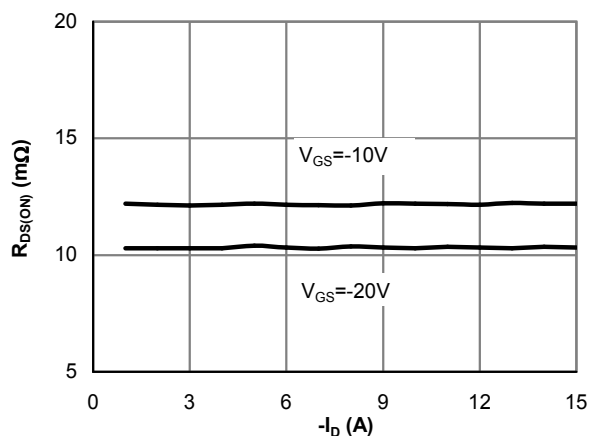


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

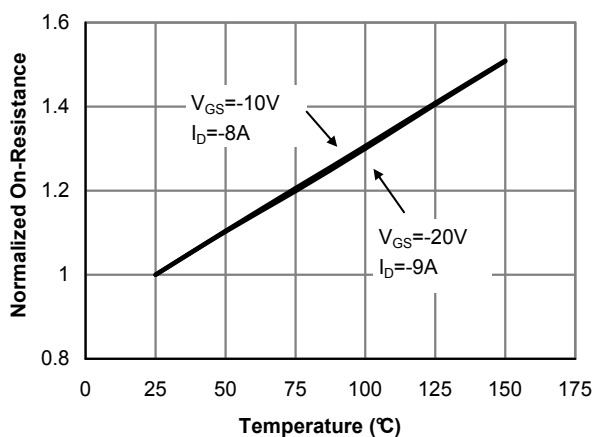


Figure 4: On-Resistance vs. Junction Temperature

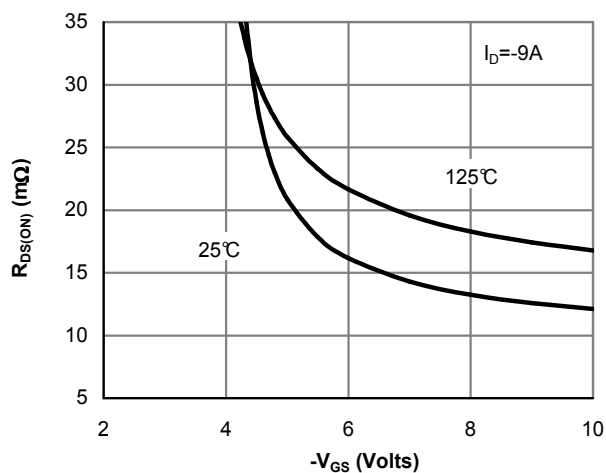


Figure 5: On-Resistance vs. Gate-Source Voltage

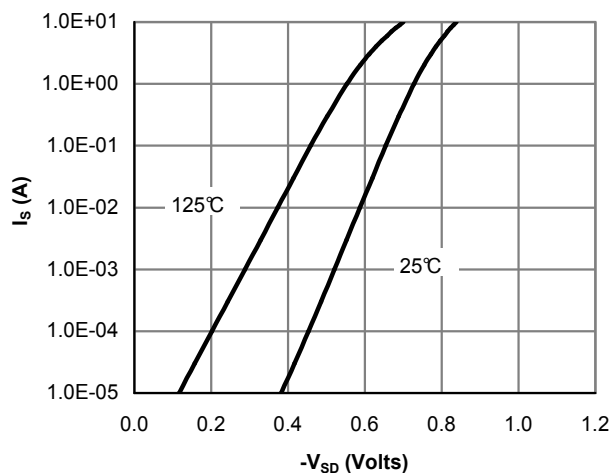


Figure 6: Body-Diode Characteristics

■ Typical Characteristics

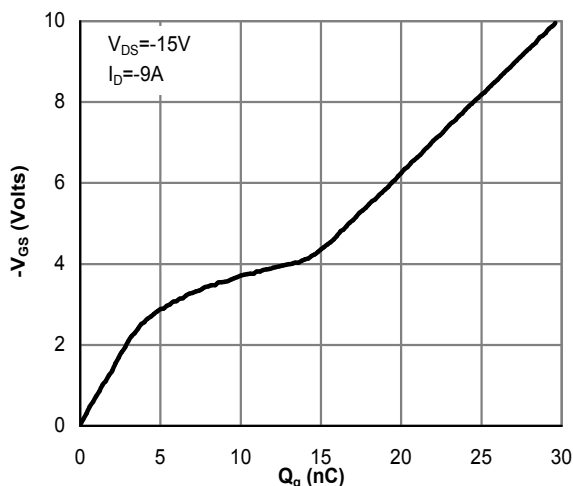


Figure 7: Gate-Charge Characteristics

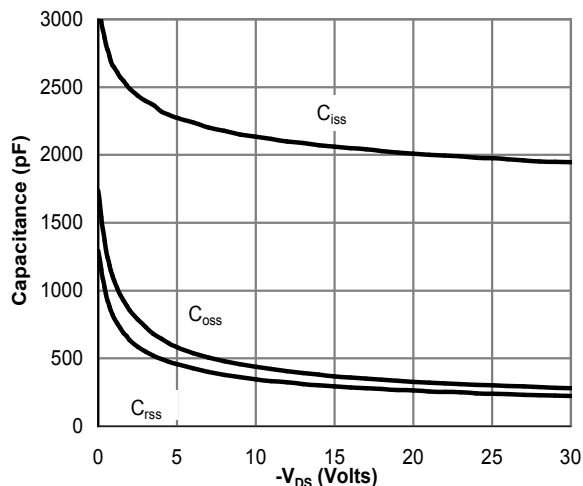


Figure 8: Capacitance Characteristics

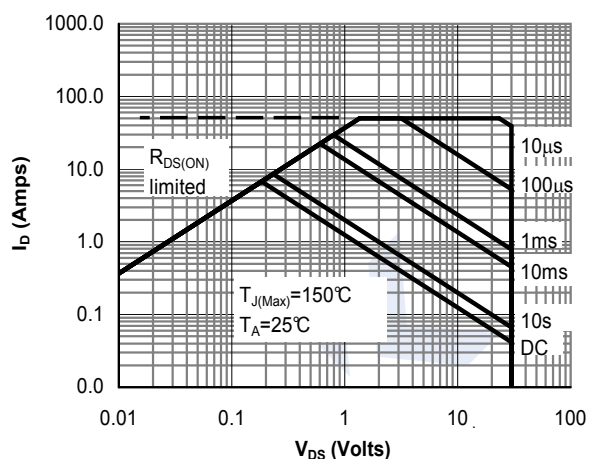


Figure 10: Maximum Forward Biased Safe Operating Area (Note F)

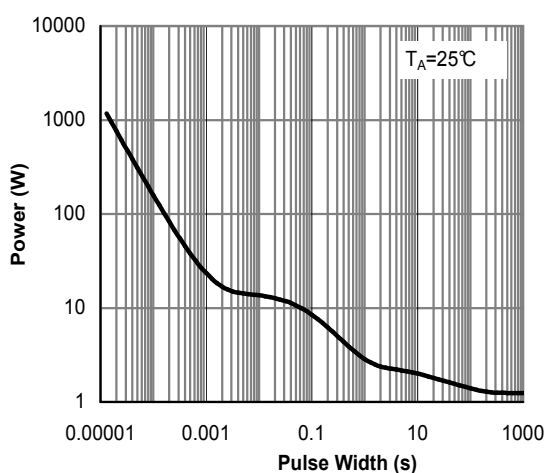


Figure 11: Single Pulse Power Rating Junction-to-Ambient (Note F)

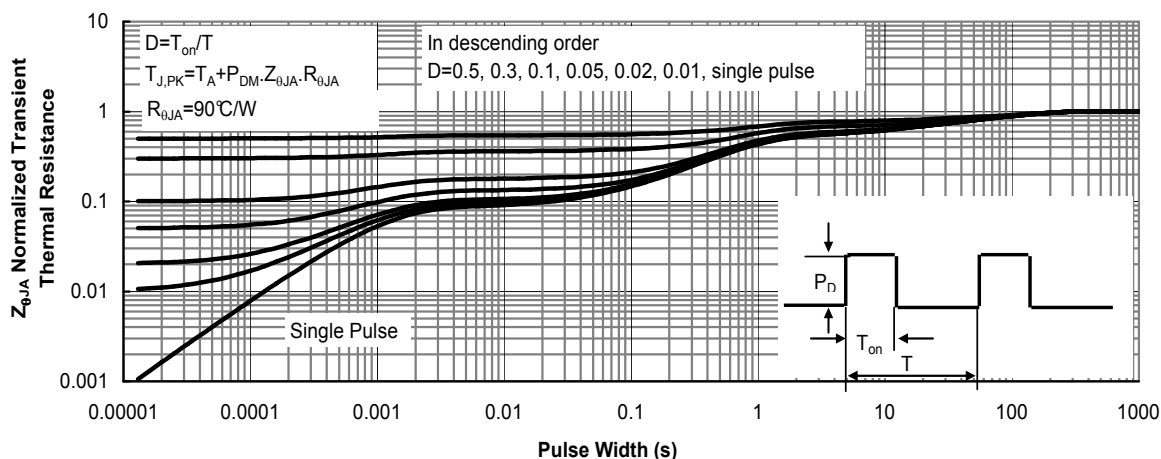


Figure 12: Normalized Maximum Transient Thermal Impedance (Note F)