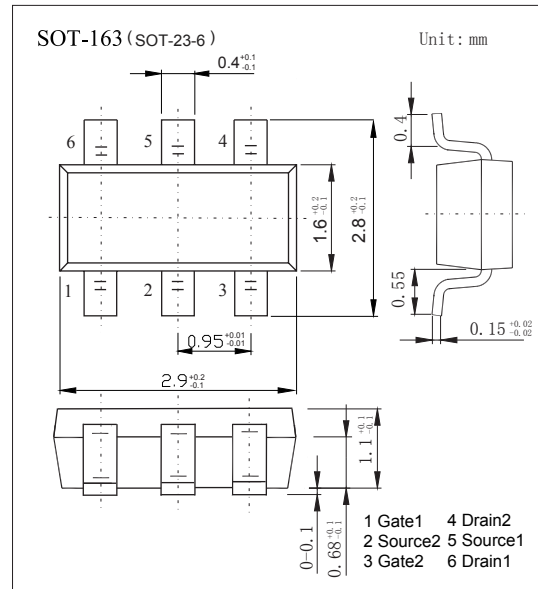
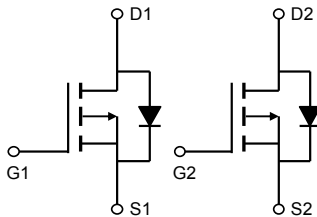


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Features

- $V_{DS} (V) = -30V$
- $I_D = -2.3A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 115m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 150m\Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 200m\Omega$ ($V_{GS} = -2.5V$)



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 12	
Continuous Drain Current	$T_A = 25^\circ C$	I_D	-2.3	A
	$T_A = 70^\circ C$		-2	
Pulsed Drain Current		I_{DM}	-11	
Power Dissipation	$T_A = 25^\circ C$	P_D	1.15	W
	$T_A = 70^\circ C$		0.75	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	110	$^\circ C/W$
	Steady-State		150	
Thermal Resistance.Junction- to-Lead		R_{thJL}	80	
Junction Temperature		T_J	150	$^\circ C$
Junction Storage Temperature Range		T_{stg}	-55 to 150	

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■ 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} =±12V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250 μA	-0.5		-1.4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-2.3A			115	mΩ
		V _{GS} =-10V, I _D =-2.3A T _J =125°C			190	
		V _{GS} =-4.5V, I _D =-2A			150	
		V _{GS} =-2.5V, I _D =-1A			200	
On state drain current	I _{D(on)}	V _{GS} =-10V, V _{DS} =-5V	-11			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-2.3A		8		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-15V, f=1MHz		260	315	pF
Output Capacitance	C _{oss}			37		
Reverse Transfer Capacitance	C _{rss}			20		
Gate resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	4		12	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =-10V, V _{DS} =-15V, I _D =-2.3A		5.9	7	nC
Total Gate Charge (4.5V)				2.8	4	
Gate Source Charge	Q _{gs}			0.7		
Gate Drain Charge	Q _{gd}			1		
Turn-On DelayTime	t _{d(on)}			6		
Turn-On Rise Time	t _r	V _{GS} =-10V, V _{DS} =-15V, R _L =6.5Ω, R _{GEN} =3Ω		3.5		ns
Turn-Off DelayTime	t _{d(off)}			20		
Turn-Off Fall Time	t _f			5		
Body Diode Reverse Recovery Time	t _{rr}	I _F =-2.3A, di/dt=100A/μs		11.5	15	nC
Body Diode Reverse Recovery Charge	Q _{rr}			4.5		
Maximum Body-Diode Continuous Current	I _S				-1.5	A
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V			-1	V

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

■ Marking

Marking	H1**
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■ Typical Characteristics

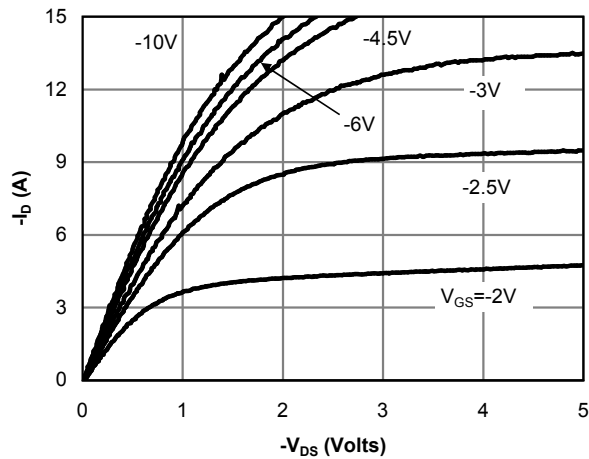


Fig 1: On-Region Characteristics (Note E)

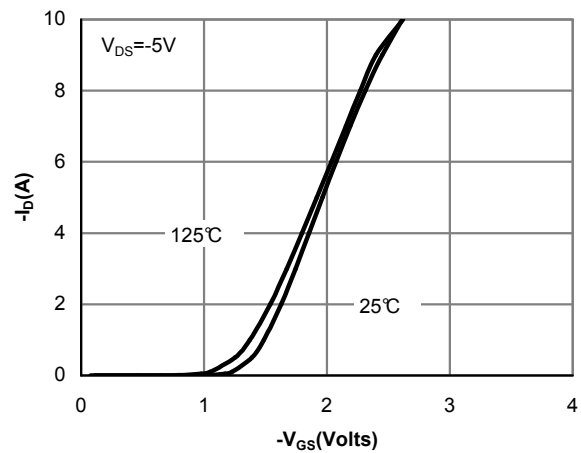


Figure 2: Transfer Characteristics (Note E)

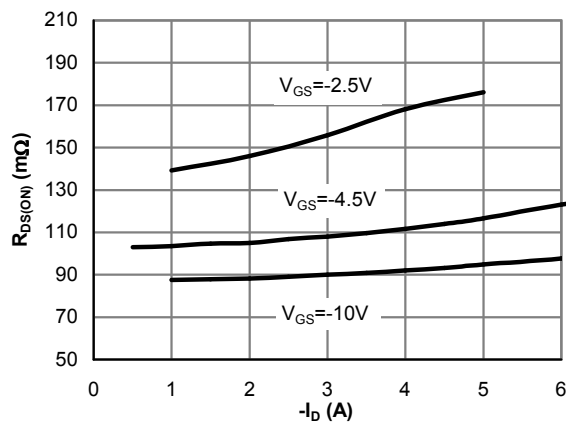


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

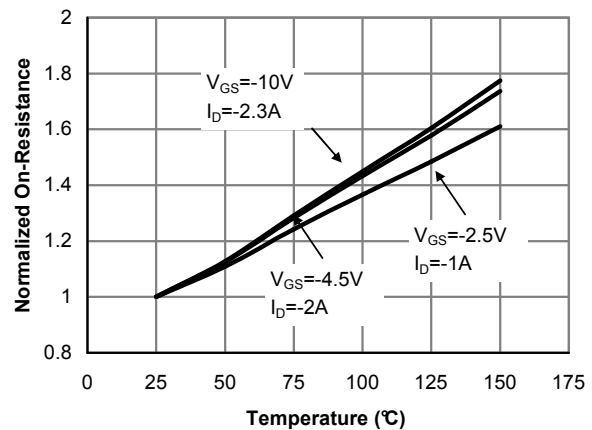


Figure 4: On-Resistance vs. Junction Temperature (Note E)

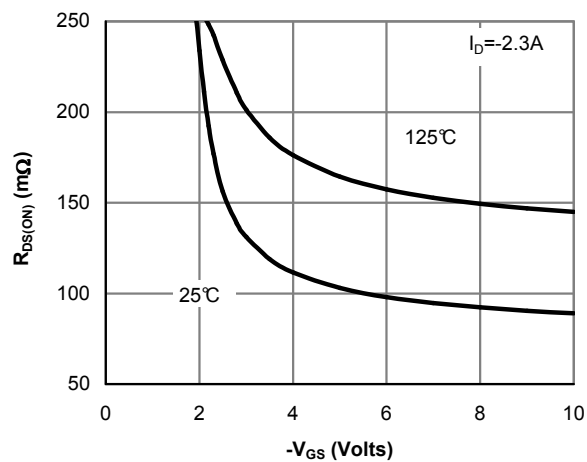


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

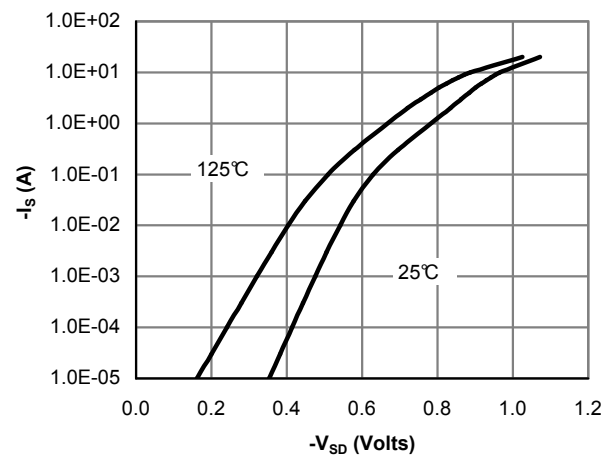


Figure 6: Body-Diode Characteristics (Note E)

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■ Typical Characteristics

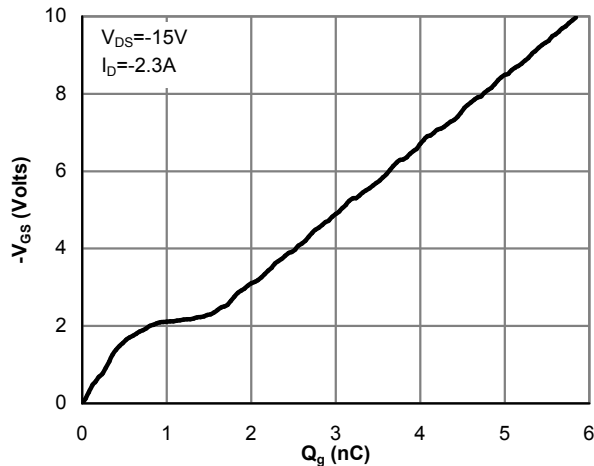


Figure 7: Gate-Charge Characteristics

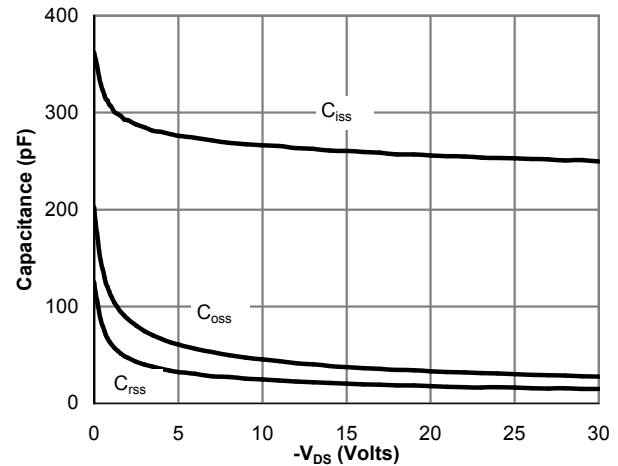


Figure 8: Capacitance Characteristics

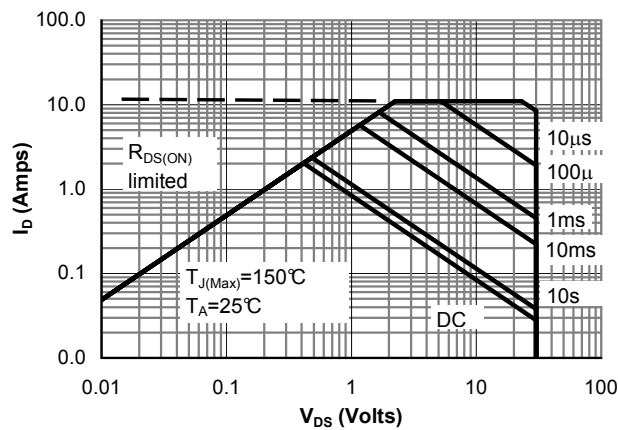


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

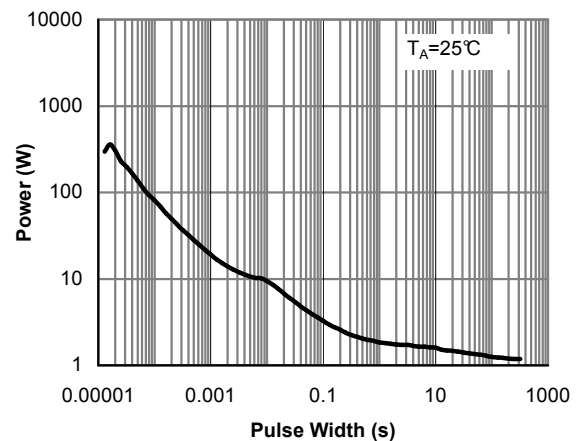


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

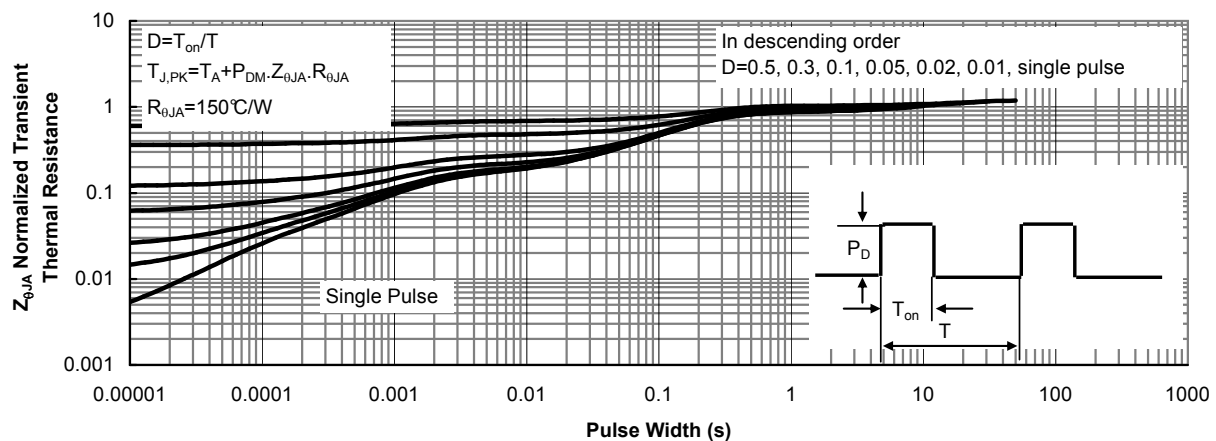


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)