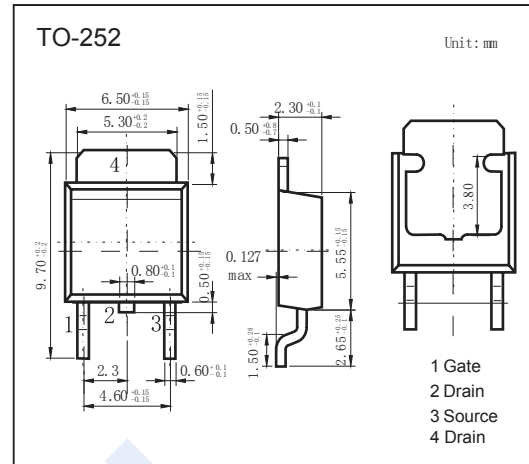
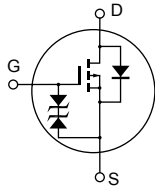


P-Channel MOSFET

2SJ181S

■ Features

- $V_{DS}(V) = -600V$
- $I_D = -0.5 A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 25 \Omega$ ($V_{GS} = -10V$)
- High speed switching
- Low drive current



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-600	V
Gate-Source Voltage	V_{GS}	± 15	
Continuous Drain Current	I_D	-0.5	A
Pulsed Drain Current (Note.1)	I_{DM}	-1	
Body to Drain Diode Reverse Drain Current	I_{DR}	-0.5	
Power Dissipation $T_c = 25^\circ C$	P_D	20	W
Junction Temperature	T_J	150	$^\circ C$
Junction Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

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

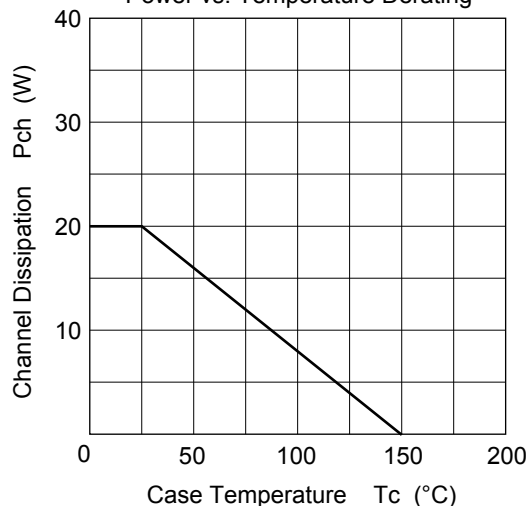
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = -10mA, V_{GS} = 0V$	-600			V
Gate to Source Breakdown Voltage	V_{GSS}	$I_G = \pm 100 \mu A, V_{DS} = 0V$	± 15			
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -500V, V_{GS} = 0V$			-100	μA
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 12V$			± 10	μA
Gate to Source Cutoff Voltage	$V_{GS(off)}$	$V_{GS} = -10V, I_D = -1mA$	-2		-4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -0.3A$			25	Ω
Forward Transconductance	g_{FS}	$V_{DS} = -20V, I_D = -0.3A$	0.3	0.45		S
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = -10V, f = 1MHz$		220		pF
Output Capacitance	C_{oss}			55		
Reverse Transfer Capacitance	C_{rss}			13		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS} = -10V, I_D = -0.3A, R_L = 100 \Omega$		7		ns
Turn-On Rise Time	t_r			20		
Turn-Off DelayTime	$t_{d(off)}$			35		
Turn-Off Fall Time	t_f			35		
Body Diode Reverse Recovery Time	t_{rr}	$I_F = -0.5A, V_{GS} = 0, dI/dt = 50A/\mu s$		230		
Diode Forward Voltage	V_{SD}	$I_S = -0.5A, V_{GS} = 0V$		-0.85		V

P-Channel MOSFET

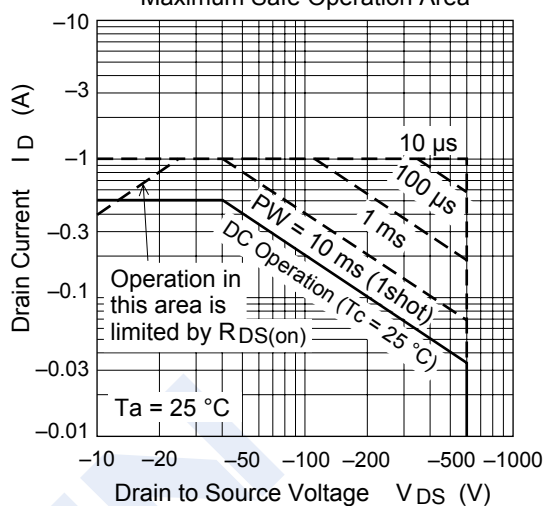
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■ Typical Characteristics

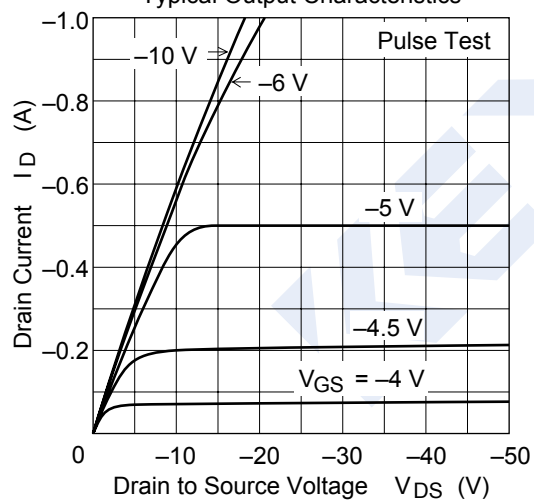
Power vs. Temperature Derating



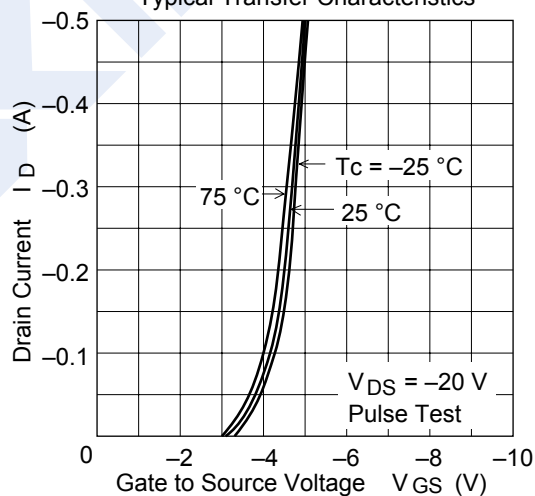
Maximum Safe Operation Area



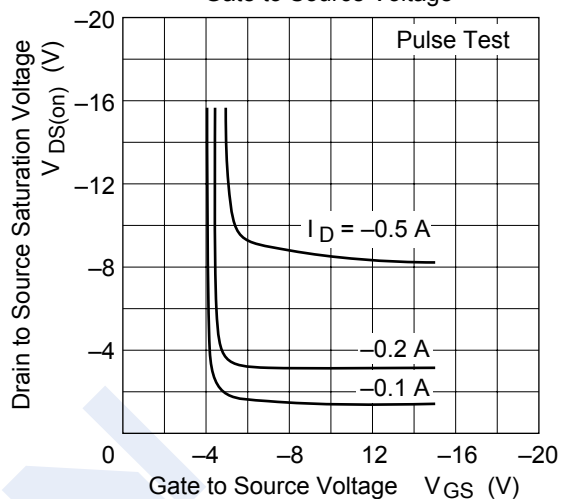
Typical Output Characteristics



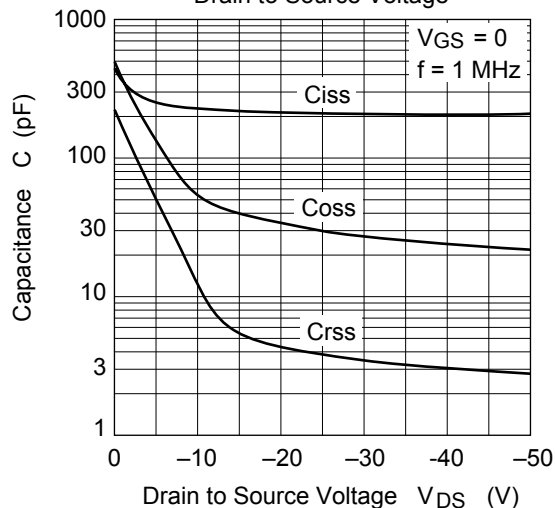
Typical Transfer Characteristics



Drain to Source Saturation Voltage vs. Gate to Source Voltage



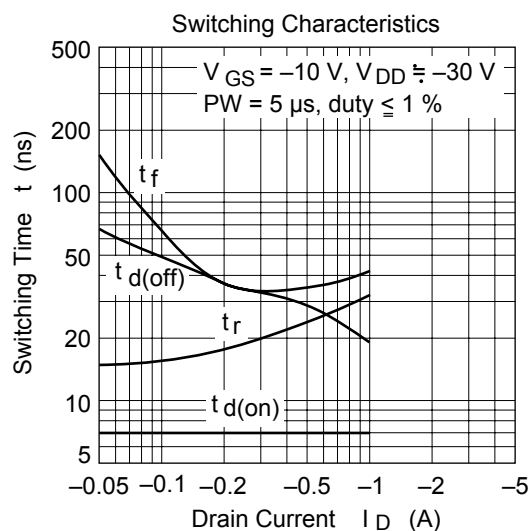
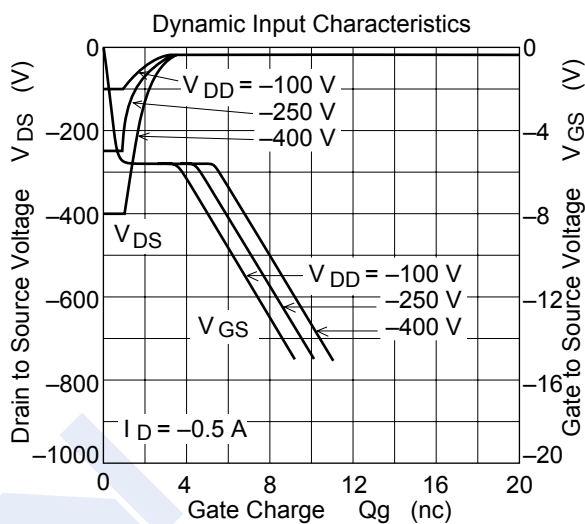
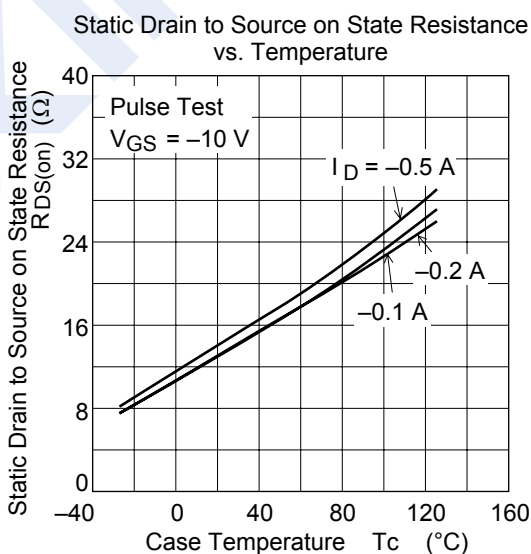
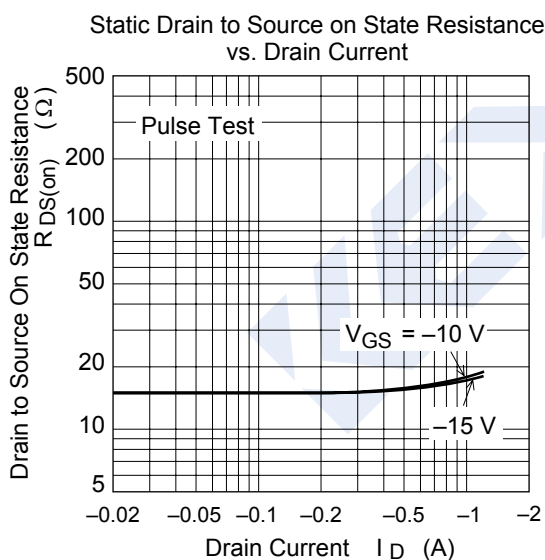
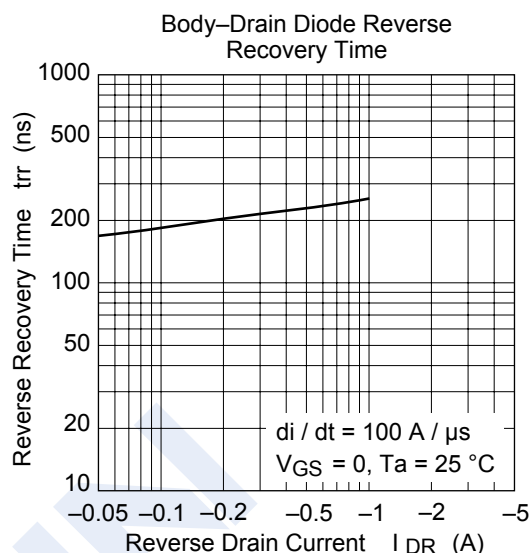
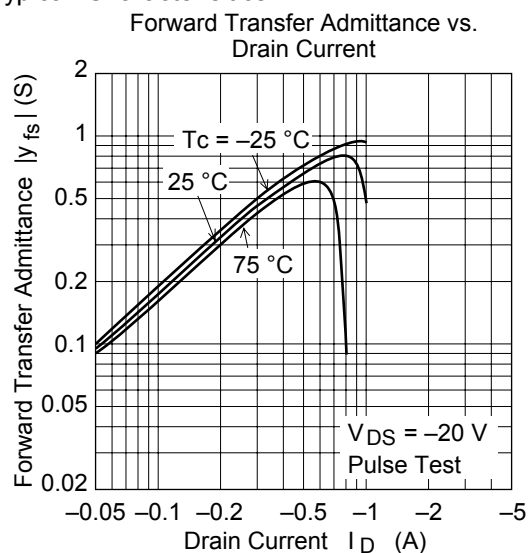
Typical Capacitance vs. Drain to Source Voltage



P-Channel MOSFET

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■ Typical Characteristics



P-Channel MOSFET

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■ Typical Characteristics

