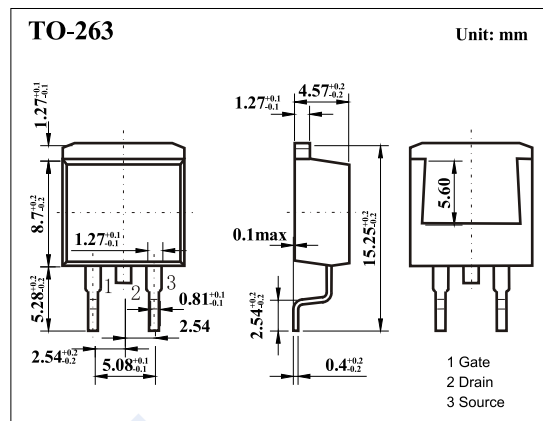
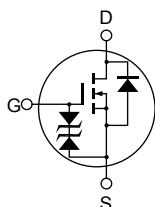


N-Channel MOSFET

2SK2869-ZJ

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 20 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 45m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 70m\Omega (V_{GS} = 4V)$
- High speed switching



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	20	A
Pulsed Drain Current (Note.1)	I_{DM}	80	
Body to Drain Diode Reverse Drain Current	I_{DR}	20	
Avalanche Current (Note.2)	I_{AR}	20	
Power Dissipation (Note.3)	P_D	30	W
Avalanche Energy (Note.2)	E_{AR}	34	mJ
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Note.2: Value at $T_{ch} = 25^\circ C$, $R_g \geq 50\Omega$

Note.3: Value at $T_c = 25^\circ C$

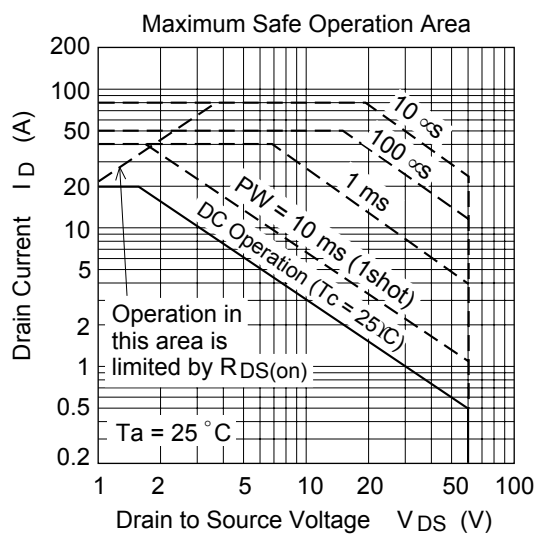
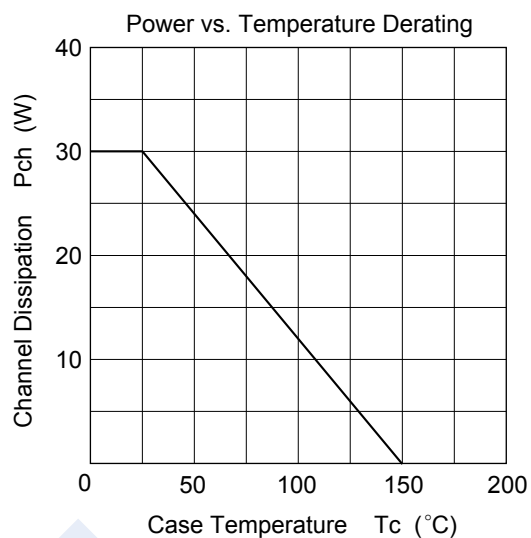
N-Channel MOSFET

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■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=10\text{mA}$, $V_{GS}=0\text{V}$	60			V
Gate-Source Breakdown Voltage	V_{GS}	$I_D=\pm 100\mu\text{A}$, $V_{DS}=0\text{V}$	± 20			
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}$, $V_{GS}=0\text{V}$			10	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 16\text{V}$			± 10	μA
Gate to Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	1.5		2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=10\text{A}$			45	$\text{m}\Omega$
		$V_{GS}=4\text{V}$, $I_D=10\text{A}$			70	
Forward Transconductance	g_{FS}	$V_{DS}=10\text{V}$, $I_D=10\text{A}$	10	16		S
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$, $V_{DS}=10\text{V}$, $f=1\text{MHz}$		740		pF
Output Capacitance	C_{oss}			380		
Reverse Transfer Capacitance	C_{rss}			140		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=10\text{V}$, $I_D=10\text{A}$, $R_L=3\Omega$		10		ns
Turn-On Rise Time	t_r			110		
Turn-Off DelayTime	$t_{d(off)}$			105		
Turn-Off Fall Time	t_f			120		
Body Diode Reverse Recovery Time	t_{rr}	$I_F=20\text{A}$, $V_{GS}=0$, $dI/dt=50\text{A}/\mu\text{s}$		40		
Diode Forward Voltage	V_{SD}	$I_S=20\text{A}$, $V_{GS}=0\text{V}$		1		V

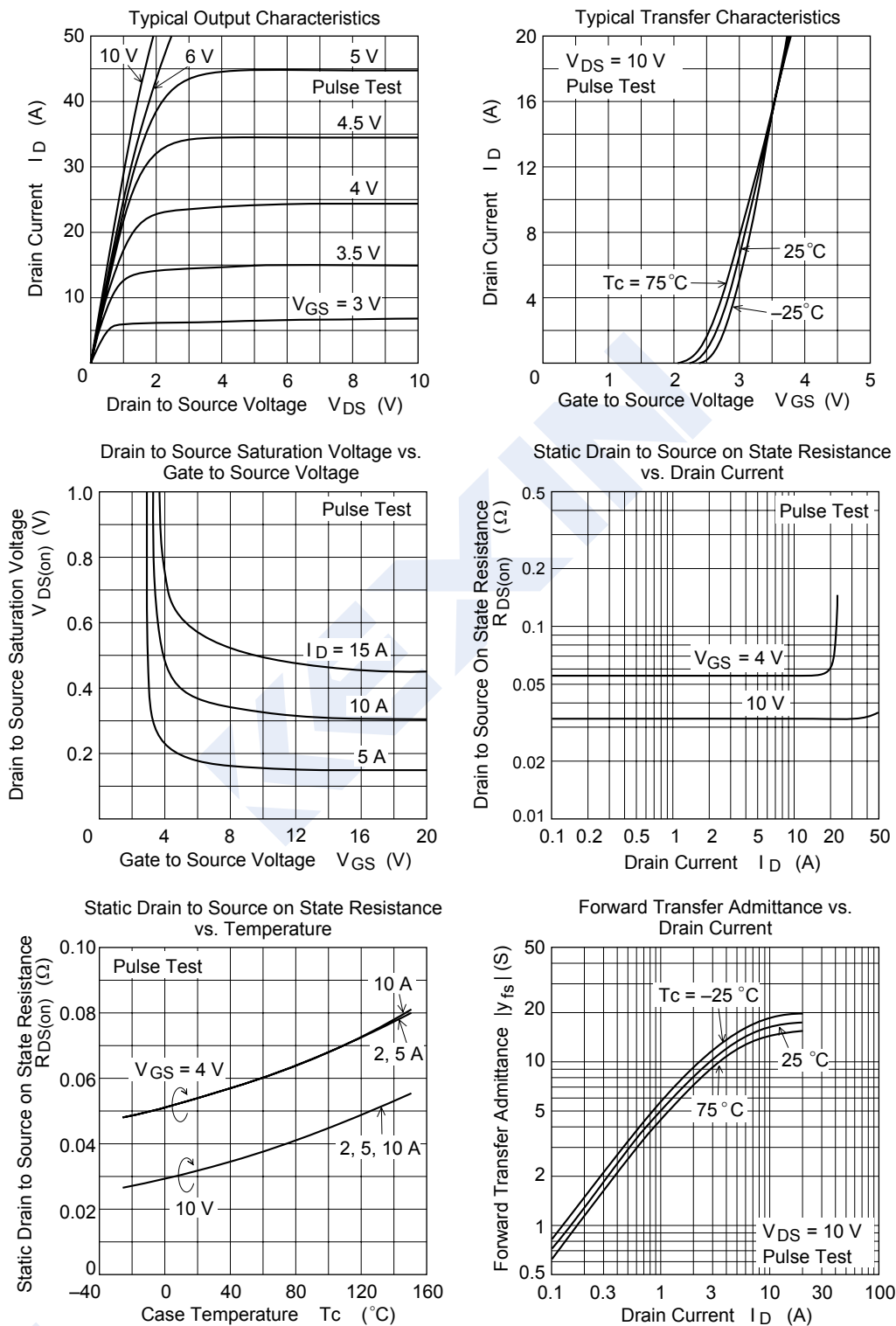
■ Typical Characteristics



N-Channel MOSFET

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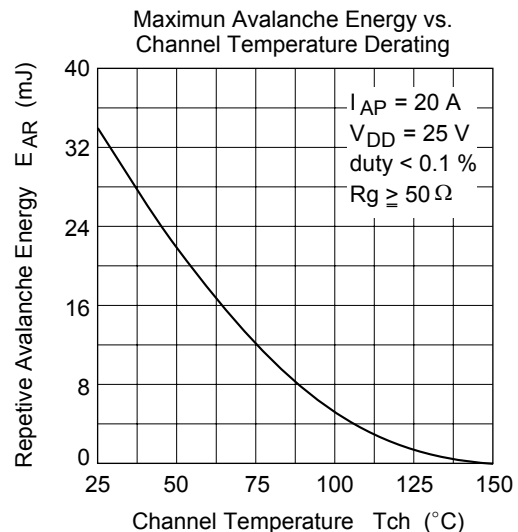
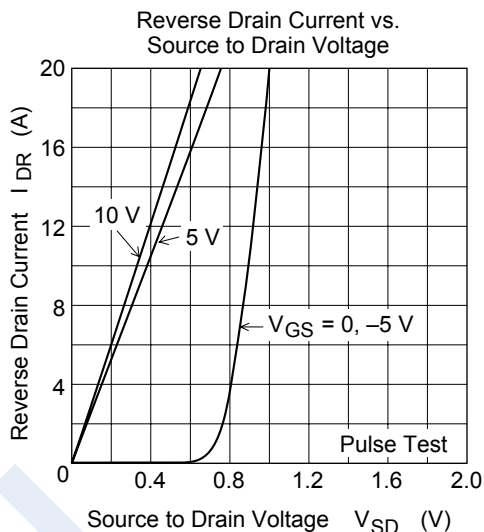
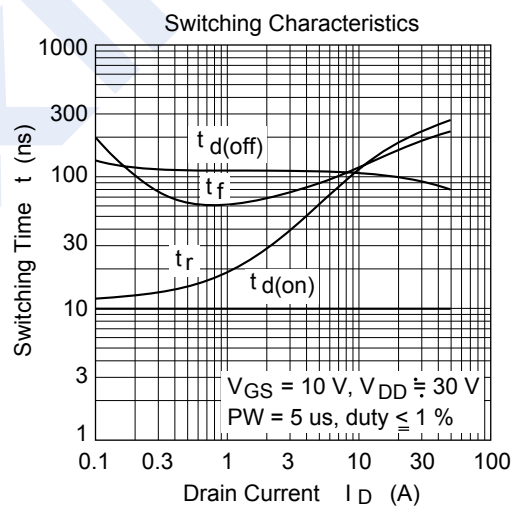
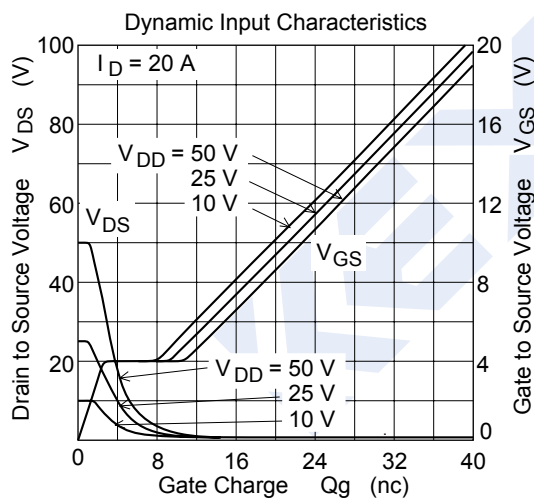
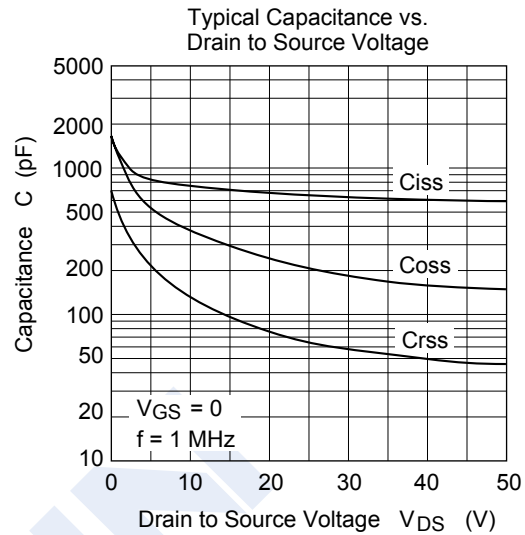
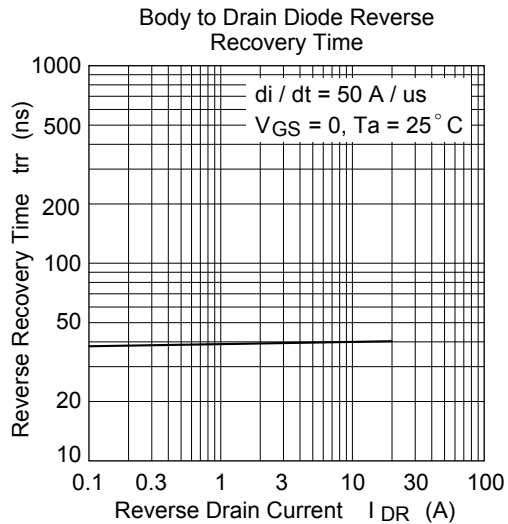
■ Typical Characteristics



N-Channel MOSFET

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■ Typical Characteristics



N-Channel MOSFET

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■ Typical Characteristics

