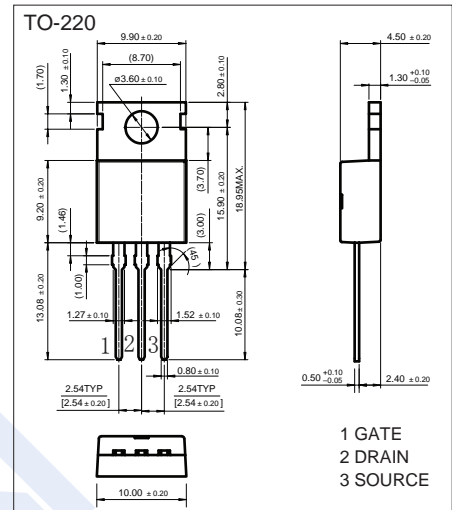


P-Channel MOSFET

2KJ6069

■ Features

- V_{DS} (V) = -60V
- I_D = -80 A
- $R_{DS(ON)} < 19.5m\Omega$ @ $V_{GS} = -10V$
- $R_{DS(ON)} < 21.5m\Omega$ @ $V_{GS} = -4.5V$

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current ^{*1}	I_D	-80	A
Pulsed Drain Current ^{*2}	I_{DM}	-200	
Single Pulse Avalanche Energy ^{*3}	EAS	196	mJ
Power Dissipation ^{*1}	P_D	75	W
Thermal Resistance, Junction- to-Ambient ^{*4}	$R_{\theta JA}$	100	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction- to-Case ^{*1}	$R_{\theta JC}$	1.66	
Junction Temperature	T_J	150	$^\circ\text{C}$
Junction Storage Temperature Range	T_{stg}	-55 to 150	

Notes: 1. $T_c = 25^\circ\text{C}$ Limited only by maximum temperature allowed.

2. $P_w \leq 10\mu\text{s}$, Duty cycle $\leq 1\%$.

3. EAS condition: $V_{DD} = -15V$, $V_{GS} = -10V$, $L = 0.5mH$, $R_g = 25\Omega$ Starting $T_J = 25^\circ\text{C}$.

4. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a = 25^\circ\text{C}$.

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■ Electrical Characteristics ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = -250\mu\text{A}$, $V_{GS} = 0\text{V}$	-60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -48\text{V}$, $V_{GS} = 0\text{V}$, $T_J = 25^\circ\text{C}$			-1	μA
		$V_{DS} = -48\text{V}$, $V_{GS} = 0\text{V}$, $T_J = 125^\circ\text{C}$			-100	
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0\text{V}$, $V_{GS} = \pm 20\text{V}$			± 100	nA
On characteristics ^{*5}						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\mu\text{A}$	-1.1		-2.1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10\text{V}$, $I_D = -20\text{A}$			19.5	m Ω
		$V_{GS} = -4.5\text{V}$, $I_D = -20\text{A}$			21.5	m Ω
Dynamic characteristics ^{*5,6}						
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}$, $V_{DS} = -25\text{V}$, $f = 1\text{MHz}$		4500		pF
Output Capacitance	C_{oss}			705		
Reverse Transfer Capacitance	C_{rss}			515		
Gate resistance	R_g	$f = 1\text{MHz}$		5.7		Ω
Switching characteristics ^{*5,6}						
Total Gate Charge	Q_g	$V_{GS} = -10\text{V}$, $V_{DS} = -30\text{V}$, $I_D = -20\text{A}$		72		nC
Gate Source Charge	Q_{gs}			15		
Gate Drain Charge	Q_{gd}			17		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -30\text{V}$, $R_G = 3\Omega$, $R_L = 1.5\Omega$, $V_{GS} = -10\text{V}$		16		ns
Turn-On Rise Time	t_r			18		
Turn-Off Delay Time	$t_{d(off)}$			39		
Turn-Off Fall Time	t_f			44		
Drain-Source Diode Characteristics ^{*5}						
Maximum Body-Diode Continuous Current	I_S				-80	A
Maximum Body-Diode Pulsed Current	I_{SM}				-200	
Diode Forward Voltage	V_{SD}	$I_S = -20\text{A}$, $V_{GS} = 0\text{V}$			-1.2	V

Notes: 5. Pulse Test : Pulse Width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

6. Guaranteed by design, not subject to production.

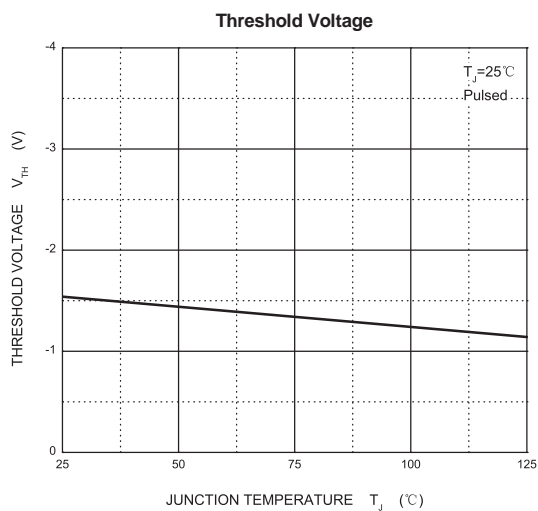
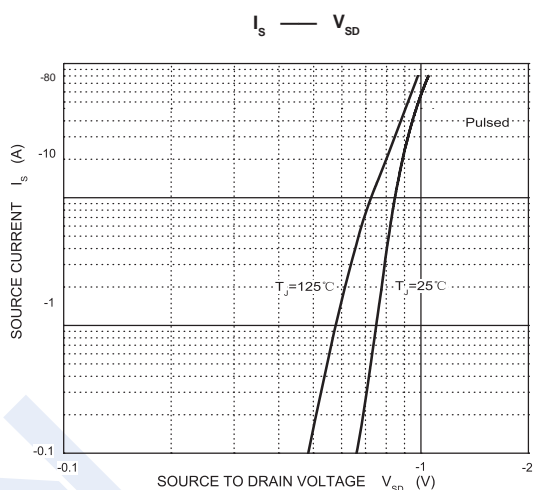
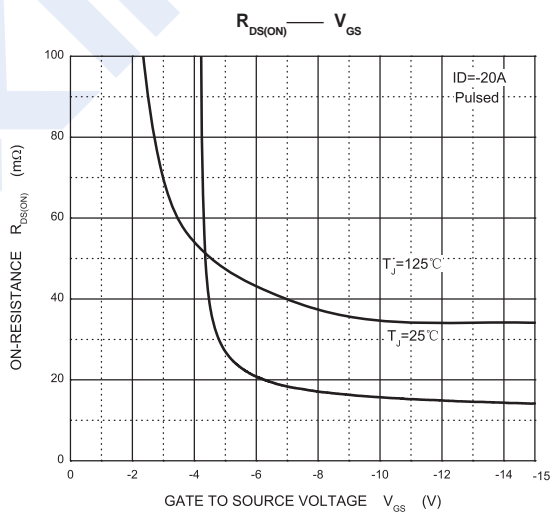
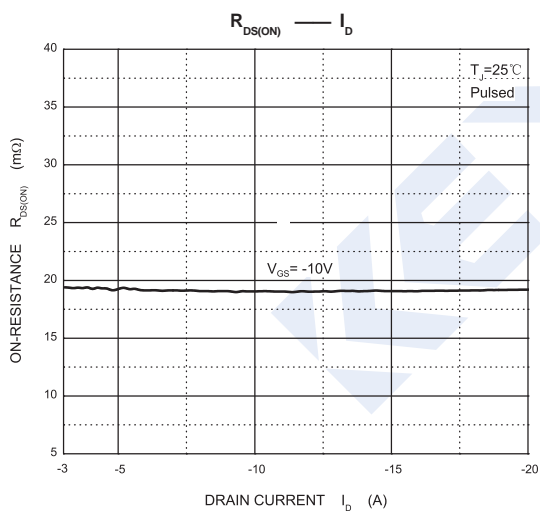
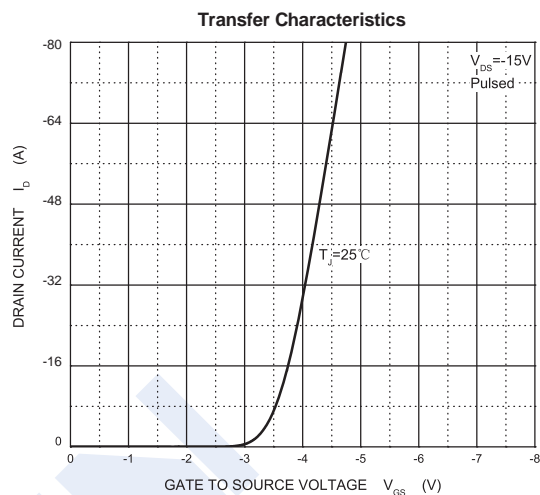
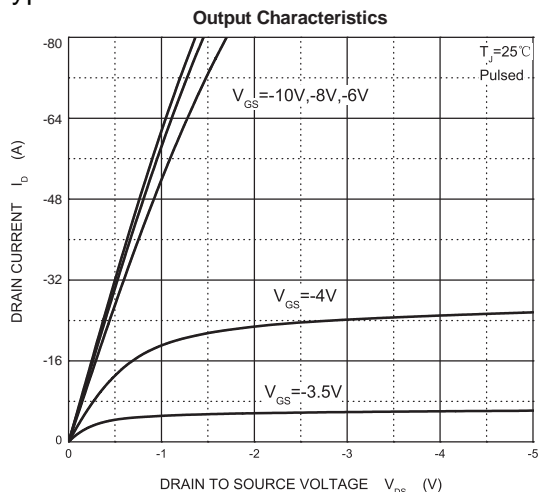
■ Marking

2KJ6069	J6069 K***
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P-Channel MOSFET

2KJ6069

Typical Characteristics



P-Channel MOSFET

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