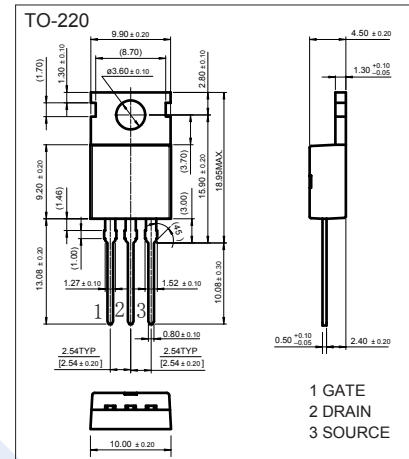
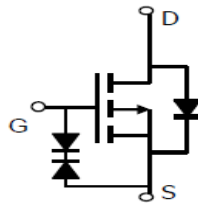


P-Channel MOSFET

IRF9530 (KRF9530)

■ Features

- V_{DS} (V) $\approx$ -100V
- I_D $\approx$ -13 A ($V_{GS} = -10V$)
- $R_{DS(ON)} < 205m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 300m\Omega$ ($V_{GS} = -4.5V$)



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-100	V
Gate-Source Voltage	V_{GS}	± 25	
Continuous Drain Current	I_D	-13	A
Pulsed Drain Current	I_{DM}	-32	
Power Dissipation $T_c = 25^\circ\text{C}$	P_D	50	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Junction Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D = -250\mu\text{A}$, $V_{GS} = 0V$	-100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -80V$, $V_{GS} = 0V$			-0.1	μA
		$V_{DS} = -80V$, $V_{GS} = 0V$, $T_J = 85^\circ\text{C}$			-30	
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V$, $V_{GS} = \pm 16V$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\mu\text{A}$	-1.2		-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V$, $I_D = -7.8A$ (Note.1)			205	$m\Omega$
		$V_{GS} = -4.5V$, $I_D = -6A$ (Note.1)			300	
Input Capacitance	C_{iss}	$V_{GS} = 0V$, $V_{DS} = -30V$, $f = 1\text{MHz}$		1050		pF
Output Capacitance	C_{oss}			70		
Reverse Transfer Capacitance	C_{rss}			40		
Total Gate Charge	Q_g	$V_{GS} = -10V$, $V_{DS} = -50V$, $I_D = -7.8A$		20.9	38	nC
Gate Source Charge	Q_{gs}			4.2		
Gate Drain Charge	Q_{gd}			5.2		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS} = -10V$, $V_{DS} = -50V$, $R_L = 15\Omega$, $R_G = 6\Omega$, $I_D = -1A$			21	ns
Turn-On Rise Time	t_r				19	
Turn-Off DelayTime	$t_{d(off)}$				100	
Turn-Off Fall Time	t_f				55	
Body Diode Reverse Recovery Time	t_{rr}	$I_F = -4A$, $dI/dt = 100A/\mu\text{s}$		16		
Diode Forward Voltage	V_{SD}	$I_S = -1A$, $V_{GS} = 0V$ (Note.1)			-1.1	V

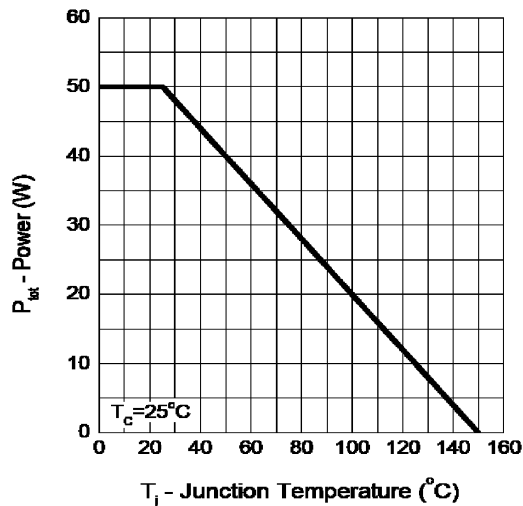
Note.1: Pulse test ; pulse width $\leq 300\text{ns}$, duty cycle $\leq 2\%$.

P-Channel MOSFET

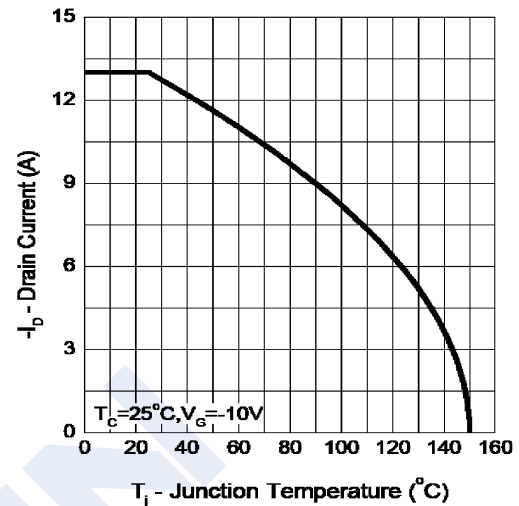
IRF9530 (KRF9530)

■ Typical Characteristics

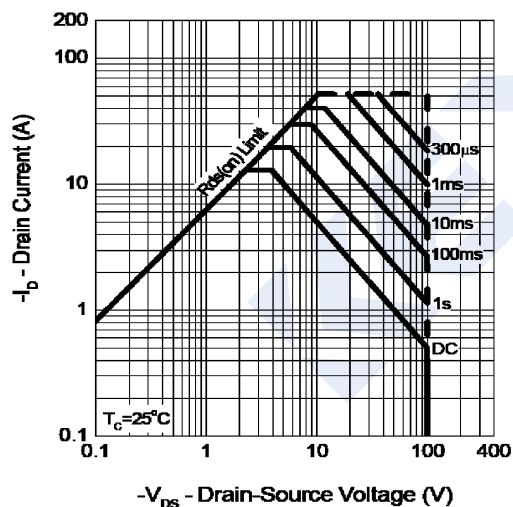
Power Dissipation



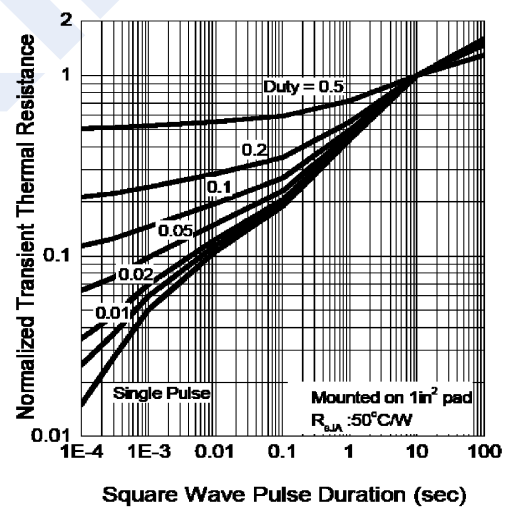
Drain Current



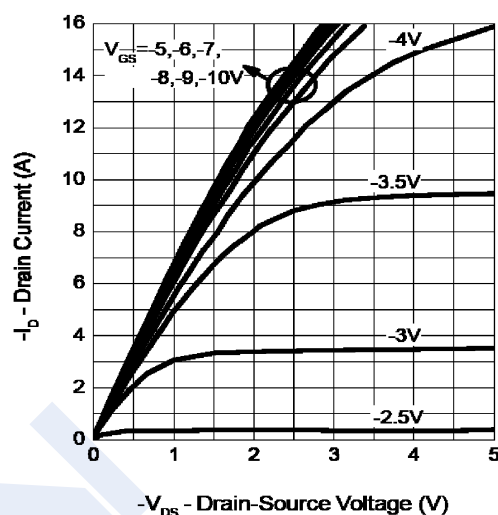
Safe Operation Area



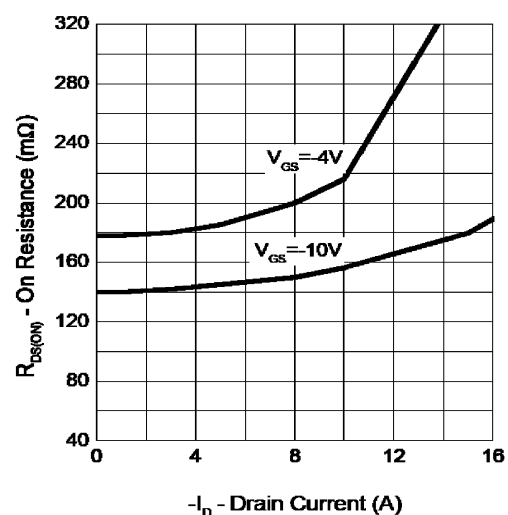
Thermal Transient Impedance



Output Characteristics



Drain-Source On Resistance



P-Channel MOSFET

IRF9530 (KRF9530)

■ Typical Characteristics

