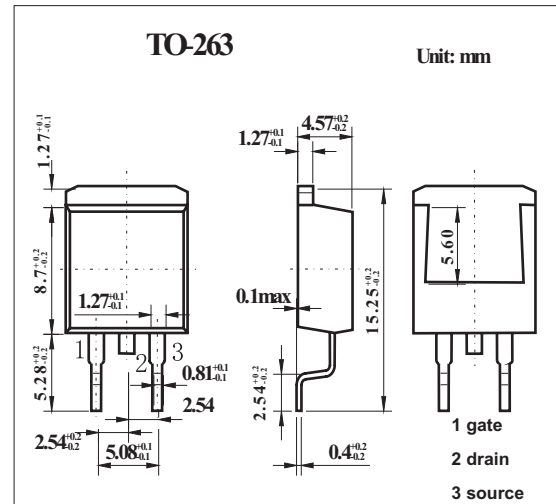
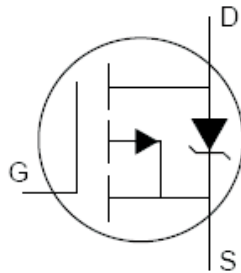


HEXFET[®] Power MOSFET

KRF4905S

■ Features

- Advanced Process Technology
- Surface Mount
- 175°C Operating Temperature
- Fast Switching
- P-Channel
- Fully Avalanche Rated



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Continuous Drain Current, V _{GS} @ -10V, T _c = 25°C	I _D	-74	A
Continuous Drain Current, V _{GS} @ -10V, T _c = 100°C	I _D	-52	
Pulsed Drain Current*1	I _{DM}	-260	
Power Dissipation Ta = 25°C	P _D	3.8	W
Power Dissipation Tc = 25°C		200	
Linear Derating Factor		1.3	W/°C
Gate-to-Source Voltage	V _{GS}	±20	V
Single Pulse Avalanche Energy*4	E _{AS}	930	mJ
Avalanche Current *1	I _{AR}	-38	A
Repetitive Avalanche Energy	E _{AR}	20	mJ
Peak Diode Recovery dv/dt *2	dv/dt	-5	V/ns
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 175	°C
Junction-to-Case	R _{θJC}	0.75	°C/W
Junction-to-Ambient	R _{θJA}	40	°C/W

*1 Repetitive rating; pulse width limited by max. junction temperature.


*2 I_{SD} ≤ -38A, di/dt ≤ -270A/μs, V_{DD} ≤ V_{(BR)DSS}, T_J ≤ 175°C

*3 When mounted on 1" square PCB

*4 Starting T_J = 25°C, L = 1.3mH, R_G = 25Ω, I_{AS} = -38A.

KRF4905S

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250 \mu A$	-55			V
Breakdown Voltage Temp. Coefficient	$\Delta V_{(BR)DSS}/\Delta T_J$	$I_D = -1mA, \text{Reference to } 25^\circ C$		-0.05		V/°C
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -38A^{*1}$			0.02	mΩ
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250 \mu A$	-2.0		-4	V
Forward Transconductance	g_{fs}	$V_{DS} = -25V, I_D = -38A^{*1}$	21			S
Drain-to-Source Leakage Current	I_{DSS}	$V_{DS} = -55V, V_{GS} = 0V$			-25	μA
		$V_{DS} = -44V, V_{GS} = 0V, T_J = 150^\circ C$			-250	
Gate-to-Source Forward Leakage	I_{GSS}	$V_{GS} = 20V$			100	nA
Gate-to-Source Reverse Leakage		$V_{GS} = -20V$			-100	
Total Gate Charge	Q_g	$I_D = -38A$			180	nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -44V$			32	
Gate-to-Drain ("Miller") Charge	Q_{gd}	$V_{GS} = -10V,^{*1}$			86	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -28V$		18		ns
Rise Time	t_r	$I_D = -38A$		99		
Turn-Off Delay Time	$t_{d(off)}$	$R_G = 2.5 \Omega$		61		
Fall Time	t_f	$R_D = 0.72 \Omega^{*1}$		96		
Internal Source Inductance	L_S	Between lead, and center of die contact		7.5		nH
Input Capacitance	C_{iss}	$V_{GS} = 0V$		3400		pF
Output Capacitance	C_{oss}	$V_{DS} = -25V$		1400		
Reverse Transfer Capacitance	C_{rss}	$f = 1.0MHz$		640		
Continuous Source Current (Body Diode)	I_S	MOSFET symbol showing the integral reverse p-n junction diode. 			-74	A
Pulsed Source Current (Body Diode) *2	I_{SM}				-260	
Diode Forward Voltage	V_{SD}	$T_J = 25^\circ C, I_S = -38A, V_{GS} = 0V^{*1}$			-1.6	V
Reverse Recovery Time	t_{rr}	$T_J = 25^\circ C, I_F = -38A$		89	130	ns
Reverse Recovery Charge	Q_{rr}	$di/dt = 100A/\mu s^{*1}$		230	350	nC
Forward Turn-On Time	t_{on}	Intrinsic turn-on time is negligible (turn-on is dominated by L_S+L_D)				

*1 Pulse width $\leq 300 \mu s$; duty cycle $\leq 2\%$.

*2 Repetitive rating; pulse width limited by max