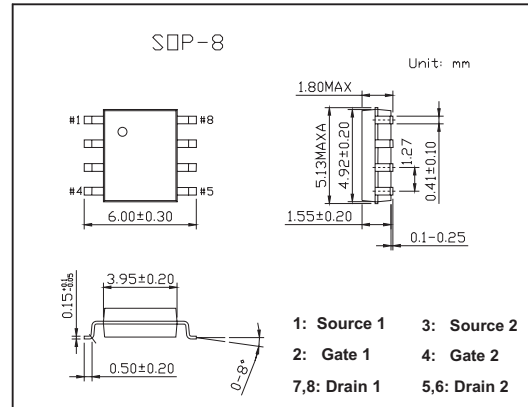
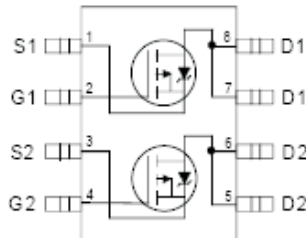


# HEXFET<sup>®</sup> Power MOSFET

## KRF7325

### ■ Features

- Trench Technology
- Ultra Low On-Resistance
- Dual P-Channel MOSFET
- Low Profile (<1.8mm)
- Available in Tape & Reel



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

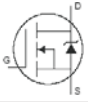
Parameter	Symbol	Rating	Unit
Drain- Source Voltage	$V_{DS}$	-12	V
Continuous Drain Current, $V_{GS} @ -4.5V @ T_a = 25^\circ\text{C}$	$I_D$	-7.8	A
Continuous Drain Current, $V_{GS} @ -4.5V @ T_a = 70^\circ\text{C}$	$I_D$	-6.2	
Pulsed Drain Current *1	$I_{DM}$	-39	
Power Dissipation *2 @ $T_a = 25^\circ\text{C}$	$P_D$	2.0	W
Power Dissipation *2 @ $T_a = 70^\circ\text{C}$	$P_D$	1.3	W
Linear Derating Factor		16	W/ $^\circ\text{C}$
Gate-to-Source Voltage	$V_{GS}$	$\pm 8.0$	V
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^\circ\text{C}$
Junction-to-Drain Lead	$R_{\theta JL}$	20	$^\circ\text{C}/\text{W}$
Maximum Junction-to-Ambient *2	$R_{\theta JA}$	62.5	$^\circ\text{C}/\text{W}$

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

\*2 When mounted on 1 inch square copper board.

## KRF7325

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250 \mu A$	-12			V
Breakdown Voltage Temp. Coefficient	$\Delta V_{(BR)DSS}/\Delta T_J$	$I_D = -1mA, \text{Reference to } 25^\circ C$		0.007		V/°C
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -7.8A^*1$			24	mΩ
		$V_{GS} = -2.5V, I_D = -6.2A^*1$			33	
		$V_{GS} = -1.8V, I_D = -3.9A^*1$			49	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250 \mu A$	-0.40		-0.90	V
Forward Transconductance	$g_{fs}$	$V_{DS} = -10V, I_D = -7.8A^*1$	17			S
Drain-to-Source Leakage Current	$I_{DSS}$	$V_{DS} = -9.6V, V_{GS} = 0V$			-1.0	μA
		$V_{DS} = -9.6V, V_{GS} = 0V, T_J = 70^\circ C$			-25	
Gate-to-Source Forward Leakage	$I_{GSS}$	$V_{GS} = -8.0V$			-100	nA
Gate-to-Source Reverse Leakage		$V_{GS} = 8.0V$			100	
Total Gate Charge	$Q_g$	$I_D = -7.8A$		22	33	nC
Gate-to-Source Charge	$Q_{gs}$	$V_{DS} = -6.0V$		5.0	7.5	
Gate-to-Drain ("Miller") Charge	$Q_{gd}$	$V_{GS} = -4.5V$		4.7	7.0	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -6.0V, V_{GS} = -4.5V$		9.4		ns
Rise Time	$t_r$	$I_D = -1.0A$		9.8		
Turn-Off Delay Time	$t_{d(off)}$	$R_G = 6 \Omega$		240		
Fall Time	$t_f$			180		
Input Capacitance	$C_{iss}$	$V_{GS} = 0V$		2020		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -10V$		520		
Reverse Transfer Capacitance	$C_{rss}$	$f = 1.0MHz$		330		
Continuous Source Current (Body Diode)	$I_S$	MOSFET symbol showing the integral reverse p-n junction diode. 			-2.0	A
Pulsed Source Current (Body Diode) *2	$I_{SM}$				-39	
Diode Forward Voltage	$V_{SD}$	$T_J = 25^\circ C, I_S = -2.0A, V_{GS} = 0V^*1$			-1.2	V
Reverse Recovery Time	$t_{rr}$	$T_J = 25^\circ C, I_F = -2.0A$		36	54	ns
Reverse Recovery Charge	$Q_{rr}$	$di/dt = -100A/\mu s^*1$		28	42	nC

\*1 Pulse width  $\leq 400 \mu s$ ; duty cycle  $\leq 2\%$ .

\*2 Repetitive rating; pulse width limited by max. junction temperature.