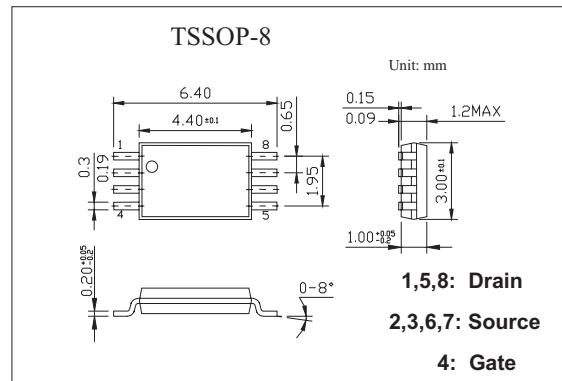


HEXFET® Power MOSFET

KRF7750

■ Features

- Ultra Low On-Resistance
- Dual P-Channel MOSFET
- Very Small SOIC Package
- Low Profile ($< 1.1\text{mm}$)
- Available in Tape & Reel



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

Parameter	Symbol	Rating	Unit
Drain- Source Voltage	V_{DS}	-20	V
Continuous Drain Current, $V_{GS} @ -4.5\text{V} @ T_c = 25^\circ\text{C}$	I_D	± 4.7	A
Continuous Drain Current, $V_{GS} @ -4.5\text{V} @ T_c = 70^\circ\text{C}$	I_D	± 3.8	
Pulsed Drain Current *1	I_{DM}	± 38	
Power Dissipation *2 @ $T_c = 25^\circ\text{C}$	P_D	1.0	W
Power Dissipation *2 @ $T_c = 70^\circ\text{C}$	P_D	0.64	W
Linear Derating Factor		0.008	W/ $^\circ\text{C}$
Gate-to-Source Voltage	V_{GS}	± 12	V
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^\circ\text{C}$
Maximum Junction-to-Ambient *2	R_{JA}	125	$^\circ\text{C}/\text{W}$

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

*2 When mounted on 1 inch square copper board, $t < 10$ sec

KRF7750■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(\text{BR})\text{DSS}}$	$V_{GS} = 0\text{V}, I_D = -250 \mu\text{A}$	-20			V
Breakdown Voltage Temp. Coefficient	$\Delta V_{(\text{BR})\text{DSS}}/\Delta T_J$	$I_D = -1\text{mA}$, Reference to 25°C		0.012		$\text{V}/^\circ\text{C}$
Static Drain-to-Source On-Resistance	$R_{DS(\text{on})}$	$V_{GS} = -4.5\text{V}, I_D = -4.7\text{A}^*1$			0.030	Ω
		$V_{GS} = -2.5\text{V}, I_D = -3.8\text{A}^*1$			0.055	
Gate Threshold Voltage	$V_{GS(\text{th})}$	$V_{DS} = V_{GS}, I_D = -250 \mu\text{A}$	-0.45		-1.2	V
Forward Transconductance	g_{fs}	$V_{DS} = -10\text{V}, I_D = -4.7\text{A}^*1$	11			S
Drain-to-Source Leakage Current	I_{DSS}	$V_{DS} = -20\text{V}, V_{GS} = 0\text{V}$			-1.0	μA
		$V_{DS} = -16\text{V}, V_{GS} = 0\text{V}, T_J = 70^\circ\text{C}$			-25	
Gate-to-Source Forward Leakage	I_{GSS}	$V_{GS} = -12\text{V}$			-100	nA
Gate-to-Source Reverse Leakage		$V_{GS} = 12\text{V}$			100	
Total Gate Charge	Q_g	$I_D = -4.7\text{A}$		26	39	nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -16\text{V}$		3.9	5.8	
Gate-to-Drain ("Miller") Charge	Q_{gd}	$V_{GS} = -5.0\text{V}$		8.0	12	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -10\text{V}$		15		ns
Rise Time	t_r	$I_D = -1.0\text{A}$		54		
Turn-Off Delay Time	$t_{d(off)}$	$R_D = 10 \Omega$		180		
Fall Time	t_f	$R_G = 24 \Omega$		210		
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}$		1700		pF
Output Capacitance	C_{oss}	$V_{DS} = -15\text{V}$		380		
Reverse Transfer Capacitance	C_{rss}	$f = 1.0\text{MHz}$		270		
Continuous Source Current (Body Diode)	I_s	MOSFET symbol showing the integral reverse p-n junction diode.			-1.0	A
Pulsed Source Current (Body Diode) *2	I_{SM}				-38	
Diode Forward Voltage	V_{SD}	$T_J = 25^\circ\text{C}, I_S = -1.0\text{A}, V_{GS} = 0\text{V}^*1$			-1.2	V
Reverse Recovery Time	t_{rr}	$T_J = 25^\circ\text{C}, I_F = -1.0\text{A}$		26	39	ns
Reverse RecoveryCharge	Q_{rr}	$dI/dt = -100\text{A}/\mu\text{s}^*1$		16	24	nC

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

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