HEXFET®Power MOSFET

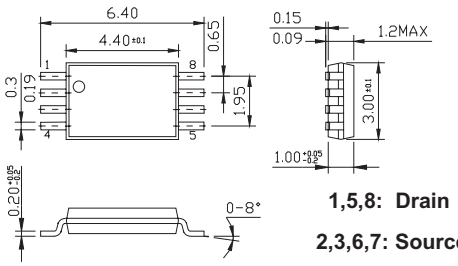
KRF7756

■ Features

- Ultra Low On-Resistance
- Dual P-Channel MOSFET
- Very Small SOIC Package
- Low Profile (＜ 1.2mm)
- Available in Tape & Reel

TSSOP-8

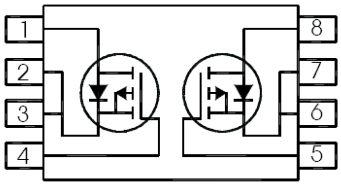
Unit: mm



1,5,8: Drain

2,3,6,7: Source

4: Gate



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain- Source Voltage	V_{DS}	-12	V
Continuous Drain Current, V_{GS} @ -4.5V @ T_A = 25℃	I_D	-4.3	A
Continuous Drain Current, V_{GS} @ -4.5V @ T_A = 70℃	I_D	-3.5	
Pulsed Drain Current *1	I_{DM}	-17	
Power Dissipation *2 @T_A= 25℃	P_D	1.0	W
Power Dissipation *2 @T_A = 70℃	P_D	0.64	W
Linear Derating Factor		8	m W/℃
Gate-to-Source Voltage	V_{GS}	±8	V
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	℃
Maximum Junction-to-Ambient *2	$R_{\theta JA}$	125	℃/W

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

*2 Surface mounted on FR-4 board, ≤ 10sec

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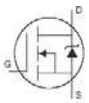
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = -250μA	-12			V
Breakdown Voltage Temp. Coefficient	$\triangle V_{(BR)DSS}/\triangle T_J$	I_D = -1mA,Reference to 25℃		-0.006		V/℃
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -4.5V, I_D = -4.3A*1			0.040	Ω
		V_{GS} = -2.5V, I_D = -3.4A*1			0.058	
		V_{GS} = -1.8V, I_D = -2.2A*1			0.087	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250μA	-0.4		-0.9	V
Forward Transconductance	g_{fs}	V_{DS} = -10V, I_D = -4.3A*1	13			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℃			-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 = -4.3A		12	18	nC
Gate-to-Source Charge	Q_{gs}	V_{DS} = -6.0V		1.8	2.7	
Gate-to-Drain ("Miller") Charge	Q_{gd}	V_{GS} = -4.5V		2.9	4.4	
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = -6V		12		ns
Rise Time	t_r	I_D = -1.0A		18		
Turn-Off Delay Time	$t_{d(off)}$	R_D = 6Ω		160		
Fall Time	t_f	V_{GS} = -4.5V		170		
Input Capacitance	C_{iss}	V_{GS} = 0V		1400		pF
Output Capacitance	C_{oss}	V_{DS} = -10V		310		
Reverse Transfer Capacitance	C_{rss}	f = 1.0MHz		240		
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}				-17	
Diode Forward Voltage	V_{SD}	T_J = 25℃, I_S = -1.0A, V_{GS} = 0V*1			-1.2	V
Reverse Recovery Time	t_{rr}	T_J = 25℃, I_F =-1.0A		35	53	ns
Reverse RecoveryCharge	Q_{rr}	d_i/d_t = -100A/μs*1		20	30	nC

*1 Pulse width ≤ 400μs; duty cycle ≤ 2%.

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