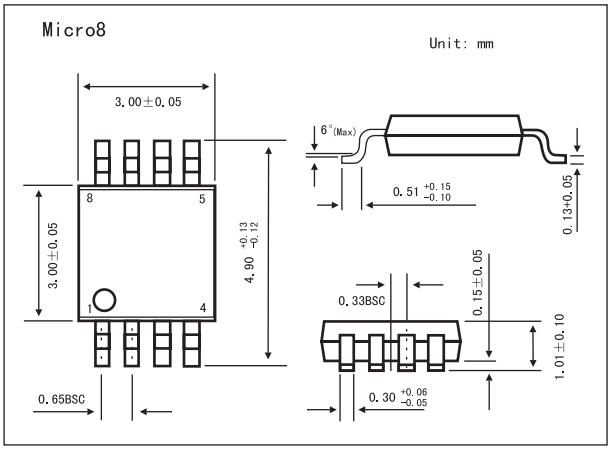
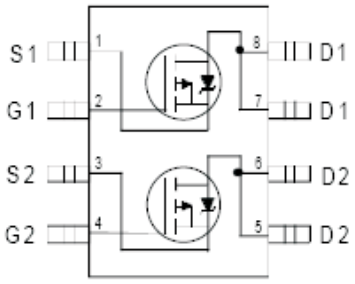
HEXFET®Power MOSFET

KRF7506



■ Features

- Generation V Technology
- Ultra Low On-Resistance
- Dual P-Channel MOSFET
- Very Small SOIC Package
- Low Profile (＜1.1mm)
- Available in Tape & Reel
- Fast Switching



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Continuous Drain Current, V_{GS} @ -10V @ T_A = 25℃	I_D	-1.7	A
Continuous Drain Current, V_{GS} @ -10V @ T_A = 70℃	I_D	-1.4	
Pulsed Drain Current *1	I_{DM}	-9.6	
Power Dissipation *2 @T_A= 25℃	P_D	1.25	W
Linear Derating Factor		10	m W/℃
Gate-to-Source Voltage	V_{GS}	±20	V
Peak Diode Recovery dv/dt *3	dv/dt	5.0	V/ns
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	℃
Maximum Junction-to-Ambient *2	$R_{\theta JA}$	100	℃/W

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

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

*3 I_{SD} ≤ -1.2A, di/dt ≤ -140A/μs, V_{DD} ≤ $V_{(BR)DSS}$,T_J ≤ 150℃

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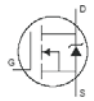
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = -250μA	-30			V
Breakdown Voltage Temp. Coefficient	$\triangle V_{(BR)DSS}/\triangle T_J$	I_D = -1mA,Reference to 25℃		-0.039		V/℃
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	V_{GS} = -10V, I_D = -1.2A*1			0.27	Ω
		V_{GS} = -4.5V, I_D = -0.60A*1			0.45	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250μA	-1.0			V
Forward Transconductance	g_{fs}	V_{DS} = -10V, I_D = -0.60A*1	0.92			S
Drain-to-Source Leakage Current	I_{DSS}	V_{DS} = -24V, V_{GS} = 0V			-1.0	μA
		V_{DS} = -24V, V_{GS} = 0V, T_J = 125℃			-25	
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 = -1.2A		7.5	11	nC
Gate-to-Source Charge	Q_{gs}	V_{DS} = -24V		1.3	1.9	
Gate-to-Drain ("Miller") Charge	Q_{gd}	V_{GS} = -10V		2.5	3.7	
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = -15V		9.7		ns
Rise Time	t_r	I_D = -1.2A		12		
Turn-Off Delay Time	$t_{d(off)}$	R_D = 6.2Ω		19		
Fall Time	t_f	R_g = 12Ω		9.3		
Input Capacitance	C_{iss}	V_{GS} = 0V		180		pF
Output Capacitance	C_{oss}	V_{DS} = -25V		87		
Reverse Transfer Capacitance	C_{rss}	f = 1.0MHz		42		
Continuous Source Current（Body Diode)	I_S	MOSFET symbol showing the integral reverse p-n junction diode. 			-1.25	A
Pulsed Source Current （Body Diode) *2	I_{SM}				-9.6	
Diode Forward Voltage	V_{SD}	T_J = 25℃, I_S = -1.2A, V_{GS} = 0V*1			-1.2	V
Reverse Recovery Time	t_{rr}	T_J = 25℃, I_F =-1.2A		30	45	ns
Reverse RecoveryCharge	Q_{rr}	di/dt = -100A/μs*1		37	55	nC

*1 Pulse width ≤ 300μs; duty cycle ≤ 2%.

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