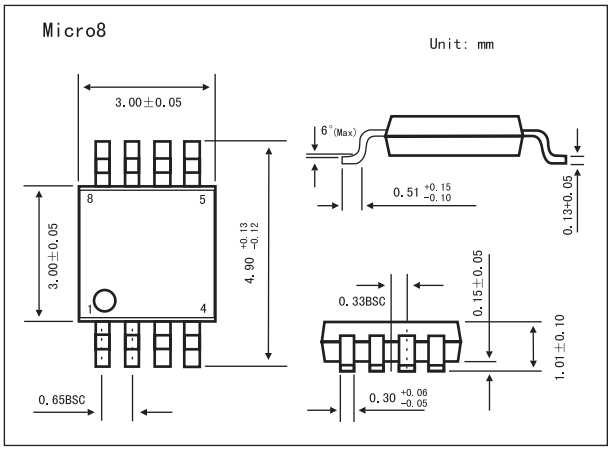
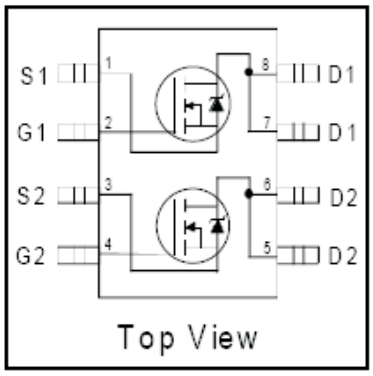
HEXFET®Power MOSFET

KRF7503



■ Features

- Generation V Technology
- Ulrtra Low On-Resistance
- Dual N-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,Ta = 25℃	I_D	2.4	A
Continuous Drain Current, V_{GS} @ 10V,T_A = 70℃	I_D	1.9	
Pulsed Drain Current*1	I_{DM}	14	
Power Dissipation Ta = 25℃ *1	P_D	1.25	W
Linear Derating Factor		10	mW/℃
Gate-to-Source Voltage	V_{GS}	±12	V
Peak Diode Recovery dv/dt*1	dv/dt	5	V/ns
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	℃
Junction-to-Ambient *2	R θ JA	100	℃/W

* I_{SD} ≤ 1.7A, di/dt ≤ 120A/μs, V_{DD} ≤ $V_{(BR)DSS}$,T_J ≤ 150℃

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

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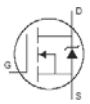
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 250μA	30			V
Breakdown Voltage Temp. Coefficient	$\triangle V_{(BR)DSS}/\triangle T_J$	I_D = 1mA,Reference to 25℃		0.059		V/℃
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 1.7A*1			0.135	Ω
		V_{GS} = 4.5V, I_D =0.85A*1			0.222	
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 = 0.85A*1	1.9			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 = 1.7A		7.8	12	nC
Gate-to-Source Charge	Q_{gs}	V_{DS} = 24V		1.2	1.8	
Gate-to-Drain ("Miller") Charge	Q_{gd}	V_{GS} = 10V,*1		2.5	3.8	
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = 15V		4.7		ns
Rise Time	t_r	I_D = 1.7A		10		
Turn-Off Delay Time	$t_{d(off)}$	R_G =6.0Ω		12		
Fall Time	t_f	R_D = 8.7Ω		5.3		
Input Capacitance	C_{iss}	V_{GS} = 0V		210		pF
Output Capacitance	C_{oss}	V_{DS} = 25V		80		
Reverse Transfer Capacitance	C_{rss}	f = 1.0MHz		32		
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}				14	
Diode Forward Voltage	V_{SD}	T_J = 25℃, I_S = 1.7A, V_{GS} = 0V*1			1.2	V
Reverse Recovery Time	t_{rr}	T_J = 25℃, I_F = 1.7A.V_R=10V		40	60	ns
Reverse RecoveryCharge	Q_{rr}	di/dt = 100A/μs*1		48	72	nC

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

*2 Repetitive rating; pulse width limited bymax