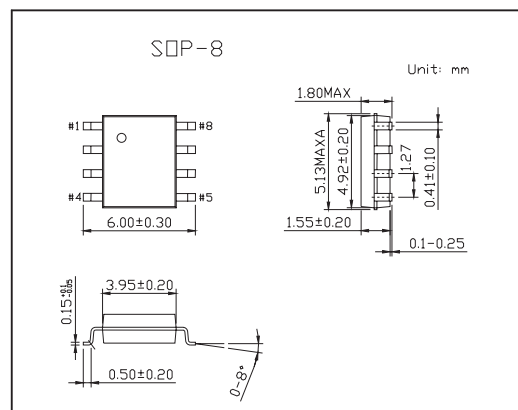
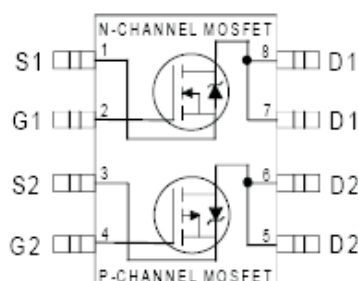


HEXFET[®] Power MOSFET

KRF7350

■ Features

- Ultra Low On-Resistance
- Dual N and P Channel MOSFET
- Surface Mount
- Available in Tape and Reel

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

Parameter	Symbol	N-Channel	P-Channel	Unit
Drain-Source Voltage	V _{DS}	100	-100	V
Continuous Drain Current T _a = 25℃	I _D	2.1	-1.5	A
Continuous Drain Current T _a = 70℃	I _D	1.7	-1.2	
Pulsed Drain Current *1	I _{DM}	8.4	-6.0	
Power Dissipation @T _a = 25℃	P _D	2.0		W
Linear Derating Factor		0.016		W/℃
Gate-to-Source Voltage	V _{GS}	±20		V
Single Pulse Avalanche Energy *4	E _{AS}	35	51	mJ
Peak Diode Recovery dv/dt *2	dv/dt	4.0	4.3	V/ns
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150		℃
Maximum Junction-to-Ambient *3	R θ JA	62.5		℃/W
Junction-to-Drain Lead	R θ JL	20		

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

*2 Pulse width $\leq 400 \mu\text{s}$; duty cycle $\leq 2\%$.

*3 Surface mounted on 1 in square Cu board

*4 N channel: Starting $T_J = 25^\circ\text{C}$, $L = 4.0\text{mH}$, $R_G = 25 \Omega$, $I_{AS} = 4.2\text{A}$

P channel: Starting $T_J = 25^\circ\text{C}$, $L = 11\text{mH}$, $R_G = 25 \Omega$, $I_{AS} = -3.0\text{A}$

KRF7350

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons		Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	VGS = 0V, ID = 250 μ A	N-Ch	100			V
		VGS = 0V, ID = -250 μ A	P-Ch	-100			
Breakdown Voltage Temp. Coefficient	ΔV(BR)DSS/ ΔTJ	ID = 1mA,Reference to 25℃	N-Ch		0.12		V/℃
		ID = -1mA,Reference to 25℃	P-Ch		-0.11		
Static Drain-to-Source On-Resistance	RDS(on)	VGS = 10V, ID = 2.1A*1	N-Ch			0.21	Ω
		VGS = -10V, ID = -1.5A*1	P-Ch			0.48	
Gate Threshold Voltage	VGS(th)	VDS = VGS, ID = 250 μ A	N-Ch	2.0		4.0	V
		VDS = VGS, ID = -250 μ A	P-Ch	-2.0		-4.0	
Forward Transconductance	gfs	VDS = 50V, ID = 2.1A*1	N-Ch	2.4			S
		VDS = -50V, ID = -1.5A*1	P-Ch	1.1			
Drain-to-Source Leakage Current	IDSS	VDS = 100V, VGS = 0V	N-Ch			25	μ A
		VDS = -100V, VGS = 0V	P-Ch			-25	
		VDS = 80V, VGS = 0V, TJ = 70℃	N-Ch			250	
		VDS = -80V, VGS = 0V, TJ = 70℃	P-Ch			-250	
Gate-to-Source Forward Leakage	IGSS	VGS = ±20V	N-Ch			±100	nA
			P-Ch			±100	
Total Gate Charge	Qg	N-Channel ID =2.1A,VDS = 80V,VGS =10V	N-Ch		19	28	nC
Gate-to-Source Charge	Qgs		P-Ch		21	31	
Gate-to-Drain ("Miller") Charge	Qgd	P-Channel ID = -1.5A,VDS = -80V,VGS = -10V	N-Ch		3.0	4.5	
			P-Ch		3.4	5.1	
Turn-On Delay Time	td(on)	N-Channel VDD = 50V,ID = 1.A,RG = 22 Ω P-Channel RD=50 Ω , VGS = 10V N-Channel VDD = -50V,ID = -1.0A,RG = 22 Ω P-Channel RD=50 Ω , VGS = -10V	N-Ch		6.7		ns
			P-Ch		25		
Rise Time	tr		N-Ch		11		
			P-Ch		13		
Turn-Off Delay Time	td(off)		N-Ch		35		
			P-Ch		30		
Fall Time	tr		N-Ch		20		
			P-Ch		40		
Input Capacitance	Ciss	N-Channel VGS = 0V,VDS = 25V,f = 1.0MHz P-Channel VGS = 0V,VDS = -25V,f = 1.0MHz	N-Ch		380		pF
			P-Ch		360		
Output Capacitance	Coss		N-Ch		100		
			P-Ch		110		
Reverse Transfer Capacitance	Crss		N-Ch		54		
			P-Ch		65		

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons		Min	Typ	Max	Unit
Continuous Source Current (Body Diode)	Is		N-Ch			1.8	A
			P-Ch			-1.4	
Pulsed Source Current (Body Diode) *2	ISM		N-Ch			8.4	
			P-Ch			-6.0	
Diode Forward Voltage	VSD	TJ = 25℃, Is = 1.8A, VGS = 0V*1	N-Ch			1.3	V
		TJ = 25℃, Is = -1.4A, VGS = 0V*1	P-Ch			-1.6	
Reverse Recovery Time	trr	N-Channel	N-Ch		72	110	ns
		TJ = 25℃, IF = 1.8A, di/dt = 100A/ μ s*1	P-Ch		77	120	
Reverse RecoveryCharge	Qrr	P-Channel	N-Ch		205	310	nC
		TJ=25℃,IF=-1.4A,di/dt=-100A/ μ s*1	P-Ch		240	360	

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

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