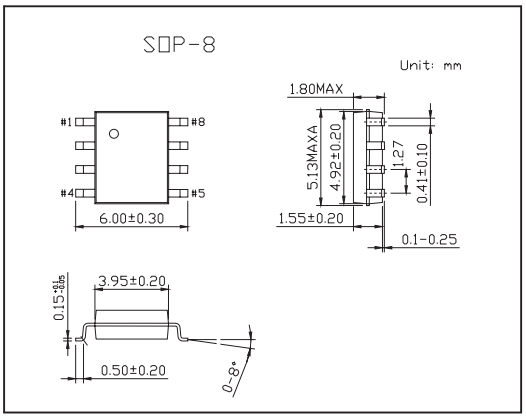
www.DataSheet4U.com

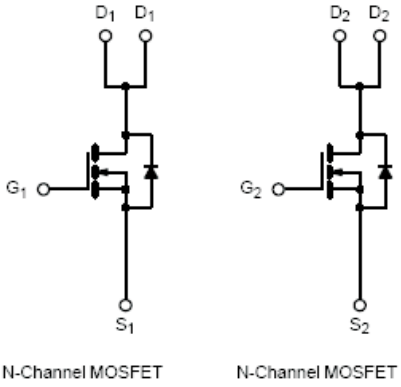
Dual N-Channel 30-V (D-S) MOSFET

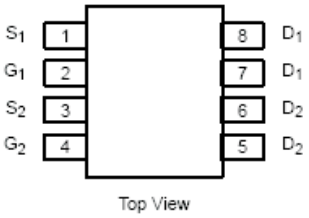
KI4920DY

■ Features

●







■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current (T_J = 150 ℃)*	T_A = 25℃	I_D	±6.9	A
	T_A = 70℃		±5.5	
Pulsed Drain Current		I_{DM}	±40	
Continuous Source Current (Diode Conduction) *		I_S	1.7	A
Maximum Power Dissipation *	T_A = 25℃	P_D	2	W
	T_A = 70℃		1.3	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	℃
Maximum Junction-to-Ambient*		R_{thJA}	62.5	℃/W

* Surface Mounted on FR4 Board, t ≤ 10 sec.

www.DataSheet4U.com

www.DataSheet4U.com

KI4920DY

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 μA	1			V
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 30 V, V_{GS} = 0 V			1	μA
		V_{DS} = 30 V, V_{GS} = 0 V, T_J = 55℃			25	
On-State Drain Current *	$I_{D(on)}$	V_{DS} ≥ 5 V, V_{GS} = 10 V	20			A
Drain-Source On-State Resistance*	$r_{DS(on)}$	V_{GS} = 10 V, I_D =6.9 A		0.02	0.025	Ω
		V_{GS} = 4.5 V, I_D = 5.8 A		0.026	0.035	Ω
Forward Transconductance*	g_{fs}	V_{DS} = 15 V, I_D = 6.9 A		25		S
Schottky Diode Forward Voltage*	V_{SD}	I_S = 1.7 A, V_{GS} = 0 V			1.2	V
Total Gate Charge	Q_g	V_{DS} = 15 V, V_{GS} = 5V, I_D = 6.9 A		15	23	nC
Total Gate Charge	Qgt	V_{DS} = 15 V, V_{GS} = 10 V, I_D = 6.9 A		30	50	nC
Gate-Source Charge	Q_{gs}			7.5		nC
Gate-Drain Charge	Q_{gd}			3.5		nC
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = 15 V, R_L = 15 Ω I_D = 1 A, V_{GEN} = 10 V, R_G = 6 Ω		12	20	ns
Rise Time	t_r			10	20	ns
Turn-Off Delay Time	$t_{d(off)}$			60	90	ns
Fall Time	t_f			15	30	ns
Source-Drain Reverse Recovery Time	t_{rr}	I_F = 1.7 A, di/dt = 100 A/μs		50	90	ns

* Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.

www.DataSheet4U.com