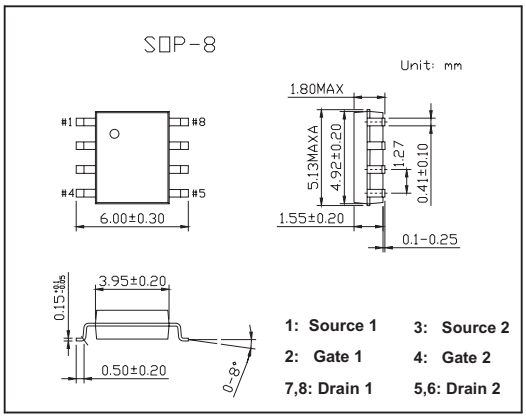
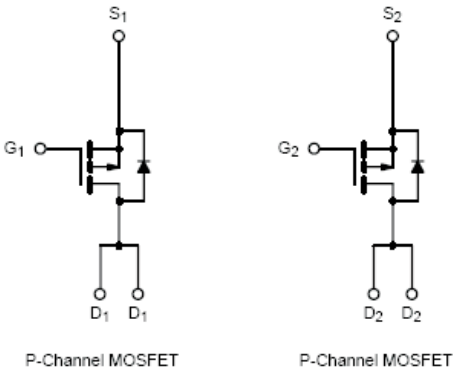
Dual P-Channel 30-V(D-S) MOSFET

KI4953DY



■ Features

- 100% Rg Tested



P-Channel MOSFET P-Channel MOSFET

■ 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	-4.9	A
	T_A = 70℃		-3.9	
Pulsed Drain Current		I_{DM}	-30	
Continuous Source Current *		I_S	-1.7	
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 1" X 1' FR4 Board.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250μA	-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} = -30V, V_{GS} = 0 V			-1	μA
		V_{DS} = -30V, V_{GS} = 0 V, T_J = 55℃			-25	μA
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 = -4.9A		0.043	0.053	Ω
		V_{GS} = -4.5 V, I_D = -3.6A		0.070	0.095	Ω
Forward Transconductance*	g_{fs}	V_{DS} = -15 V, I_D = -4.9A		10		S
Schottky Diode Forward Voltage*	V_{SD}	I_S = -1.7 A, V_{GS} = 0 V		0.8	-1.2	V
Total Gate Charge	Q_g	V_{DS} = -15V, V_{GS} = -10 V, I_D = -4.9A		16	25	nC
Gate-Source Charge	Q_{gs}			5		nC
Gate-Drain Charge	Q_{gd}			2		nC
Gate Resistance	R_g		2		7.1	Ω
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = -15 V, R_L = 15 Ω I_D = -1 A, V_{GEN} = -10V, R_G = 6 Ω		9	15	ns
Rise Time	t_r			13	20	ns
Turn-Off Delay Time	$t_{d(off)}$			25	40	ns
Fall Time	t_f			15	25	ns
Source-Drain Reverse Recovery Time	t_{rr}	I_F = -1.7 A, di/dt = 100 A/μs		60	90	ns

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