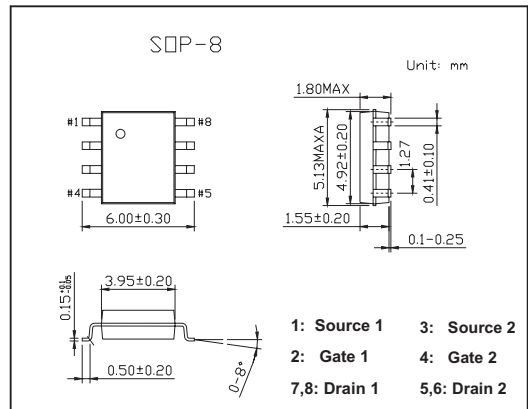
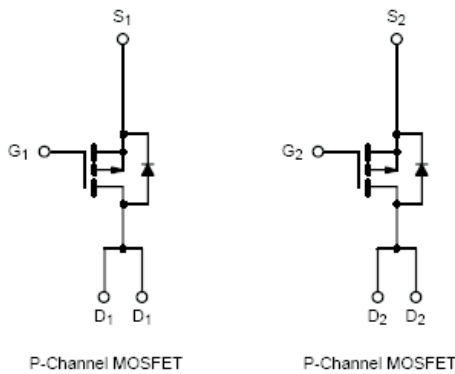


# KI4953DY

■ Features

- 100% Rg Tested



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

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	$V_{DS}$	-30	V	
Gate-Source Voltage	$V_{GS}$	$\pm 20$		
Continuous Drain Current ( $T_J = 150^\circ\text{C}$ ) *	$I_D$	$T_A = 25^\circ\text{C}$	-4.9	A
		$T_A = 70^\circ\text{C}$	-3.9	
Pulsed Drain Current	$I_{DM}$	-30		
Continuous Source Current *	$I_S$	-1.7		
Maximum Power Dissipation *	$P_D$	$T_A = 25^\circ\text{C}$	2	W
		$T_A = 70^\circ\text{C}$	1.3	
Operating Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 to 150	$^\circ\text{C}$	
Maximum Junction-to-Ambient*	$R_{thJA}$	62.5	$^\circ\text{C/W}$	

\* Surface Mounted on 1" X 1" FR4 Board.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250 μ A	-1			V	
Gate-Body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±20 V			±100	nA	
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = -30V, V <sub>GS</sub> = 0 V			-1	μ A	
		V <sub>DS</sub> = -30V, V <sub>GS</sub> = 0 V, T <sub>J</sub> = 55°C			-25	μ A	
On-State Drain Current*	I <sub>D(on)</sub>	V <sub>DS</sub> ≤ -5 V, V <sub>GS</sub> = -10 V	-20			A	
Drain-Source On-State Resistance*	r <sub>DS(on)</sub>	V <sub>GS</sub> = -10 V, I <sub>D</sub> = -4.9A		0.043	0.053	Ω	
		V <sub>GS</sub> = -4.5 V, I <sub>D</sub> = -3.6A		0.070	0.095	Ω	
Forward Transconductance*	g <sub>fs</sub>	V <sub>DS</sub> = -15 V, I <sub>D</sub> = -4.9A		10		S	
Schottky Diode Forward Voltage*	V <sub>SD</sub>	I <sub>S</sub> = -1.7 A, V <sub>GS</sub> = 0 V		0.8	-1.2	V	
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> = -15V, V <sub>GS</sub> = -10 V, I <sub>D</sub> = -4.9A		16	25	nC	
Gate-Source Charge	Q <sub>gs</sub>			5		nC	
Gate-Drain Charge	Q <sub>gd</sub>			2		nC	
Gate Resistance	R <sub>g</sub>		2		7.1	Ω	
Turn-On Delay Time	t <sub>d(on)</sub>	I <sub>D</sub> = -1 A, V <sub>GEN</sub> = -10V, R <sub>G</sub> = 6 Ω		9	15	ns	
Rise Time	t <sub>r</sub>		V <sub>DD</sub> = -15 V, R <sub>L</sub> = 15 Ω		13	20	ns
Turn-Off Delay Time	t <sub>d(off)</sub>				25	40	ns
Fall Time	t <sub>f</sub>				15	25	ns
Source-Drain Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = -1.7 A, di/dt = 100 A/μ s		60	90	ns	

\* Pulse test; pulse width ≤ 300 μ s, duty cycle ≤ 2%.