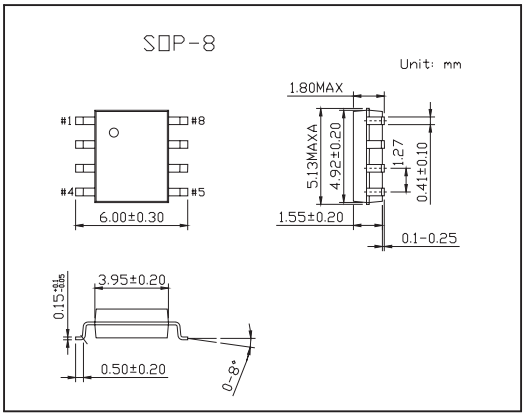
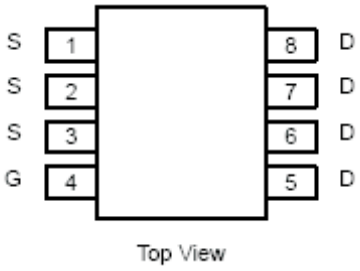
N-Channel 200-V (D-S) MOSFET
KI4464DY

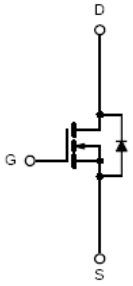


■ Features

- PWM Optimized for (Lowest Q^g and Low R^G)
- TrenchFET Power MOSFET



Top View



N-Channel MOSFET

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	10 secs	Steady State	Unit
Drain-Source Voltage	V_{DS}	200		V
Gate-Source Voltage	V_{GS}	±20		
Continuous Drain Current (T_J = 150 ℃) T_A = 25℃	I_D	2.2	1.7	A
T_A = 70℃		1.7	1.3	
Pulsed Drain Current	I_{DM}	8		
Single Avalanch Current L = 0.1 mH	I_{AS}	3		
Single Avalanch Energy L = 0.1 mH	E_{AS}	0.45		mJ
Continuous Source Current (Diode Conduction)*	I_S	2.1	1.2	A
Maximum Power Dissipation * T_A = 25℃	P_D	2.5	1.5	W
T_A = 70℃		1.6	0.9	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150		℃

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

KI4464DY

■ Thermal Resistance Ratings

Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient *	t≤10 sec	R_{thJA}	37	50	℃/W
	Steady-State		68	85	
Maximum Junction-to-Foot (Drain)	Steady-State	R_{thJF}	17	21	

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

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = VGS, I_D = 250 μA	2.0		4	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} = 160 V, V_{GS} = 0 V			1	μA
		V_{DS} = 160 V, V_{GS} = 0 V, T_J = 55℃			5	
On-State Drain Current*	$I_{D(on)}$	V_{DS} ≥ 5 V, V_{GS} = 10 V	8			A
Drain Source On State Resistance*	$r_{DS(on)}$	V_{GS} = 10 V, I_D = 2.2 A		0.195	0.240	Ω
		V_{GS} = 6.0 V, I_D = 2.1 A		0.210	0.260	
Forward Transconductanceb	g_{fs}	V_{DS} = 15 V, I_D = 2.2 A		8.0		S
Schottky Diode Forward Voltage*	V_{SD}	I_S = 2.1 A, V_{GS} = 0 V		0.8	1.2	V
Total Gate Charge	Q_g	V_{DS} = 100 V, V_{GS} = 10 V, I_D = 2.2 A		12	18	nC
Gate-Source Charge	Q_{gs}			2.5		
Gate-Drain Charge	Q_{gd}			3.8		
Gate Resistance	R_g			2.5		Ω
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=100V,R_L=100 Ω,I_D=1A,V_{GEN}=10V,R_G=6 Ω		10	15	ns
Rise Time	t_r			12	20	
Turn-Off Delay Time	$t_{d(off)}$			15	25	
Fall Time	t_f			15	25	
Source-Drain Reverse Recovery Time	t_{rr}	I_F = 2.1 A, di/dt = 100 A/μs		60	90	ns

* Pulse test :Pulse width ≤300 μs,duty cycle≤2%