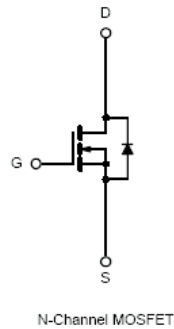
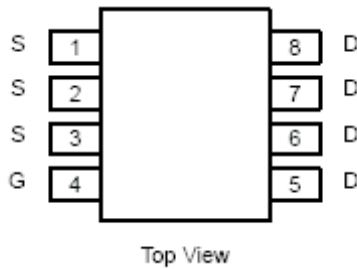
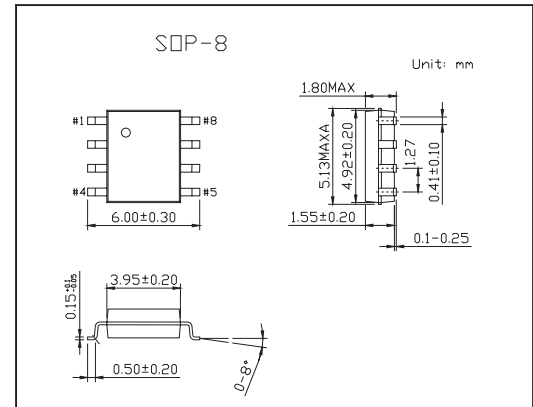


N-Channel 200-V (D-S) MOSFET KI4464DY

■ Features

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



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

Parameter	Symbol	10 secs	Steady State	Unit
Drain-Source Voltage	V_{DS}	200		V
Gate-Source Voltage	V_{GS}	± 20		
Continuous Drain Current ($T_J = 150^\circ\text{C}$) $T_A = 25^\circ\text{C}$ $T_A = 70^\circ\text{C}$	I_D	2.2 1.7	1.7 1.3	A
Pulsed Drain Current	I_{DM}	8		
Single Avalanche Current $L = 0.1\text{ mH}$	I_{AS}	3		
Single Avalanche Energy $L = 0.1\text{ mH}$	E_{AS}	0.45		mJ
Continuous Source Current (Diode Conduction)*	I_S	2.1	1.2	A
Maximum Power Dissipation * $T_A = 25^\circ\text{C}$ $T_A = 70^\circ\text{C}$	P_D	2.5 1.6	1.5 0.9	W
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	37	50	°C/W
	Steady-State	68	85	
Maximum Junction-to-Foot (Drain)	Steady-State	17	21	

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

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , 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°C			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 Transconductance ^b	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%