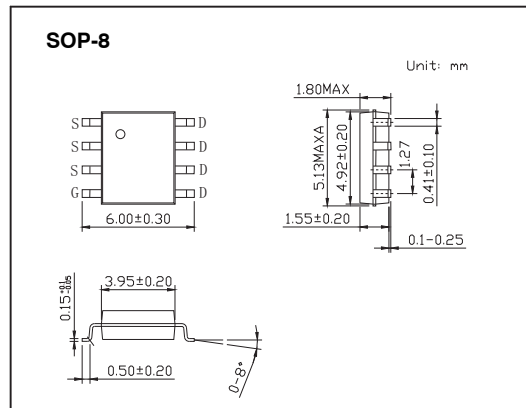
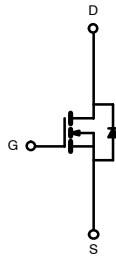
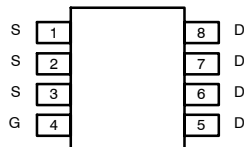


SI4410DY

■ Features

- $R_{DS(ON)} \leq 0.0135 \Omega$ @ $V_{GS}=10V$
- $R_{DS(ON)} \leq 0.02 \Omega$ @ $V_{GS}=4.5V$
- Low gate charge.
- Fast switching speed.



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

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	30	V	
Gate-Source Voltage	V_{GS}	± 20	V	
Drain-Current	-Continuous (NOTE 1)	I_D	10	A
	-Pulsed (NOTE 2)	I_{DM}	50	A
Power Dissipation	(NOTE 1)	P_D	2.5	W
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	50	$^\circ C/W$	
Operating Junction and Storage Temperature Range	$T_{j, Tstg}$	-55 to 150	$^\circ C$	

SI4410DY

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	V _{GS} =0V, I _D =250uA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{Ds} =30V, V _{GS} =0V			1	μA
Gate-Body Leakage	I _{GSS}	V _{GS} =±20V, V _{Ds} =0V			±100	nA
Gate Threshold Voltage (NOTE 2)	V _{GS(th)}	V _{GS} =V _{Ds} , I _D =250uA	1		3	V
Drain- Source on-state Resistance (NOTE 2)	R _{DS(ON)}	V _{GS} =10V, I _D =10A			0.0135	Ω
		V _{GS} =4.5V, I _D =5A			0.02	Ω
On-State Drain Current (NOTE 2)	I _{D(ON)}	V _{Ds} =5V, V _{GS} =10V	20			A
Forward Transconductance (NOTE 2)	g _{FS}	V _{Ds} =10V, I _D =10A		27		S
Input Capacitance	C _{iss}	V _{Ds} = 15V, V _{GS} = 0V, f = 1.0MHZ		1350		pF
Output Capacitance	C _{oss}			340		pF
Reverse Transfer Capacitance	C _{rss}			125		pF
Turn-On Delay Time	t _{D(on)}	V _{DD} =25V, I _D =1A, V _{GS} =10V, R _L =25Ω, R _{GEN} =6Ω		30		ns
Rise Time	t _r			20		ns
Turn-Off Delay Time	t _{D(off)}			100		ns
Fall Time	t _f			80		ns
Total Gate Charge	Q _g	V _{Ds} = 15V, I _D = 10A, V _{GS} = 10V		22	60	nC
Gate-Source Charge	Q _{gs}			5		nC
Gate-Drain Charge	Q _{gd}			4		nC
Drain-Source Diode Forward Current (NOTE 2)	I _s				2.3	A
Diode Forward Voltage	V _{sD}	V _{GS} =0V, I _s =2.3A		0.825	1.2	V

Note: 1. Surface Mounted on FR4 Board

2. Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2%

■ Marking

Marking	4410
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