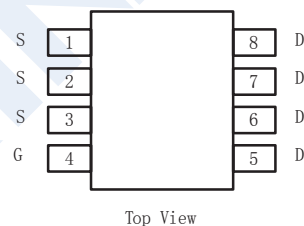
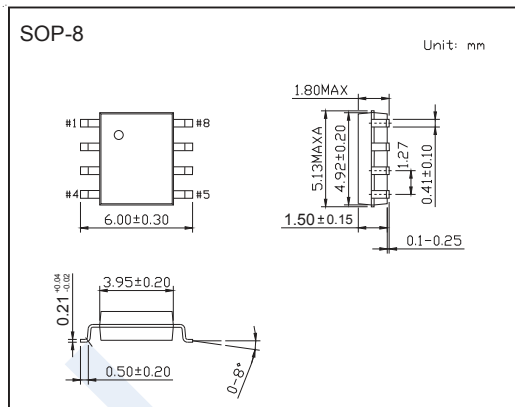
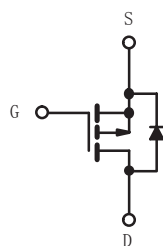


P-Channel MOSFET

SI4435DY (KI4435DY)

■ Features

- $V_{DS} = -30V$
- $R_{DS(on)} = 0.02 \Omega @ V_{GS} = -10V$
- $R_{DS(on)} = 0.035 \Omega @ V_{GS} = -4.5V$

■ 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
Continuous Drain Current	I_D	-8.8	A
Pulsed Drain Current	I_{DM}	-50	A
Maximum Power Dissipation	P_D	2.5	W
Maximum Junction-to-Ambient	R_{thJA}	50	$^\circ C/W$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ C$

SI4435DY (KI4435DY)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	V _{GS} = 0 V, I _D = -250 μA	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1	μA
		V _{DS} = -15V, V _{GS} = 0V, T _J = 70°C			-5	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.0	-1.7	-3	V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Drain-Source On-State Resistance *	r _{DS(on)}	V _{GS} = -10V, I _D = -8.0A		0.015	0.02	Ω
		V _{GS} = -4.5V, I _D = -5.0A		0.022	0.035	
On-State Drain Current	I _{D(on)}	V _{DS} = -5V, V _{GS} = -10V	-40			A
Forward Transconductance*	g _{fs}	V _{DS} = -15V, I _D = -8A		11		S
Total Gate Charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -4.6A		47	60	nC
Gate-Source Charge	Q _{gs}			7.1		
Gate-Drain Charge	Q _{gd}			8		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -15V, R _L = 15 Ω, I _D = -1A, V _{GEN} = -10V, R _G = 6 Ω		16	24	ns
Rise Time	t _r			76	110	
Turn-Off Delay Time	t _{d(off)}			130	200	
Fall Time	t _f			90	140	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -2.5A, di/dt = 100A/μs		34	51	ns
Continuous Source Current (Diode Conduction)	I _S			-2.5		A
Diode Forward Voltage*	V _{SD}	I _S = -2.5 A, V _{GS} = 0 V			-1.2	V

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

■ Marking

Marking	4435 KC****
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