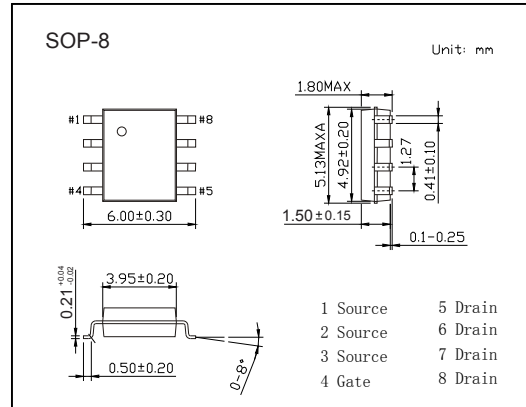
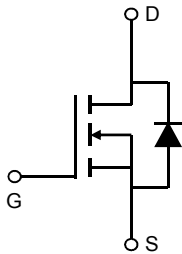


■ Features

- $V_{DS} (V) = 30V$
- $I_D = 15 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 7.5m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 11.0m\Omega (V_{GS} = 4.5V)$



■ 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		
Continuous Drain Current	I_D	$T_A=25^\circ C$	15	A
		$T_A=70^\circ C$	12	
Pulsed Drain Current	I_{DM}	100		
Avalanche Current	I_{AS}	22		
Avalanche energy	$L=0.1mH$	E_{AS}	24	mJ
Power Dissipation	P_D	$T_A=25^\circ C$	3.1	W
		$T_A=70^\circ C$	2	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	40	$^\circ C/W$
		Steady-State	75	
Thermal Resistance.Junction- to-Lead	R_{thJL}	24		
Junction Temperature	T_J	150	$^\circ C$	
Storage Temperature Range	T_{stg}	-55 to 150		

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 uA, V _{GS} =0V	30			V	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	uA	
		V _{DS} =30V, V _{GS} =0V, T _J =55°C			5		
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	1.5		2.5	V	
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =15A			7.5	mΩ	
		V _{GS} =10V, I _D =15A T _J =125°C			12		
		V _{GS} =4.5V, I _D =12A			11		
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	100			A	
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =12A		45		S	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz	610		910	pF	
Output Capacitance	C _{oss}		88		160		
Reverse Transfer Capacitance	C _{rss}		40		100		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	0.8		2.4	Ω	
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =15V, I _D =12A	11		17	nC	
Total Gate Charge (4.5V)			5		8		
Gate Source Charge			Q _{gs}	1.9			2.9
Gate Drain Charge			Q _{gd}	1.8			4.2
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =15V, R _L =1.25Ω, R _{GEN} =3Ω		4.4		ns	
Turn-On Rise Time	t _r			9			
Turn-Off DelayTime	t _{d(off)}			17			
Turn-Off Fall Time	t _f			6			
Body Diode Reverse Recovery Time	t _{rr}	I _F = 12A, di/dt= 500A/us	5.6		8	nC	
Body Diode Reverse Recovery Charge	Q _{rr}		6.4		9.6		
Maximum Body-Diode Continuous Current	I _S				4	A	
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1	V	

Note : The static characteristics in Figures 1 to 6 are obtained using <300 μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4406A
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