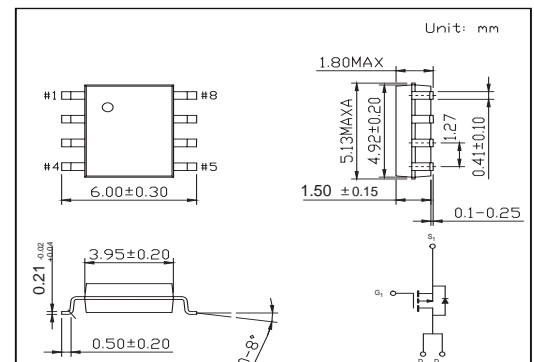


**SOP-8 Plastic-Encapsulate MOSFETS**
**FEATURES**

- VDS (V) =-30V
- ID =-4.9 A (VGS =-10V)
- RDS(ON) < 53mΩ (VGS =-10V)
- RDS(ON) < 95mΩ (VGS =-4.5V)

**MECHANICAL DATA**

- Case style:SOP-8 molded plastic
- Mounting position:any


**MAXIMUM RATINGS AND CHARACTERISTICS**

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V <sub>DS</sub>	-30	V
Gate-Source Voltage	V <sub>GS</sub>	±20	
Continuous Drain Current	I <sub>D</sub>	T <sub>a</sub> = 25 °C	-4.9
		T <sub>a</sub> = 70 °C	-3.9
Pulsed Drain Current	I <sub>DM</sub>	-30	A
Power Dissipation	P <sub>D</sub>	T <sub>a</sub> = 25 °C	2
		T <sub>a</sub> = 70 °C	1.3
Thermal Resistance.Junction- to-Ambient	R <sub>thJA</sub>	62.5	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Junction Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

**MOSFET ELECTRICAL CHARACTERISTICS** T<sub>A</sub>=25°C unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =-250 μ A, V <sub>GS</sub> =0V	-30			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V			-1	uA
		V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V, T <sub>J</sub> =55°C			-25	
Gate-Body leakage current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =-250 μ A	-1		-3	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.9A (Note.1)			53	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-3.6A (Note.1)			95	
On state drain current	I <sub>D(ON)</sub>	V <sub>GS</sub> ≤-5 V, V <sub>DS</sub> =-10 V (Note.1)	-20			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-15V, I <sub>D</sub> =-4.9A (Note.1)		10		S
Gate resistance	R <sub>g</sub>		2		7.1	Ω
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-15V, I <sub>D</sub> =-4.9A		16	25	nC
Gate Source Charge	Q <sub>gs</sub>		5			
Gate Drain Charge	Q <sub>gd</sub>		2			
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-15V, R <sub>L</sub> =15 Ω, R <sub>G</sub> =6 Ω		9	15	ns
Turn-On Rise Time	t <sub>r</sub>		13	20		
Turn-Off DelayTime	t <sub>d(off)</sub>		25	40		
Turn-Off Fall Time	t <sub>f</sub>		15	25		
Body Diode Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =-1.7A, dI/dt=100A/μ s		60	90	
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1.7A, V <sub>GS</sub> =0V (Note.1)			-1.2	V

Note.1:Pulse test; pulse width ≤ 300 us, duty cycle ≤ 2%.

## Typical Characteristics

