

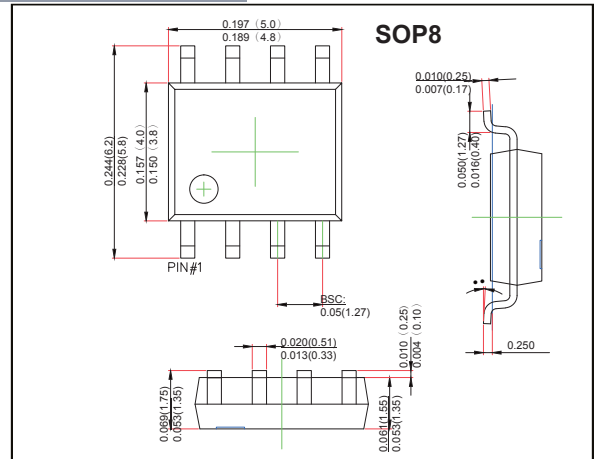
## SOP8 Plastic-Encapsulate MOSFETS

### Features

- VDS (V) = 30V
- ID = 7 A (VGS = 10V)
- RDS(ON) < 30mΩ (VGS = 10V)
- RDS(ON) < 40mΩ (VGS = 5V)
- RDS(ON) < 50mΩ (VGS = 4.5V)
- N-Channel MOSFET

### MECHANICAL DATA

- Case style:SOP8 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	V
Continuous Drain Current (Note.1)	I <sub>D</sub>	TA=25°C	7
		TA=70°C	5.8
Pulsed Drain Current	I <sub>DM</sub>	30	A
Power Dissipation (Note.1)	P <sub>D</sub>	TA=25°C	2.5
		TA=70°C	1.6
Thermal Resistance,Junction- to-Ambient	R <sub>thJA</sub>	50	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	°C

Note.1: Surface Mounted on FR4 Board, t ≤ 10 sec.

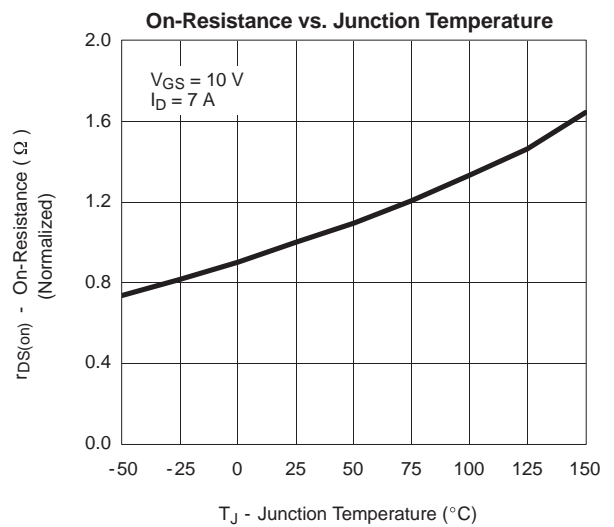
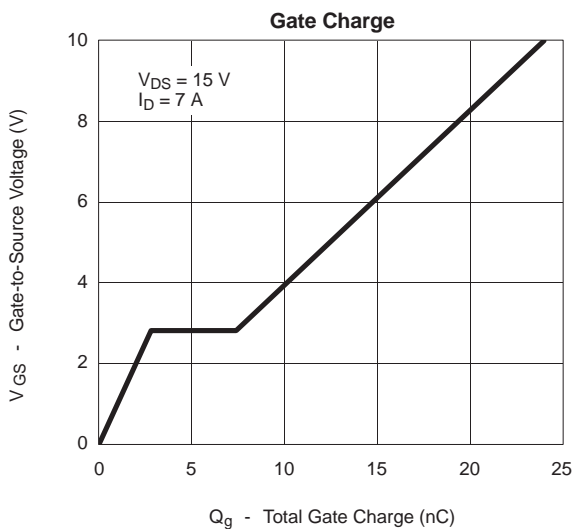
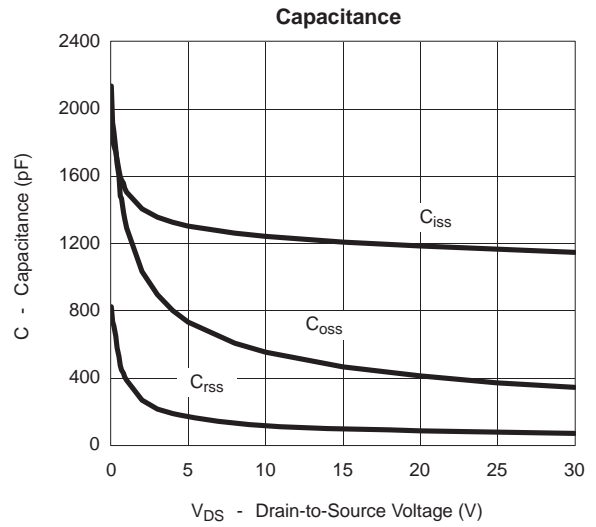
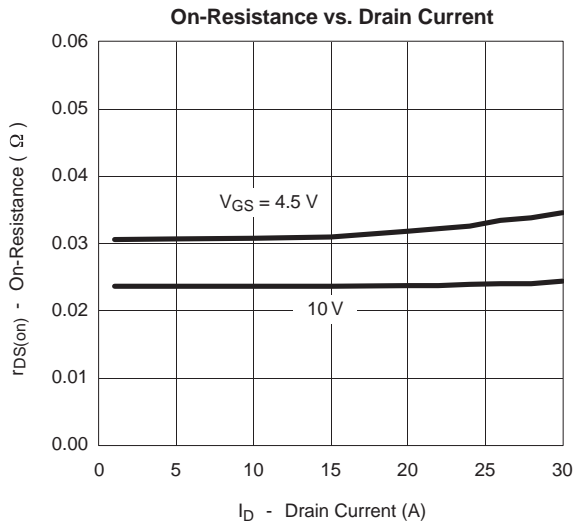
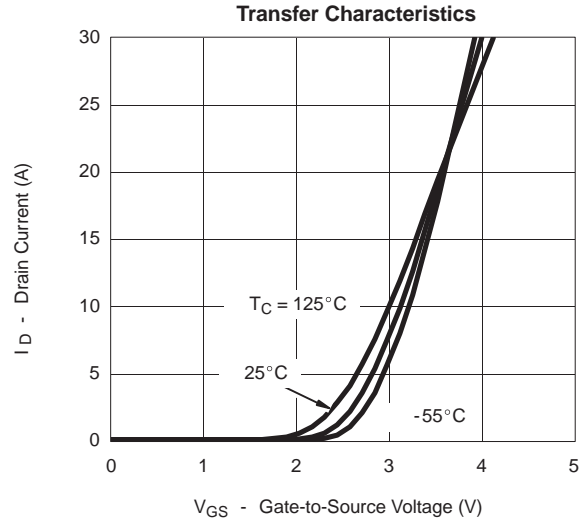
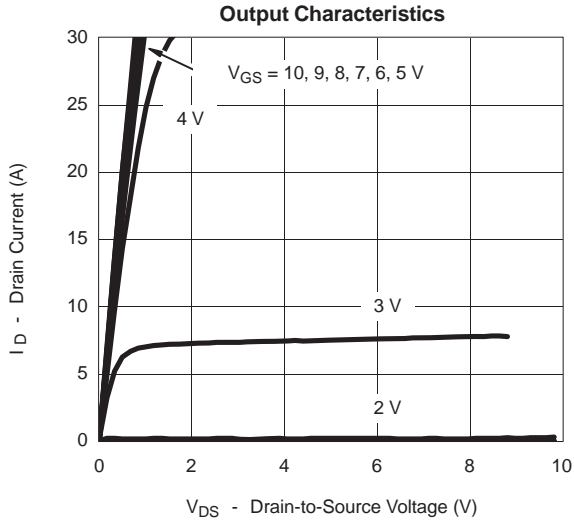
## MOSFET ELECTRICAL CHARACTERISTICS T<sub>A</sub>=25°C unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =250 μA, V <sub>GS</sub> =0V	30			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =24V, V <sub>GS</sub> =0V			2	μA
		V <sub>DS</sub> =24V, 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 μA	1		3	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =7A (Note.1)			30	mΩ
		V <sub>GS</sub> =5V, I <sub>D</sub> =4A (Note.1)			40	
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =3.5A (Note.1)			50	
On-State Drain Current	I <sub>DS(on)</sub>	V <sub>DS</sub> ≥ 5 V, V <sub>GS</sub> = 10 V	30			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =7A (Note.1)		15		S
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =15V, I <sub>D</sub> =7A		24	50	nC
Gate Source Charge	Q <sub>gs</sub>		2.8			
Gate Drain Charge	Q <sub>gd</sub>		4.6			
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =25V, R <sub>L</sub> =25Ω, R <sub>GEN</sub> =6Ω I <sub>D</sub> =1A		14	30	ns
Turn-On Rise Time	t <sub>r</sub>		10	60		
Turn-Off DelayTime	t <sub>d(off)</sub>		46	150		
Turn-Off Fall Time	t <sub>f</sub>		17	140		
Body Diode Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 2A, di/dt= 100A/μs		60		
Maximum Body-Diode Continuous Current	I <sub>S</sub>				2.8	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =2A, V <sub>GS</sub> =0V (Note.1)			1.1	V

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

Marking	9410
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## Typical Characteristics



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