

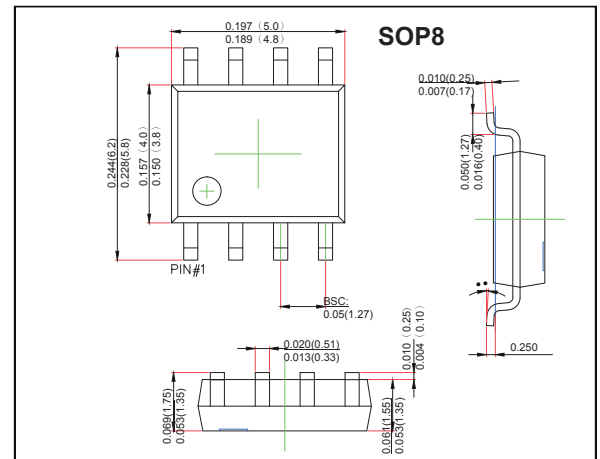
SOP-8 Plastic-Encapsulate MOSFETS

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 _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current (Note.1)	I _D	TA=25°C	7
		TA=70°C	5.8
Pulsed Drain Current	I _{DM}	30	A
Power Dissipation (Note.1)	P _D	TA=25°C	2.5
		TA=70°C	1.6
Thermal Resistance, Junction- to-Ambient	R _{thJA}	50	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	°C

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

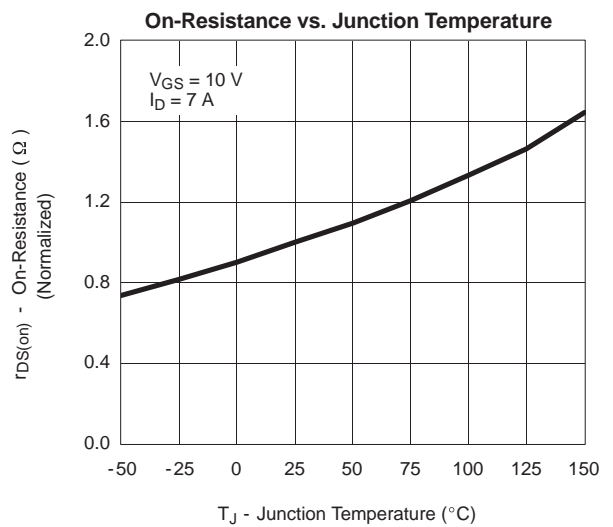
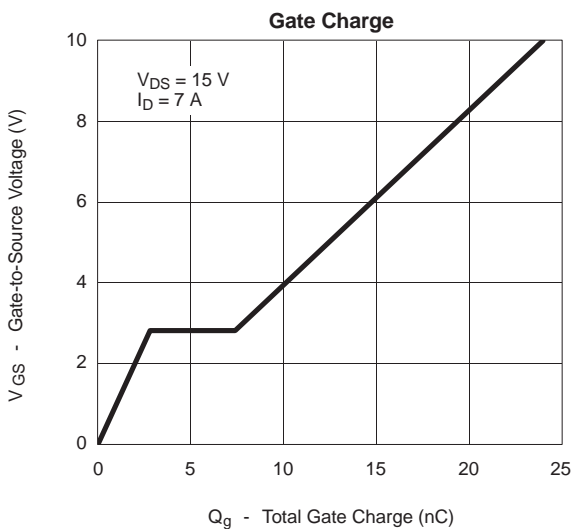
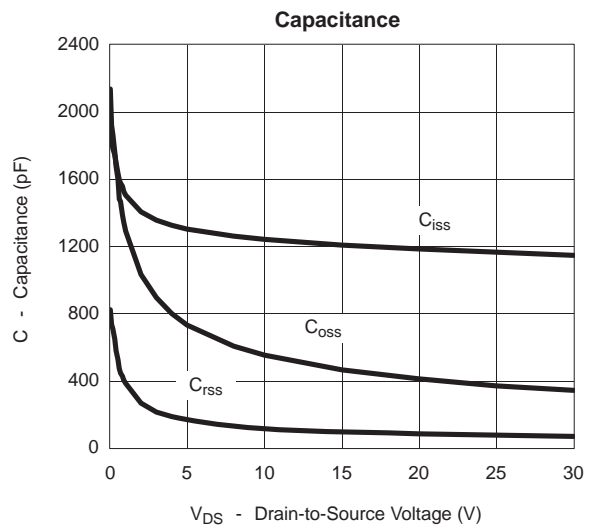
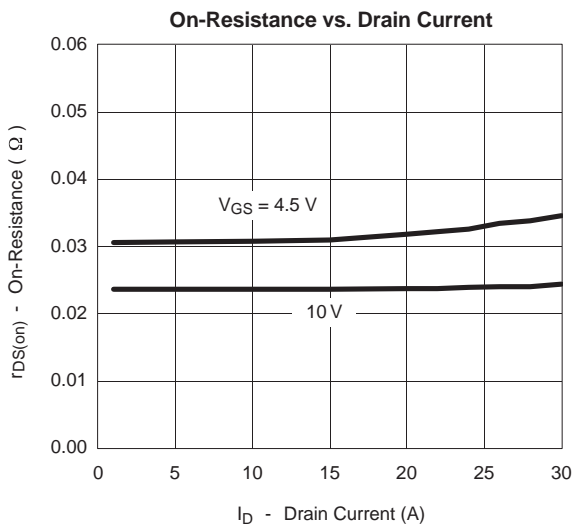
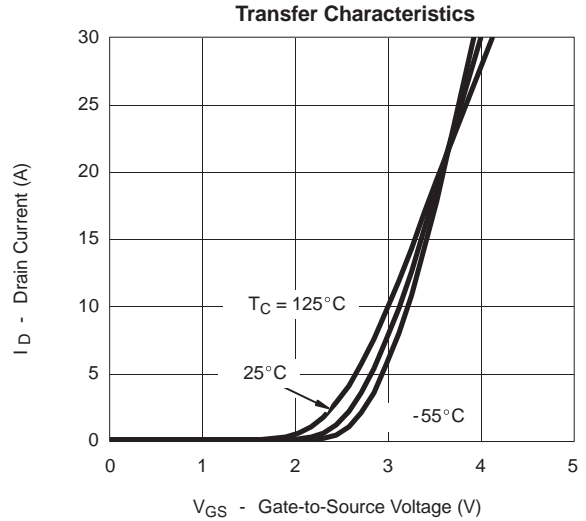
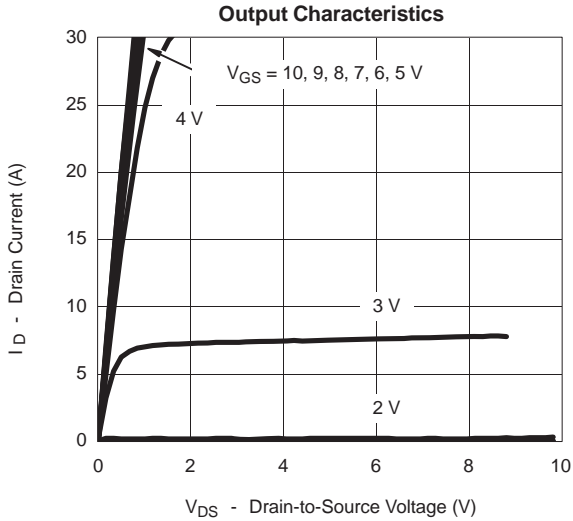
MOSFET ELECTRICAL CHARACTERISTICS T_A=25°C unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =24V, V _{GS} =0V			2	μA
		V _{DS} =24V, V _{GS} =0V, T _J =55°C			25	
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 =250 μA	1		3	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =7A (Note.1)			30	mΩ
		V _{GS} =5V, I _D =4A (Note.1)			40	
		V _{GS} =4.5V, I _D =3.5A (Note.1)			50	
On-State Drain Current	I _{DS(on)}	V _{DS} ≥ 5V, V _{GS} = 10V	30			A
Forward Transconductance	g _{FS}	V _{DS} =15V, I _D =7A (Note.1)		15		S
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =15V, I _D =7A		24	50	nC
Gate Source Charge	Q _{gs}		2.8			
Gate Drain Charge	Q _{gd}		4.6			
Turn-On Delay Time	t _{d(on)}	V _{GS} =10V, V _{DS} =25V, R _L =25Ω, R _{GEN} =6Ω I _D =1A		14	30	ns
Turn-On Rise Time	t _r		10	60		
Turn-Off Delay Time	t _{d(off)}		46	150		
Turn-Off Fall Time	t _f		17	140		
Body Diode Reverse Recovery Time	t _{rr}	I _F =2A, di/dt= 100A/μs		60		
Maximum Body-Diode Continuous Current	I _S				2.8	A
Diode Forward Voltage	V _{SD}	I _S =2A, V _{GS} =0V (Note.1)			1.1	V

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

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics



Typical Characteristics

