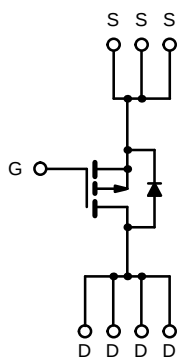
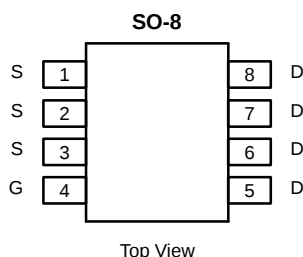




P-Channel Reduced Q_g , Fast Switching MOSFET

High-Efficiency
PWM Optimized

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-25	0.040 @ $V_{GS} = -4.5$ V	± 5.9
	0.060 @ $V_{GS} = -3.0$ V	± 4.8



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	-25	V
Gate-Source Voltage		V_{GS}	± 12	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a	$T_A = 25^\circ\text{C}$	I_D	± 5.9	A
	$T_A = 70^\circ\text{C}$		± 4.7	
Pulsed Drain Current		I_{DM}	± 40	
Continuous Source Current (Diode Conduction) ^a		I_S	-2.1	
Maximum Power Dissipation ^a	$T_A = 25^\circ\text{C}$	P_D	2.5	W
	$T_A = 70^\circ\text{C}$		1.6	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient ^a	R_{thJA}	50	$^\circ\text{C/W}$

Notes

a. Surface Mounted on FR4 Board, $t \leq 10$ sec.

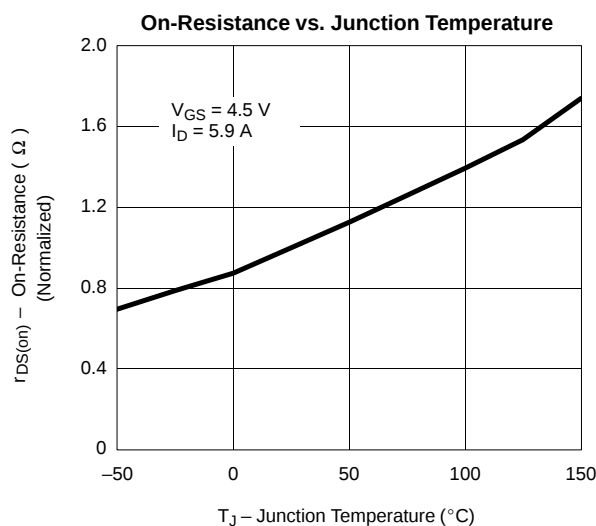
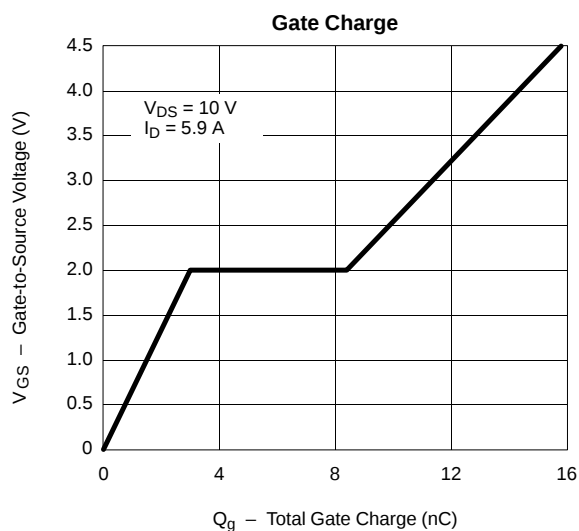
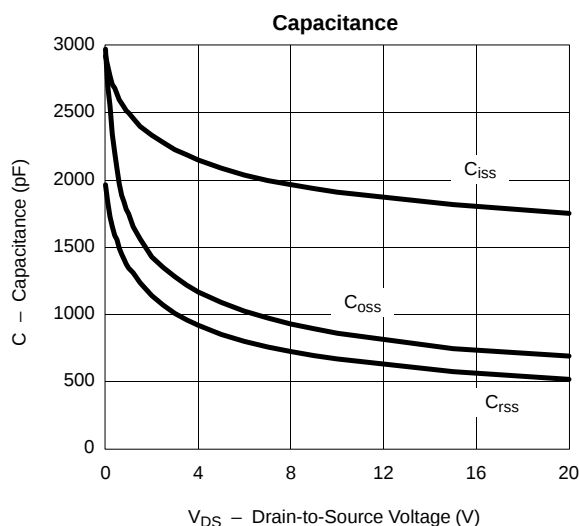
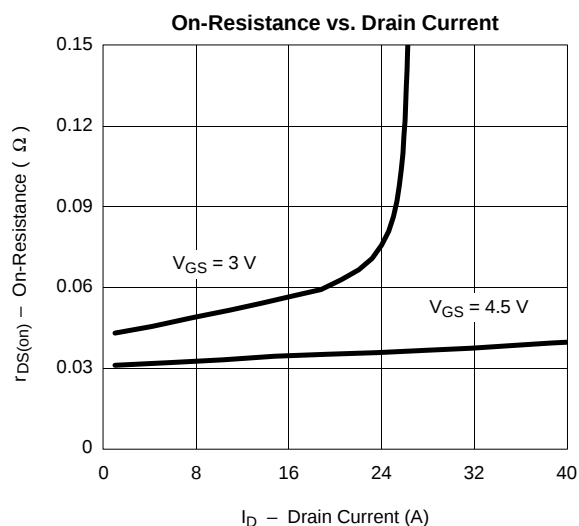
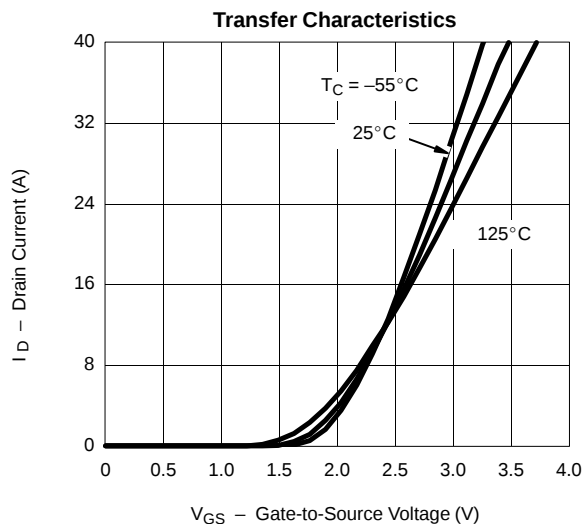
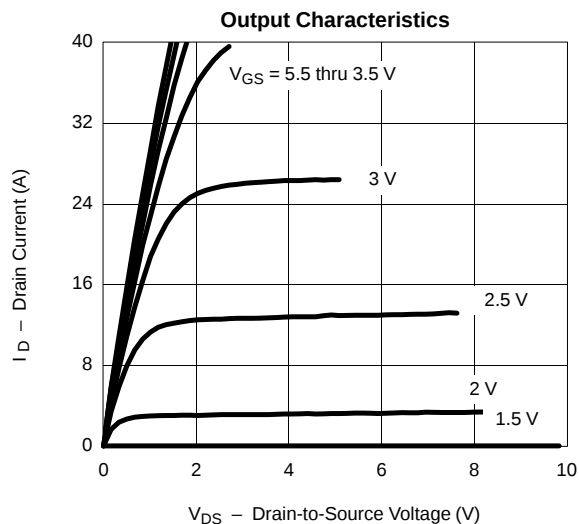
SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.6			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±12 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -25 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -25 V, V _{GS} = 0 V, T _J = 70 °C			-5	
On-State Drain Current ^b	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -4.5 V	-40			A
Drain-Source On-State Resistance ^b	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -5.9 A		0.033	0.040	Ω
		V _{GS} = -3.0 V, I _D = -4.8 A		0.044	0.060	
Forward Transconductance ^b	g _{fs}	V _{DS} = -9 V, I _D = -5.9 A		18		S
Diode Forward Voltage ^b	V _{SD}	I _S = -2.1 A, V _{GS} = 0 V		-0.75	-1.2	V
Dynamic^a						
Total Gate Charge	Q _g	V _{DS} = -10 V, V _{GS} = -4.5 V, I _D = -5.9 A		15.8	25	nC
Gate-Source Charge	Q _{gs}			3.0		
Gate-Drain Charge	Q _{gd}			5.4		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -10 V, R _L = 10 Ω I _D ≈ -1 A, V _{GEN} = -4.5 V, R _G = 6 Ω		20	40	ns
Rise Time	t _r			30	60	
Turn-Off Delay Time	t _{d(off)}			53	100	
Fall Time	t _f			31	60	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -2.6, di/dt = 100 A/μs		80	120	

Notes

- a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
b. For design aid only; not subject to production testing.



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

