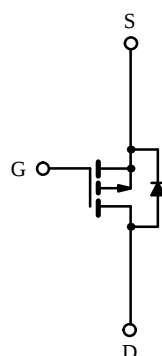
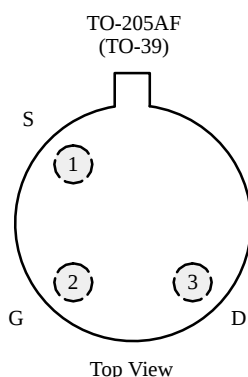


P-Channel Enhancement-Mode Transistor

Product Summary

$V_{(BR)DSS}$ (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-200	0.80	-4.0

Parametric limits in accordance with MIL-S-19500/564 where applicable.



P-Channel MOSFET

Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	-200	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current ($T_J = 150^\circ\text{C}$)	$T_C = 25^\circ\text{C}$	I_D	-4.0	A
	$T_C = 100^\circ\text{C}$		-2.4	
Pulsed Drain Current		I_{DM}	-20	
Avalanche Current		I_{AR}	-3.1	
Maximum Power Dissipation	$T_C = 25^\circ\text{C}$	P_D	25	W
	$T_C = 100^\circ\text{C}$		10	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$
Lead Temperature ($1/16''$ from case for 10 sec.)		T_L	300	

Thermal Resistance Ratings

Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient	R_{thJA}	175	$^\circ\text{C/W}$
Maximum Junction-to-Case	R_{thJC}	5.0	

Subsequent updates to this data sheet may be obtained via facsimile by calling Siliconix FaxBack, 1-408-970-5600. Please request FaxBack document #1490.

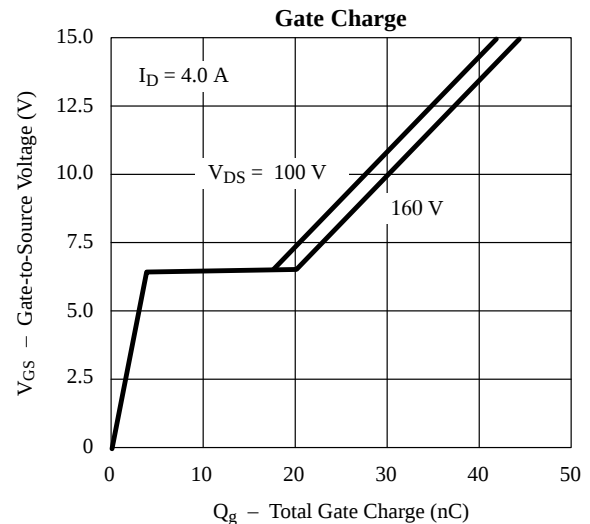
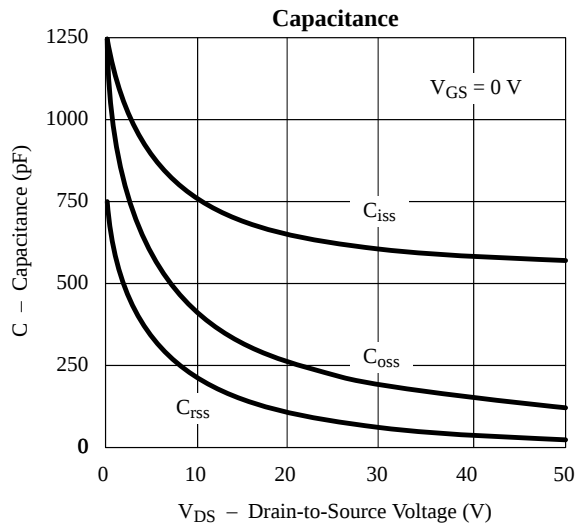
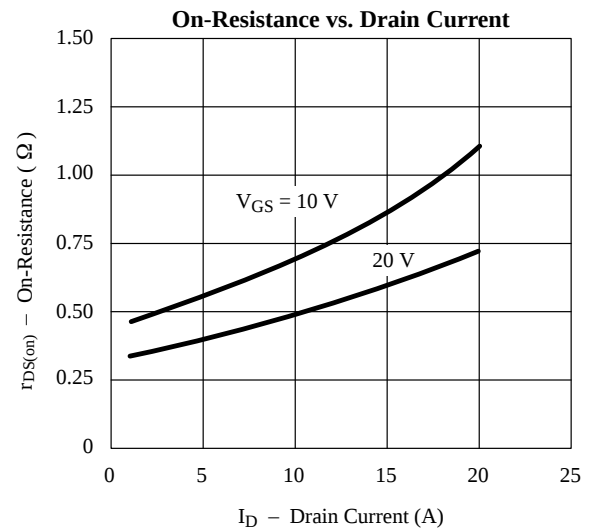
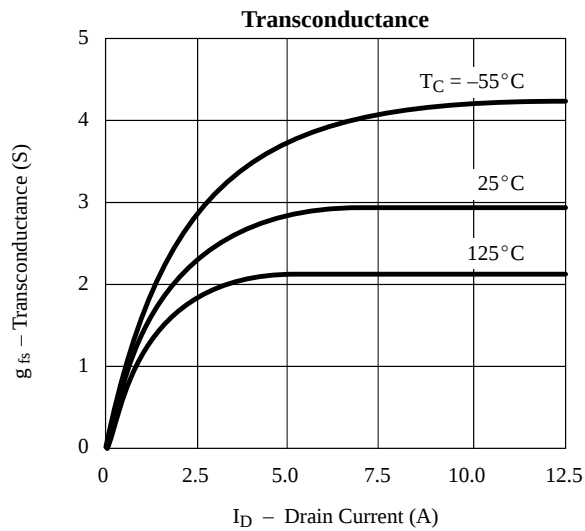
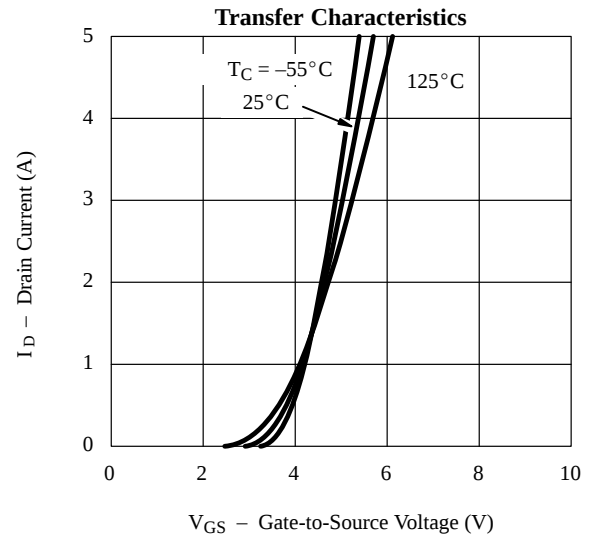
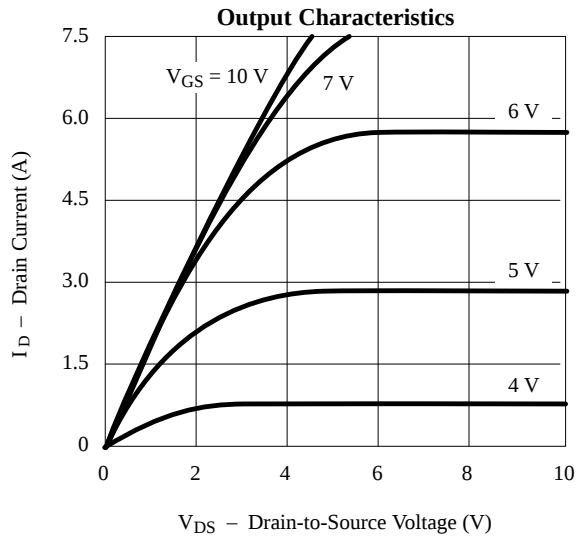
Specifications ($T_J = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Test Condition	Limit			Unit
			Min	Typ ^a	Max	
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0 V, I _D = −1000 μA	−200			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = −250 μA	−2.0		−4.0	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ± 20 V			± 100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = −160 V, V _{GS} = 0 V			−25	μA
		V _{DS} = −160 V, V _{GS} = 0 V, T _J = 125°C			−250	
On-State Drain Current ^b	I _{D(on)}	V _{DS} = −3.3 V, V _{GS} = −10 V	−4.0			A
Drain-Source On-State Resistance ^b	r _{DS(on)}	V _{GS} = −10 V, I _D = −2.4 A		0.50	0.80	Ω
		V _{GS} = −10 V, I _D = −2.4 A, T _J = 125°C		1.0	1.6	
Forward Transconductance ^b	g _{fs}	V _{DS} = −15 V, I _D = −2.4 A	2.2	2.	6.6	S
Dynamic						
Input Capacitance	C _{iss}	V _{GS} = 0 V, V _{DS} = −25 V, f = 1 MHz		625		pF
Output Capacitance	C _{oss}			280		
Reverse Transfer Capacitance	C _{rss}			105		
Total Gate Charge ^c	Q _g	V _{DS} = −100 V, V _{GS} = −10 V, I _D = −4.0 A	14.7	24	34.8	nC
Gate-Source Charge ^c	Q _{gs}		0.5	3.4	6.1	
Gate-Drain Charge ^c	Q _{gd}		3.3	13.5	20.1	
Turn-On Delay Time ^c	t _{d(on)}	V _{DD} = −100 V, R _L = 39 Ω I _D ≅ −2.4 A, V _{GEN} = −10 V, R _G = 7.5 Ω		9	50	ns
Rise Time ^c	t _r			50	100	
Turn-Off Delay Time ^c	t _{d(off)}			32	80	
Fall Time ^c	t _f			38	80	
Source-Drain Diode Ratings and Characteristics						
Continuous Current	I _S				−4.0	A
Pulsed Current	I _{SM}				−20	
Diode Forward Voltage ^b	V _{SD}	I _F = −4.0 A, V _{GS} = 0 V	−0.8		−2.0	V
Reverse Recovery Time	t _{rr}	I _F = −4.0 A, di/dt = 100 A/μs		160	400	ns
Reverse Recovery Charge	Q _{rr}			1.6		μC

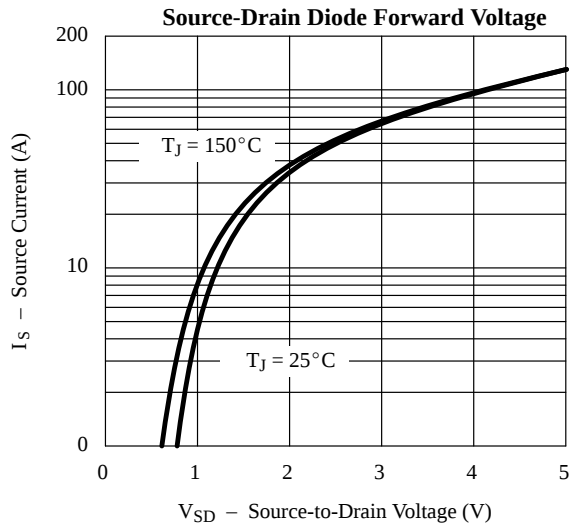
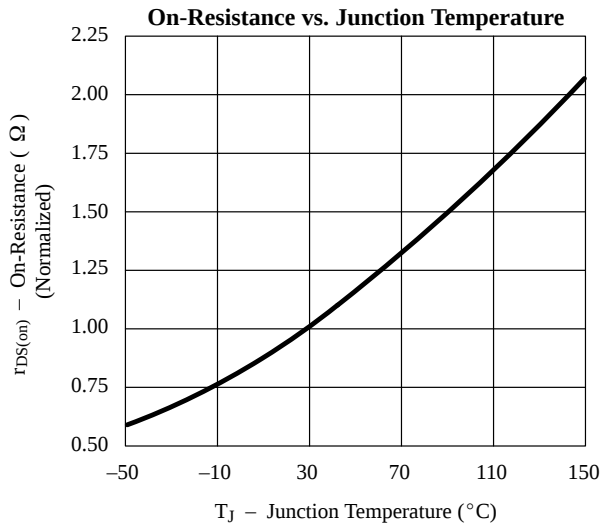
Notes:

- a. For design aid only; not subject to production testing.
 b. Pulse test; pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.
 c. Independent of operating temperature.

Typical Characteristics (25°C Unless Otherwise Noted)



Typical Characteristics (25°C Unless Otherwise Noted)



Thermal Ratings

