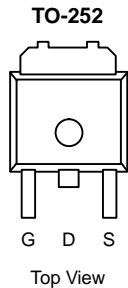




P-Channel 60-V (D-S), 175°C MOSFET, Logic Level

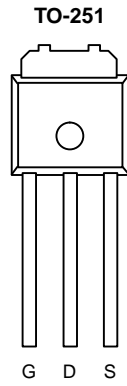
PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
-60	0.170 @ V _{GS} = -10 V	-10
	0.280 @ V _{GS} = -4.5 V	-8

175°C Rated
Maximum Junction Temperature
TrenchFET®
Power MOSFETS



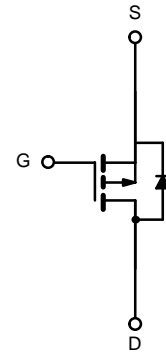
Order Number:
SUD10P06-280L

Drain Connected to Tab



Order Number:
SUU10P06-280L

and DRAIN-TAB



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _C = 25°C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Gate-Source Voltage		V _{GS}	±20	V
Continuous Drain Current (T _J = 150°C)	T _C = 25°C	I _D	-10	A
	T _C = 100°C		-7	
Pulsed Drain Current		I _{DM}	-20	
Continuous Source Current (Diode Conduction)		I _S	-10	
Avalanche Current		I _{AR}	-10	
Repetitive Avalanche Energy (Duty Cycle ≤ 1%)	L = 0.1 mH	E _{AR}	5	mJ
Maximum Power Dissipation	T _C = 25°C	P _D	37	W
	T _A = 25°C		2 ^a	
Operating Junction and Storage Temperature Range		T _J , T _{stg}	-55 to 175	°C

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typical	Maximum	Unit
Junction-to-Ambient ^a	FR4 Board Mount	R _{thJA}	60	70	°C/W
	Free Air		120	140	
Junction-to-Case		R _{thJC}	3.7	4.0	

Notes

a. Surface Mounted on FR4 Board.

For SPICE model information via the Worldwide Web: <http://www.vishay.com/www/product/spice.htm>

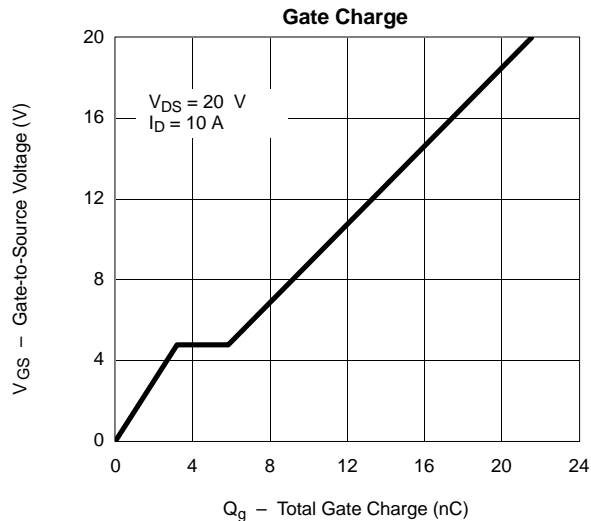
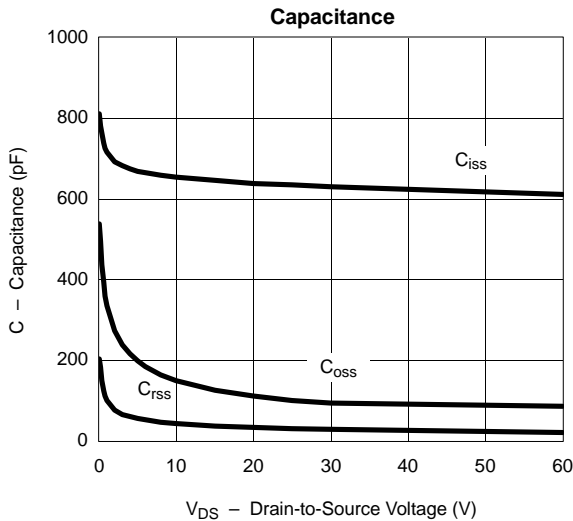
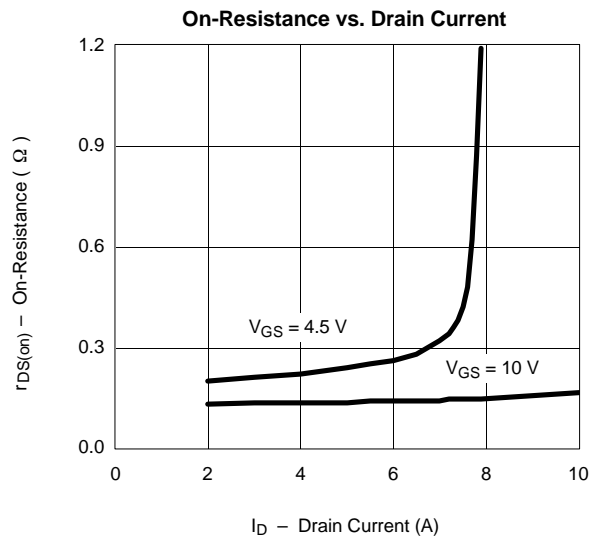
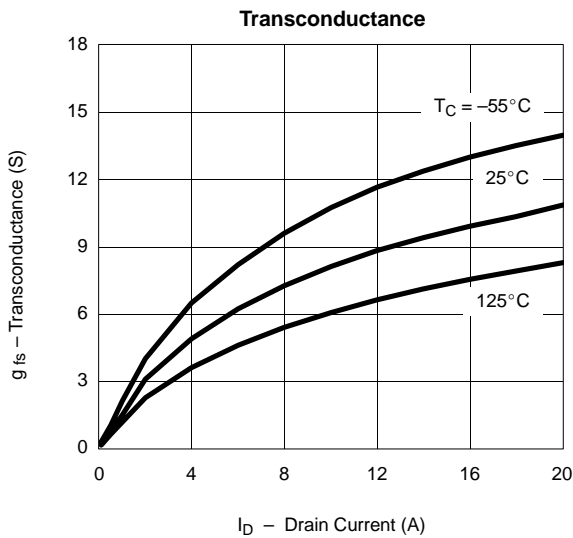
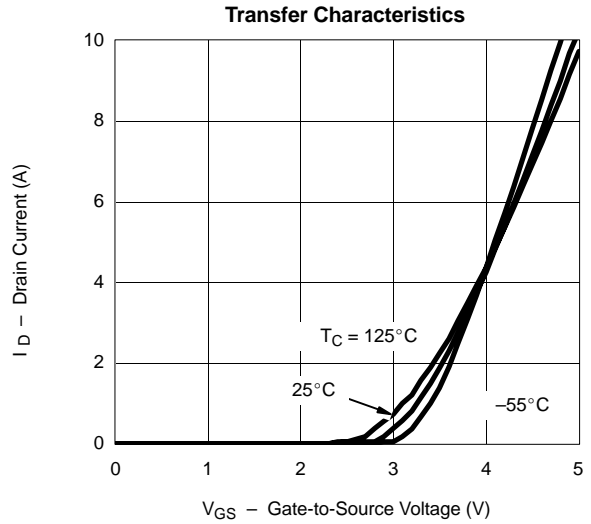
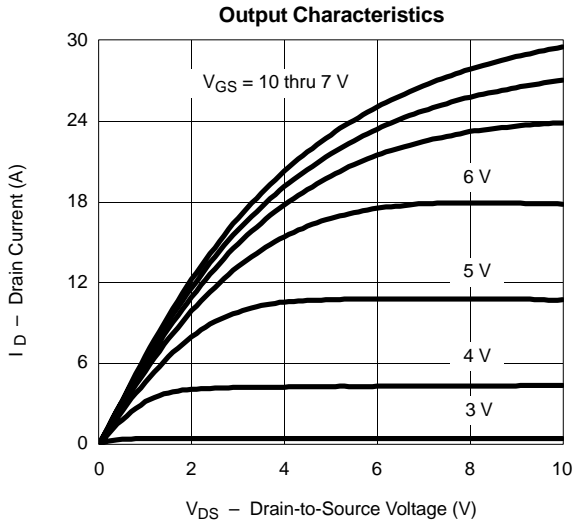
SPECIFICATIONS (T_J = 25°C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ ^a	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{DS} = 0 V, I _D = -250 μA	-60			V
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-1.0	-2.0	-3.0	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -60 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -60 V, V _{GS} = 0 V, T _J = 125°C			-50	
		V _{DS} = -60 V, V _{GS} = 0 V, T _J = 175°C			-150	
On-State Drain Current ^b	I _{D(on)}	V _{DS} = -5 V, V _{GS} = -10 V	-10			A
Drain-Source On-State Resistance ^b	r _{DS(on)}	V _{GS} = -10 V, I _D = -5 A		0.130	0.170	Ω
		V _{GS} = -10 V, I _D = -5 A, T _J = 125°C			0.31	
		V _{GS} = -10 V, I _D = -5 A, T _J = 175°C			0.375	
		V _{GS} = -4.5 V, I _D = -2 A		0.210	0.280	
Forward Transconductance ^b	g _{fs}	V _{DS} = -15 V, I _D = -5 A		6		S
Dynamic						
Input Capacitance	C _{iss}	V _{DS} = -25 V, V _{GS} = 0 V, f = 1 MHz		635		pF
Output Capacitance	C _{oss}			100		
Reverse Transfer Capacitance	C _{rss}			30		
Total Gate Charge	Q _g	V _{DS} = -30 V, V _{GS} = -10 V, I _D = -10 A		11.5	25	nC
Gate-Source Charge	Q _{gs}			3.5		
Gate-Drain Charge	Q _{gd}			2		
Turn-On Delay Time ^c	t _{d(on)}	V _{DD} = -30 V, R _L = 3 Ω I _D = 10 A, V _{GEN} = -10 V, R _G = 2.5 Ω		9	20	ns
Rise Time ^c	t _r			16	20	
Turn-Off Delay Time ^c	t _{d(off)}			17	30	
Fall Time ^c	t _f			19	35	
Source-Drain Diode Ratings and Characteristics (T_C = 25°C)^a						
Pulsed Current	I _{SM}				-20	A
Forward Voltage ^b	V _{SD}	I _F = 10 A, V _{GS} = 0 V			-1.3	V
Reverse Recovery Time	t _{rr}	I _F = 10 A, di/dt = 100 A/μs		50	80	ns

Notes:

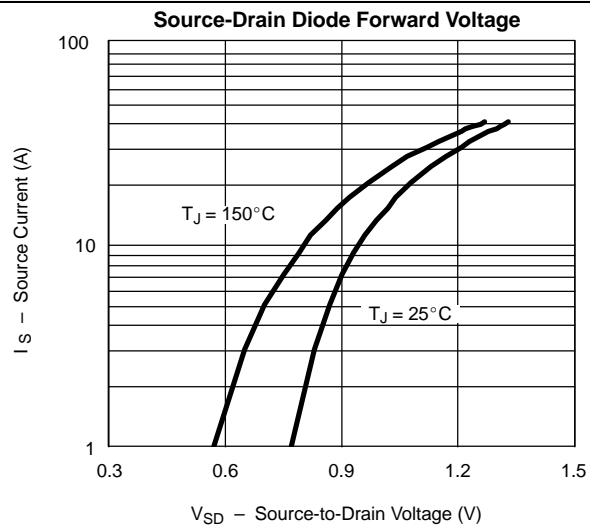
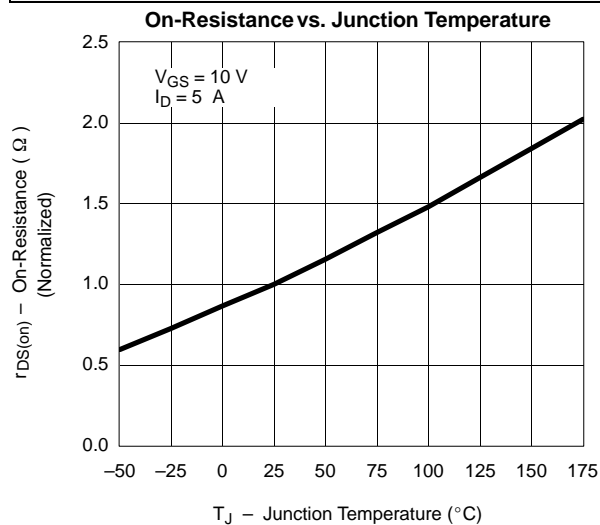
- Guaranteed by design, not subject to production testing.
- Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
- Independent of operating temperature.



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



THERMAL RATINGS

