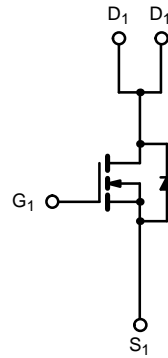
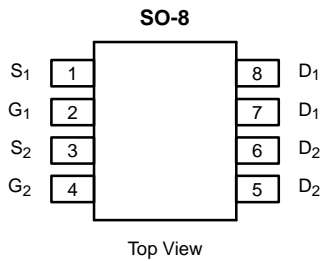




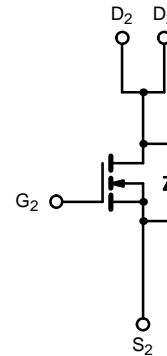
## Dual N-Channel 60-V (D-S), 175°C MOSFET

PRODUCT SUMMARY		
$V_{DS}$ (V)	$r_{DS(on)}$ ( $\Omega$ )	$I_D$ (A)
60	0.080 @ $V_{GS} = 10$ V	$\pm 3.7$
	0.100 @ $V_{GS} = 4.5$ V	$\pm 3.4$

**175°C Rated**  
Maximum Junction Temperature  
**TrenchFET®**  
Power MOSFETs



N-Channel MOSFET



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		$V_{DS}$	60	V
Gate-Source Voltage		$V_{GS}$	$\pm 20$	
Continuous Drain Current ( $T_J = 175^\circ\text{C}$ ) <sup>a</sup>	$T_A = 25^\circ\text{C}$	$I_D$	$\pm 3.7$	A
	$T_A = 70^\circ\text{C}$		$\pm 3.2$	
Pulsed Drain Current		$I_{DM}$	25	
Continuous Source Current (Diode Conduction) <sup>a</sup>		$I_S$	2	
Maximum Power Dissipation <sup>a</sup>	$T_A = 25^\circ\text{C}$	$P_D$	2.4	W
	$T_A = 70^\circ\text{C}$		1.7	
Operating Junction and Storage Temperature Range		$T_J, T_{stg}$	-55 to 175	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typ	Max	Unit
Junction-to-Ambient <sup>a</sup>	$t \leq 10$ sec	$R_{thJA}$		62.5	$^\circ\text{C/W}$
	Steady State		93		

Notes

a. Surface Mounted on 1" x 1" FR4 Board

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



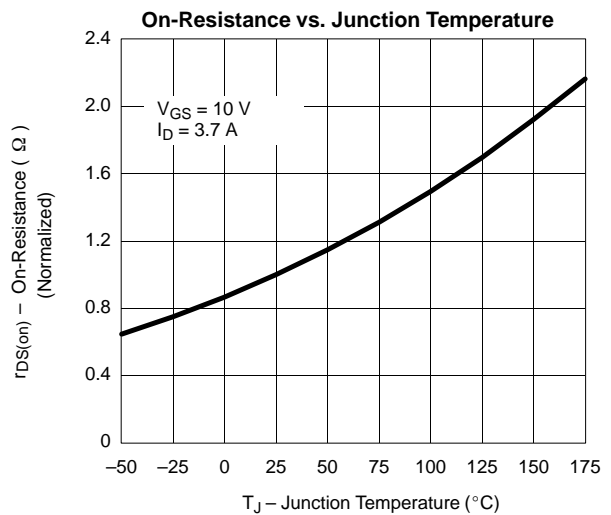
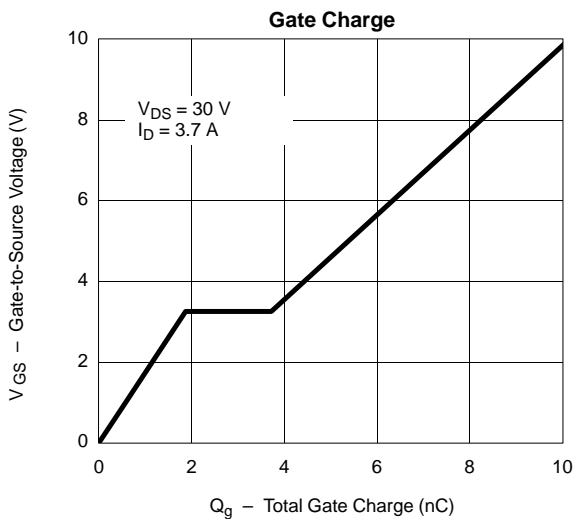
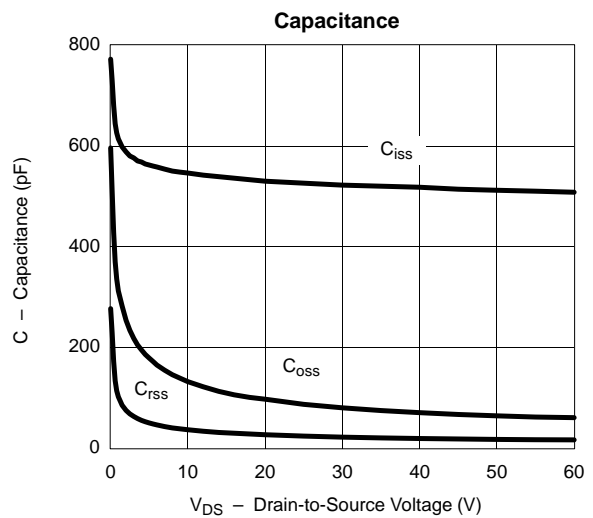
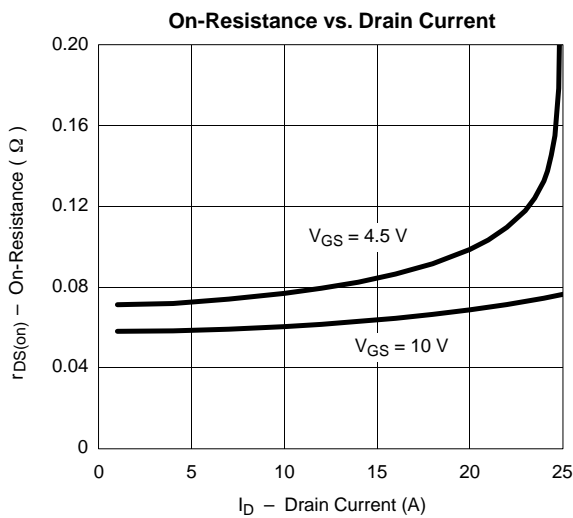
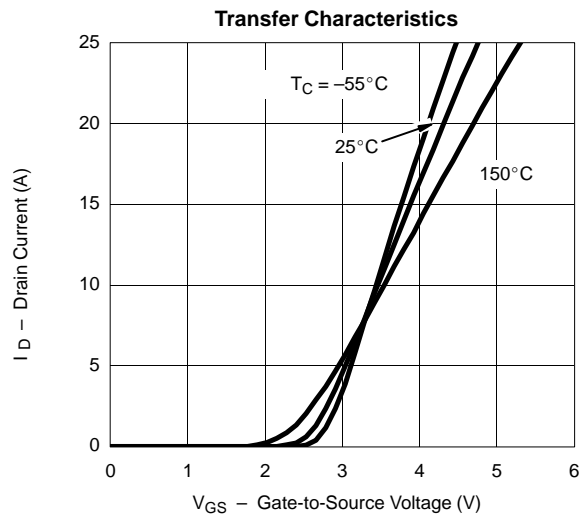
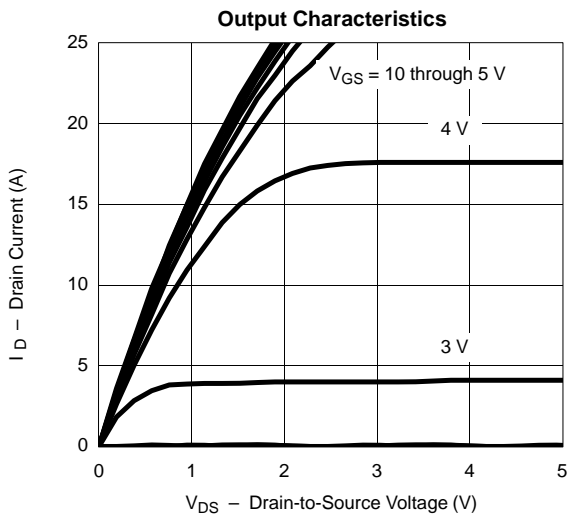
<b>SPECIFICATIONS (T<sub>J</sub> = 25 °C UNLESS OTHERWISE NOTED)</b>						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>Static</b>						
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250 μA	1.0			V
Gate-Body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 60 V, V <sub>GS</sub> = 0 V			1	μA
		V <sub>DS</sub> = 60 V, V <sub>GS</sub> = 0 V, T <sub>J</sub> = 55 °C			10	
On-State Drain Current <sup>a</sup>	I <sub>D(on)</sub>	V <sub>DS</sub> ≥ 5 V, V <sub>GS</sub> = 10 V	20			A
Drain-Source On-State Resistance <sup>a</sup>	r <sub>DS(on)</sub>	V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3.7 A		0.06	0.080	Ω
		V <sub>GS</sub> = 4.5 V, I <sub>D</sub> = 3.4 A		0.075	0.100	
Forward Transconductance <sup>a</sup>	g <sub>fs</sub>	V <sub>DS</sub> = 15 V, I <sub>D</sub> = 3.7 A		11		S
Diode Forward Voltage <sup>a</sup>	V <sub>SD</sub>	I <sub>S</sub> = 2.0 A, V <sub>GS</sub> = 0 V			1.2	V
<b>Dynamic<sup>b</sup></b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> = 30 V, V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3.7 A		11	20	nC
Gate-Source Charge	Q <sub>gs</sub>			2		
Gate-Drain Charge	Q <sub>gd</sub>			2		
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = 30 V, R <sub>L</sub> = 30 Ω I <sub>D</sub> ≅ 1 A, V <sub>GEN</sub> = 10 V, R <sub>G</sub> = 6 Ω		9	20	ns
Rise Time	t <sub>r</sub>			10	20	
Turn-Off Delay Time	t <sub>d(off)</sub>			21	40	
Fall Time	t <sub>f</sub>			8	20	
Source-Drain Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 2.0 A, di/dt = 100 A/μs		45	80	

Notes

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



**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**





**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**

