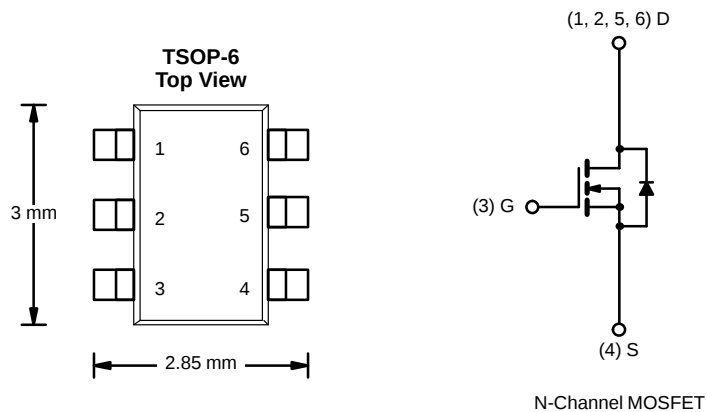




N-Channel 2.5-V (G-S) MOSFET

2.5-V Rated

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
20	0.07 @ $V_{GS} = 4.5$ V	± 4.0
	0.095 @ $V_{GS} = 2.5$ V	± 3.4



ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V _{DS}	± 20	V
Gate-Source Voltage		V _{GS}	± 8	
Continuous Drain Current (T _J = 150 °C) ^a	T _A = 25 °C	I _D	± 4.0	A
	T _A = 70 °C		± 3.1	
Pulsed Drain Current		I _{DM}	± 20	
Continuous Source Current (Diode Conduction) ^a		I _S	± 1.6	
Maximum Power Dissipation ^a	T _A = 25 °C	P _D	2.0	W
	T _A = 70 °C		1.28	
Operating Junction and Storage Temperature Range		T _J , T _{stg}	−55 to 150	°C

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient ^a	R_{thJA}	62.5	$^\circ\text{C/W}$

Notes

a. Surface Mounted on FR4 Board, $t \leq 5$ sec.

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



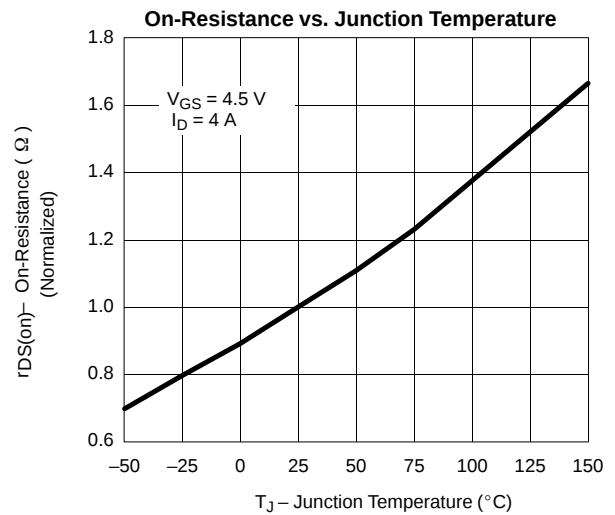
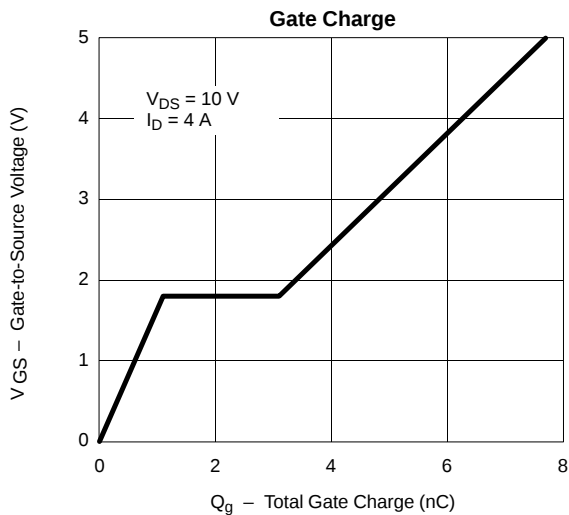
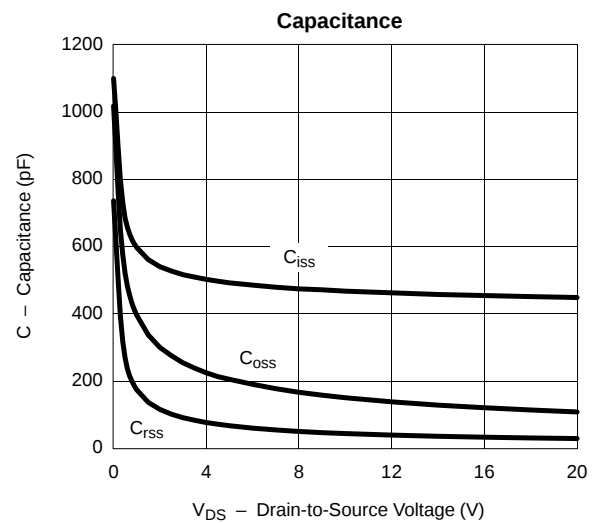
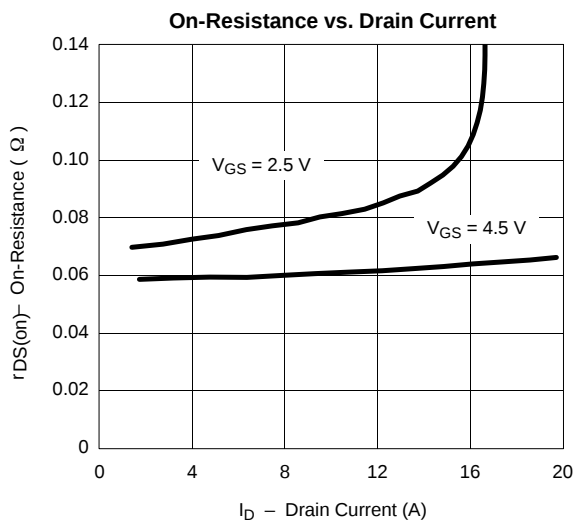
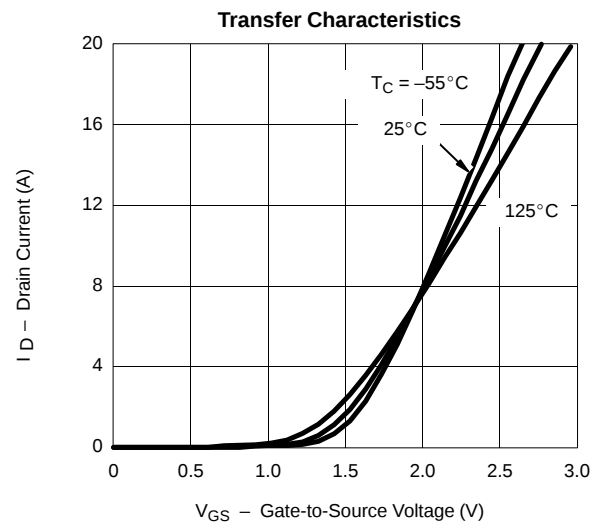
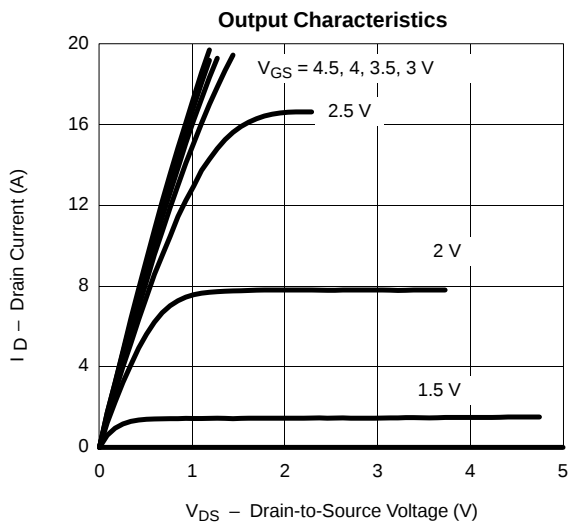
SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	0.6			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20 V, V _{GS} = 0 V			1	μA
		V _{DS} = 20 V, V _{GS} = 0 V, T _J = 70 °C			5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = 5 V, V _{GS} = 4.5 V	10			A
On-State Drain Current ^a		V _{DS} = 5 V, V _{GS} = 2.5 V	4			
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 4.5 V, I _D = 4.0 A		0.058	0.07	Ω
		V _{GS} = 2.5 V, I _D = 3.4 A		0.072	0.095	
Forward Transconductance ^a	g _{fs}	V _{DS} = 10 V, I _D = 4.0 A		11.3		S
Diode Forward Voltage ^a	V _{SD}	I _S = 1.6 A, V _{GS} = 0 V		0.75	1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = 10 V, V _{GS} = 4.5 V, I _D = 4.0 A		7.0	10	nC
Gate-Source Charge	Q _{gs}			1.1		
Gate-Drain Charge	Q _{gd}			2.0		
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		8	20	ns
Rise Time	t _r			24	40	
Turn-Off Delay Time	t _{d(off)}			35	60	
Fall Time	t _f			10	20	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 1.6 A, di/dt = 100 A/μs		40	70	

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)
