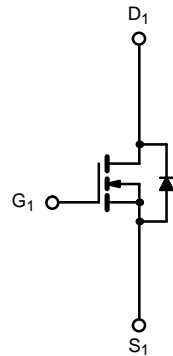
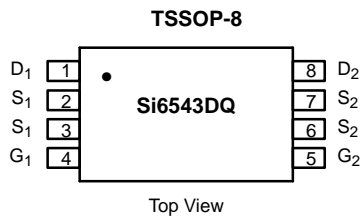
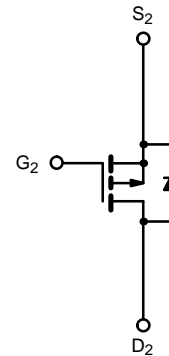


Dual N- and P-Channel 30-V (D-S) MOSFET

PRODUCT SUMMARY			
	V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
N-Channel	30	0.065 @ V _{GS} = 10 V	±3.9
		0.095 @ V _{GS} = 4.5 V	±3.1
P-Channel	-30	0.085 @ V _{GS} = -10 V	±2.5
		0.19 @ V _{GS} = -4.5 V	±1.8



N-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _A = 25°C UNLESS OTHERWISE NOTED)				
Parameter	Symbol	N-Channel	P-Channel	Unit
Drain-Source Voltage	V _{DS}	30	-30	V
Gate-Source Voltage	V _{GS}	±20	±20	
Continuous Drain Current (T _J = 150°C) ^a	I _D	T _A = 25°C	±3.9	A
		T _A = 70°C	±3.1	
Pulsed Drain Current	I _{DM}	±20	±20	
Continuous Source Current (Diode Conduction) ^a	I _S	1.25	-1.25	
Maximum Power Dissipation ^a	P _D	T _A = 25°C	1.0	
		T _A = 70°C	0.64	
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150		°C

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	N- or P-Channel	Unit
Maximum Junction-to-Ambient ^a	R _{thJA}	125	°C/W

Notes

a. Surface Mounted on FR4 Board, t ≤ 10 sec.

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

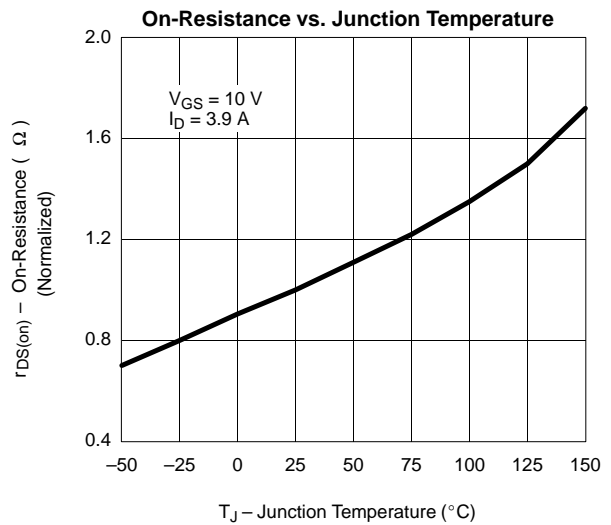
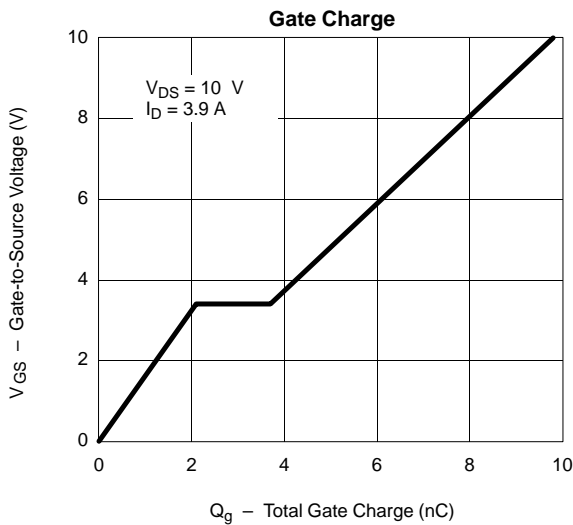
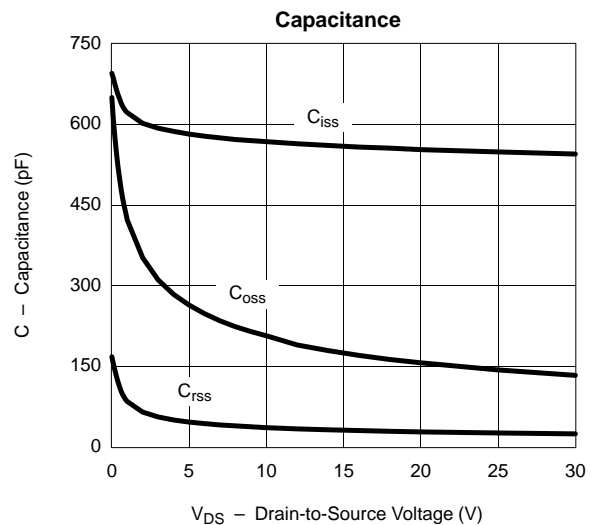
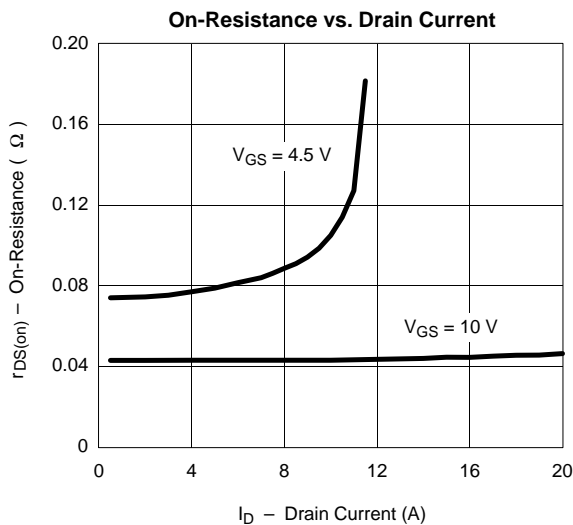
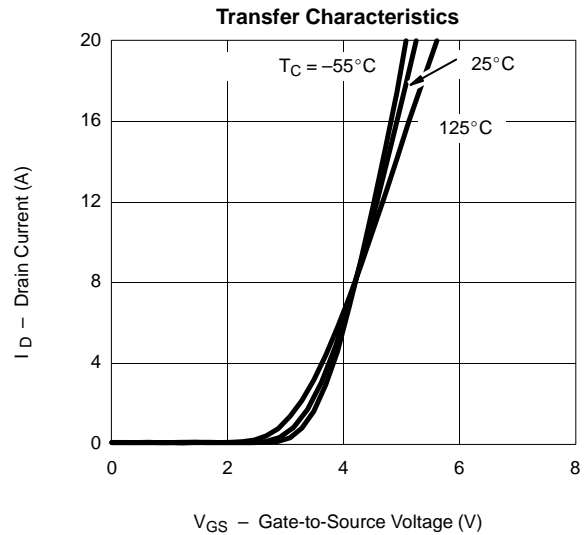
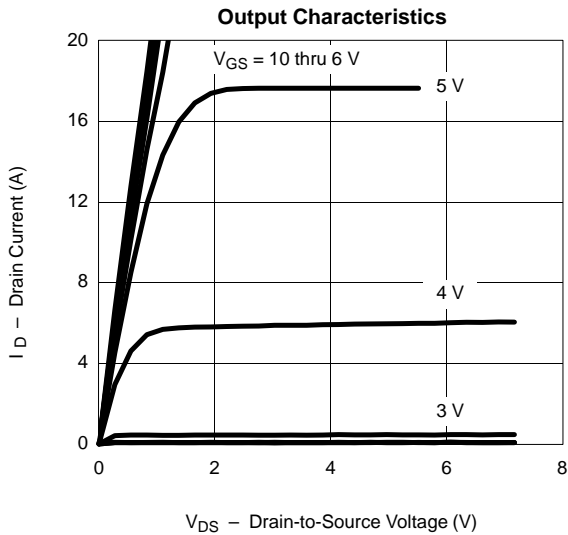
SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)								
Parameter	Symbol	Test Condition		Min	Typ	Max	Unit	
Static								
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	N-Ch	1.0			V	
		V _{DS} = V _{GS} , I _D = -250 μA	P-Ch	-1.0				
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V	N-Ch			±100	nA	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 30 V, V _{GS} = 0 V	N-Ch			1	μA	
		V _{DS} = -30 V, V _{GS} = 0 V	P-Ch			-1		
		V _{DS} = 30 V, V _{GS} = 0 V, T _J = 55 °C	N-Ch			25		
		V _{DS} = -30 V, V _{GS} = 0 V, T _J = 55 °C	P-Ch			-25		
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≥ 5 V, V _{GS} = 10 V	N-Ch	15			A	
		V _{DS} ≥ -5 V, V _{GS} = -10 V	P-Ch	-15				
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 10 V, I _D = 3.9 A	N-Ch		0.043	0.065	Ω	
		V _{GS} = -10 V, I _D = 2.5 A	P-Ch		0.066	0.085		
		V _{GS} = 4.5 V, I _D = 3.1 A	N-Ch		0.075	0.095		
		V _{GS} = -4.5 V, I _D = 1.8 A	P-Ch		0.125	0.19		
Forward Transconductance ^a	g _{fs}	V _{DS} = 15 V, I _D = 3.9 A	N-Ch		7		S	
		V _{DS} = -15 V, I _D = -2.5 A	P-Ch		5			
Diode Forward Voltage ^a	V _{SD}	I _S = 1.25 A, V _{GS} = 0 V	N-Ch		0.8	1.2	V	
		I _S = -1.25 A, V _{GS} = 0 V	P-Ch		0.8	-1.2		
Dynamic^b								
Total Gate Charge	Q _g	N-Channel V _{DS} = 10 V, V _{GS} = 10 V, I _D = 3.9 A P-Channel V _{DS} = -10 V, V _{GS} = -10 V, I _D = -2.5 A	N-Ch		9.8	15	nC	
Gate-Source Charge	Q _{gs}		N-Ch		2.1			
			P-Ch		1.9			
Gate-Drain Charge	Q _{gd}		N-Ch		1.6			
			P-Ch		1.3			
Turn-On Delay Time	t _{d(on)}		N-Ch		9	15		ns
Rise Time	t _r	N-Ch		6	18			
		P-Ch		9	18			
Turn-Off Delay Time	t _{d(off)}	N-Ch		18	27			
		P-Ch		14	27			
Fall Time	t _f	N-Ch		6	15			
		P-Ch		8	15			
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 1.25 A, di/dt = 100 A/μs	N-Ch		48	80		
		I _F = -1.25 A, di/dt = 100 A/μs	P-Ch		46	80		

Notes

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

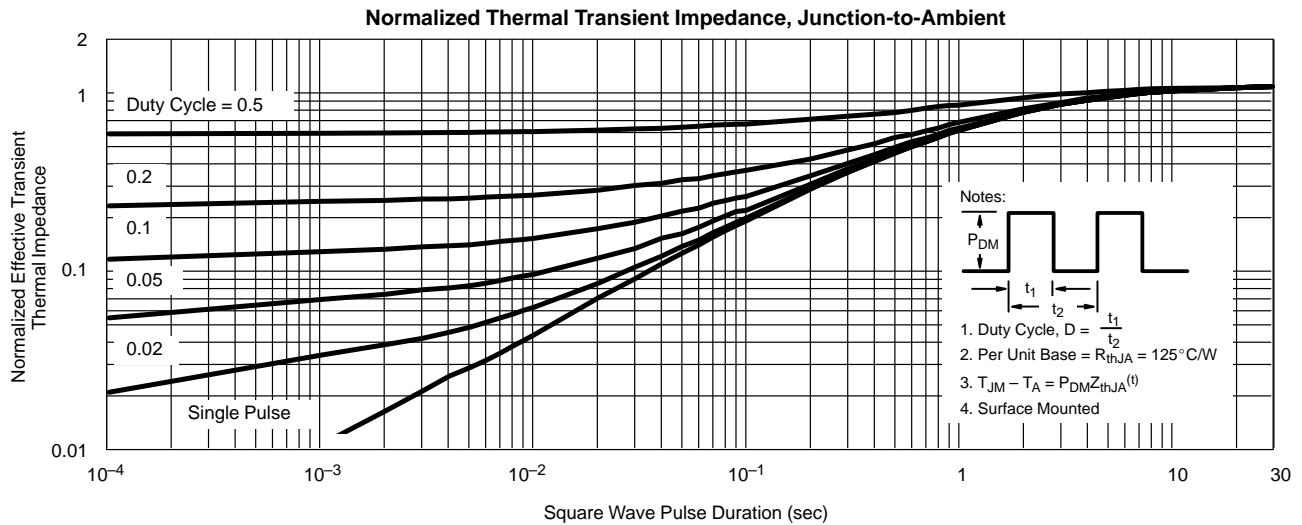
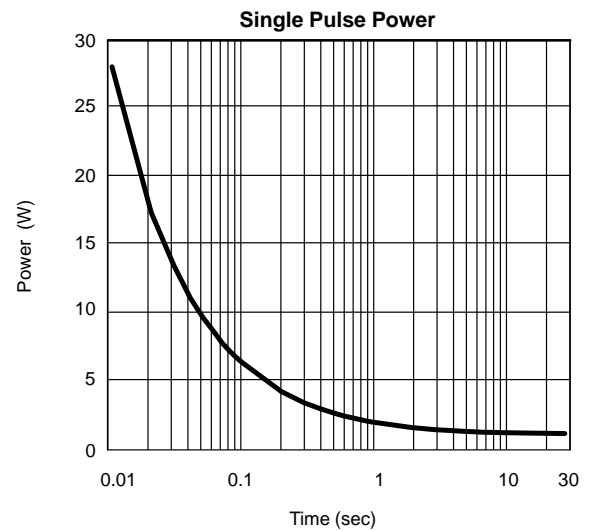
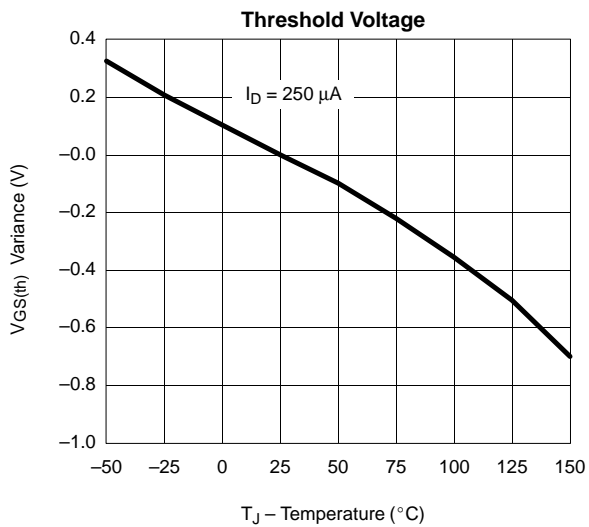
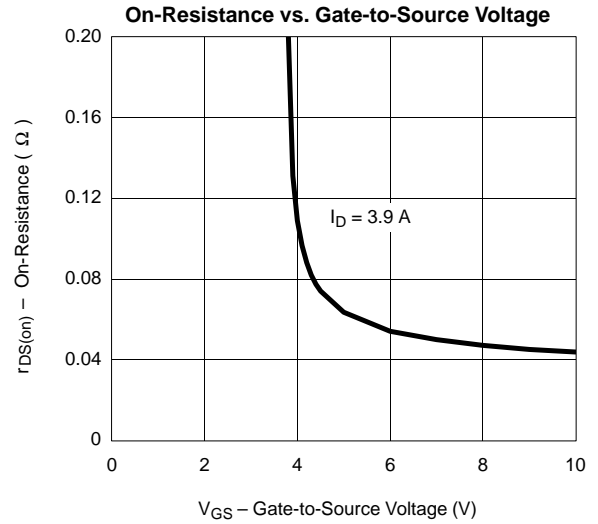
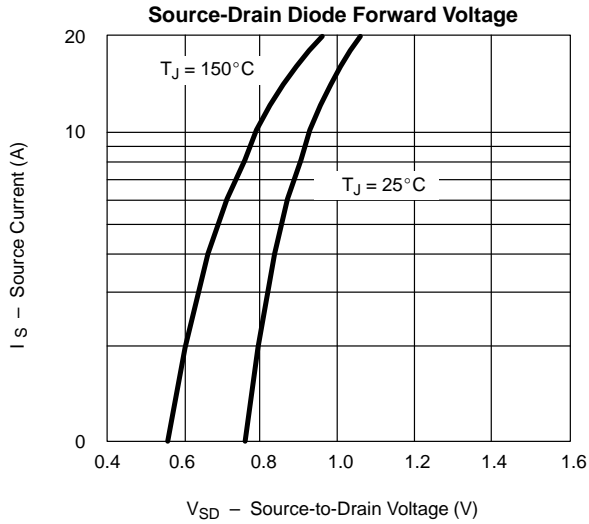
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

N-CHANNEL



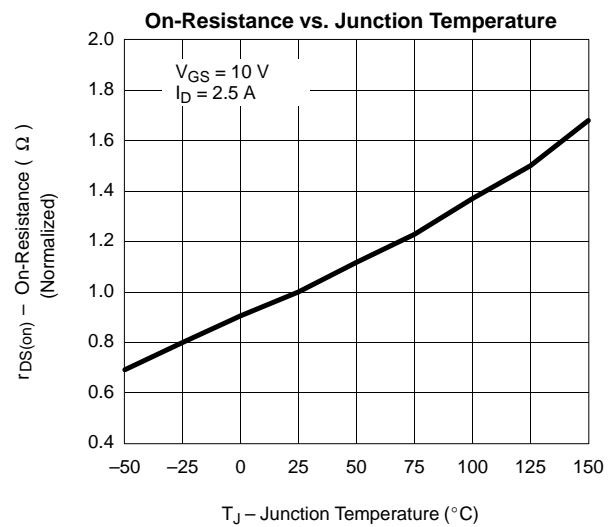
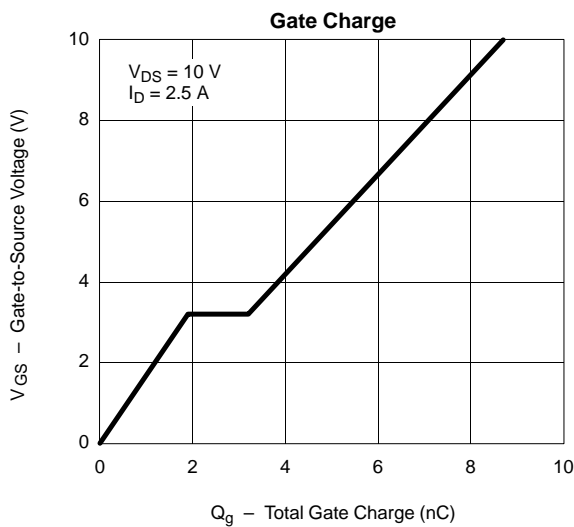
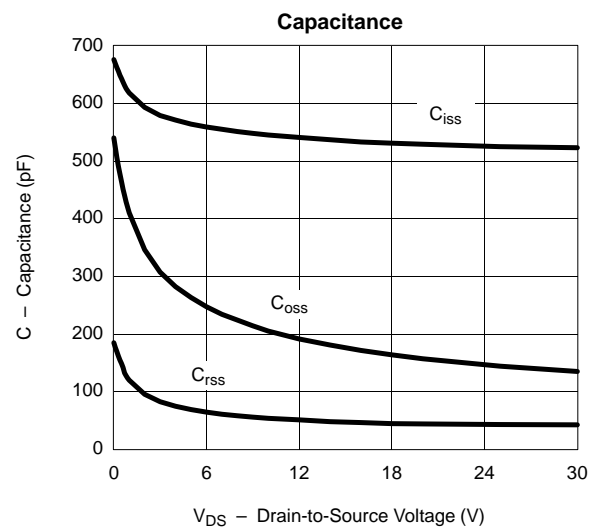
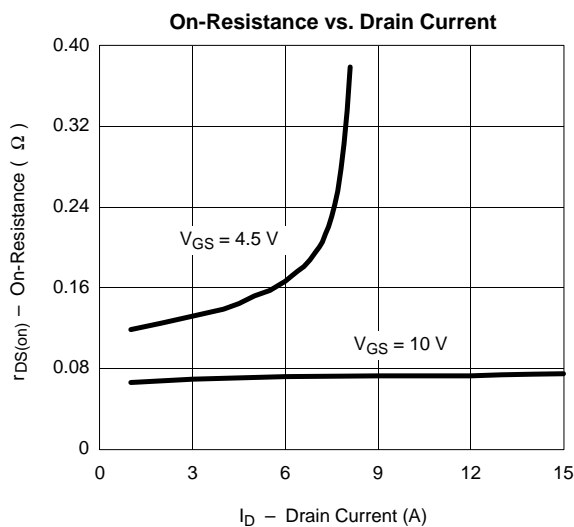
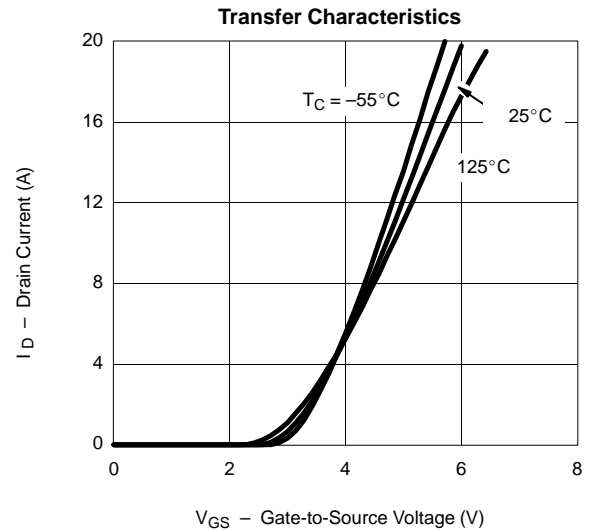
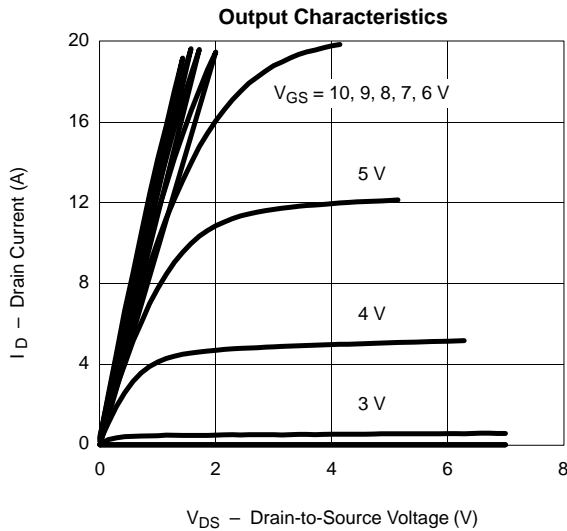


TYPICAL CHARACTERISTICS (25°C UNLESS NOTED) N-CHANNEL



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

P-CHANNEL



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED) P-CHANNEL

