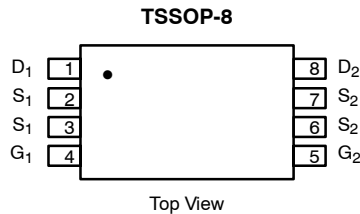


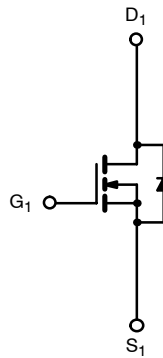


Dual N-Channel 2.5-V (G-S) MOSFET

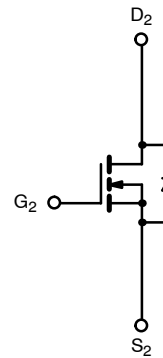
PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
20	0.030 @ $V_{GS} = 4.5$ V	4.5
	0.033 @ $V_{GS} = 3.0$ V	4.2
	0.035 @ $V_{GS} = 2.5$ V	3.9
	0.043 @ $V_{GS} = 1.8$ V	3.6



Ordering Information: Si6926ADQ-T1—E3 (Lead Free)



N-Channel MOSFET



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)					
Parameter		Symbol	10 secs	Steady State	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	4.5	4.1	A
	T _A = 70 °C		3.6	3.3	
Pulsed Drain Current (10 μs Pulse Width)		I _{DM}	20		
Continuous Source Current (Diode Conduction) ^a		I _S	0.83	0.69	W
Maximum Power Dissipation ^a	T _A = 25 °C	P _D	1.0	0.83	
	T _A = 70 °C		0.64	0.53	
Operating Junction and Storage Temperature Range		T _J , T _{stg}	–55 to 150		°C

THERMAL RESISTANCE RATINGS

Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	$t \leq 10$ sec	R_{thJA}	90	125	$^\circ\text{C/W}$
	Steady State		126	150	
Maximum Junction-to-Foot (Drain)	Steady State	R_{thJF}	65	80	

Notes

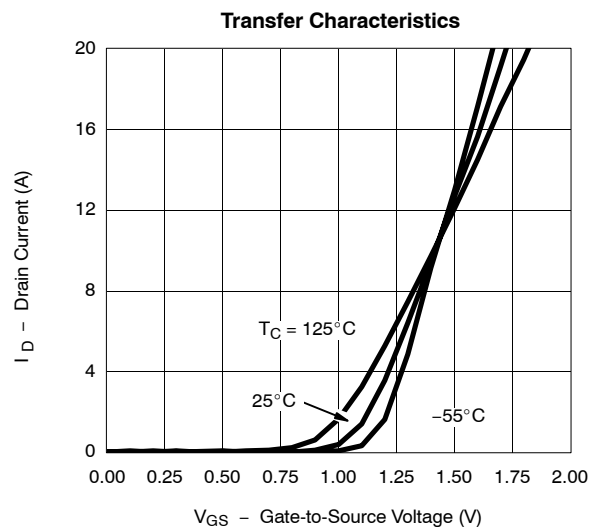
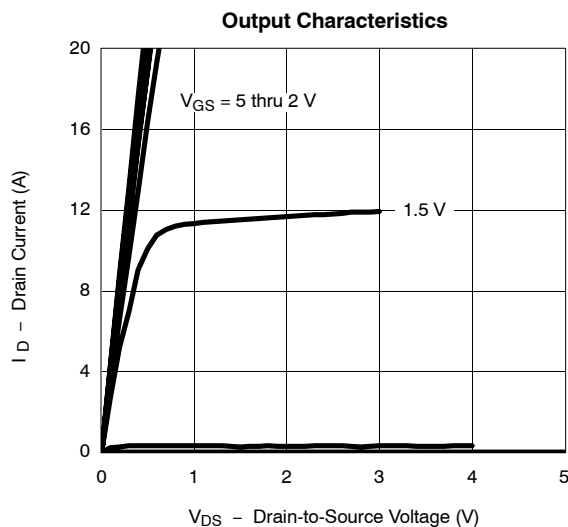
a. Surface Mounted on FR4 Board, $t \leq 10$ sec.For SPICE model information via the Worldwide Web: <http://www.vishay.com/www/product/spice.htm>

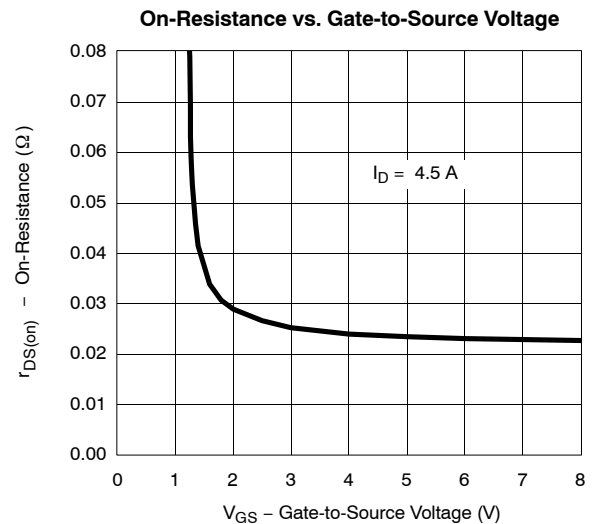
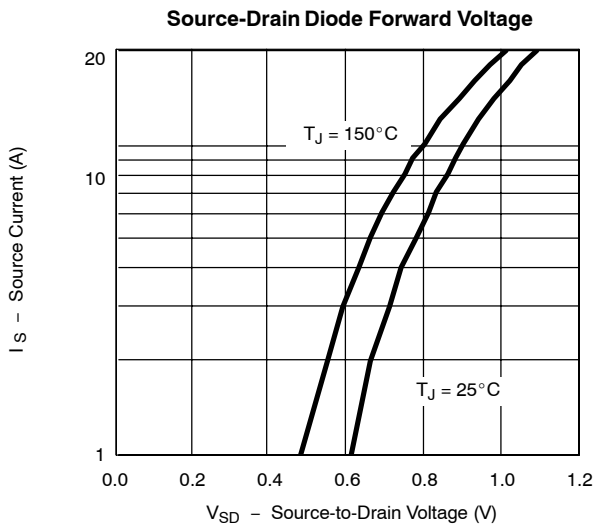
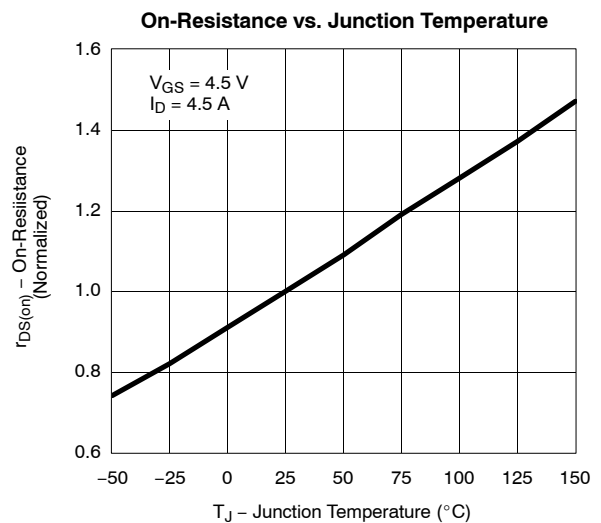
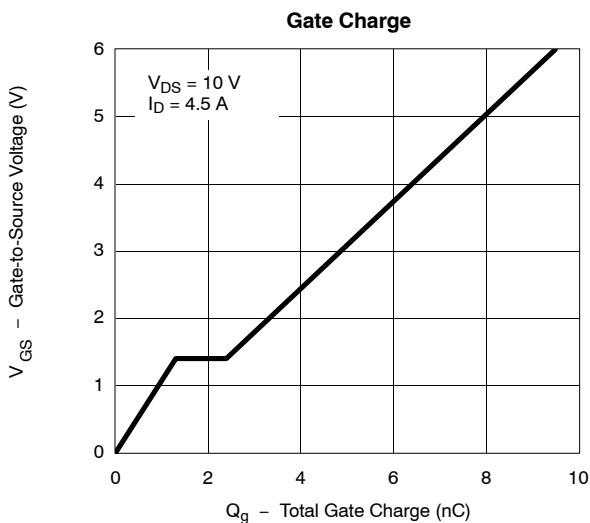
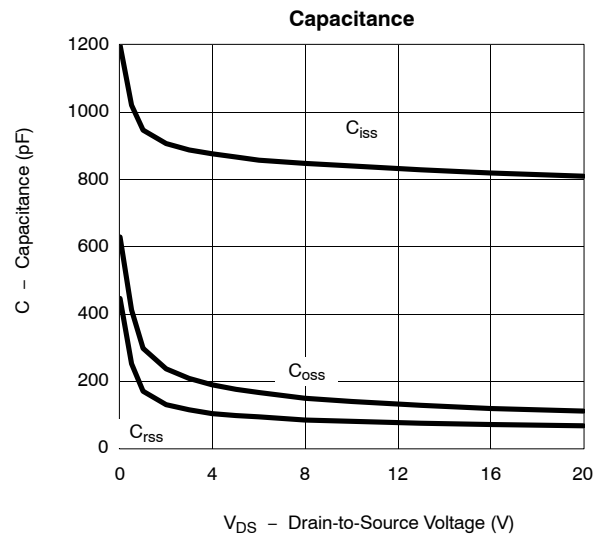
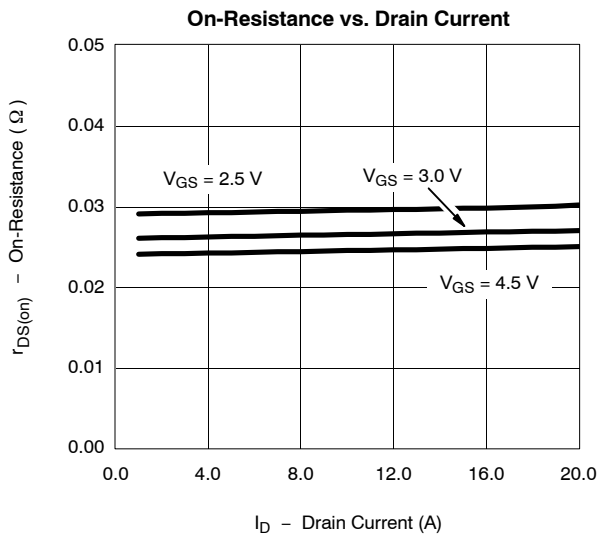
SPECIFICATIONS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Parameter	Symbol	Test Condition	Min	Typ ^a	Max	Unit
Static						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\ \mu\text{A}$	0.40		1.0	V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\ \text{V}, V_{GS} = \pm 8\ \text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20\ \text{V}, V_{GS} = 0\ \text{V}$			1	μA
		$V_{DS} = 20\ \text{V}, V_{GS} = 0\ \text{V}, T_J = 55^\circ\text{C}$			5	
On-State Drain Current ^b	$I_{D(on)}$	$V_{DS} \geq 5\ \text{V}, V_{GS} = 5\ \text{V}$	10			A
Drain-Source On-State Resistance ^b	$r_{DS(on)}$	$V_{GS} = 4.5\ \text{V}, I_D = 4.5\ \text{A}$		0.024	0.030	Ω
		$V_{GS} = 3.0\ \text{V}, I_D = 4.2\ \text{A}$		0.026	0.033	
		$V_{GS} = 2.5\ \text{V}, I_D = 3.9\ \text{A}$		0.029	0.035	
		$V_{GS} = 1.8\ \text{V}, I_D = 3.6\ \text{A}$		0.035	0.043	
Forward Transconductance ^b	g_{fs}	$V_{DS} = 10\ \text{V}, I_D = 4.5\ \text{A}$		26		S
Diode Forward Voltage ^b	V_{SD}	$I_S = 0.83\ \text{A}, V_{GS} = 0\ \text{V}$		0.6	1.1	V
Dynamic^a						
Total Gate Charge	Q_g	$V_{DS} = 10\ \text{V}, V_{GS} = 4.5\ \text{V}, I_D = 4.5\ \text{A}$		7.5	10.5	nC
Gate-Source Charge	Q_{gs}			1.2		
Gate-Drain Charge	Q_{gd}			1.2		
Gate Resistance	R_g			1.9		Ω
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 10\ \text{V}, R_L = 10\ \Omega$ $I_D \cong 1\ \text{A}, V_{GEN} = 10\ \text{V}, R_g = 6\ \Omega$		6	12	ns
Rise Time	t_r			16	25	
Turn-Off Delay Time	$t_{d(off)}$			46	70	
Fall Time	t_f			9	15	
Source-Drain Reverse Recovery Time	t_{rr}	$I_F = 0.83\ \text{A}, di/dt = 100\ \text{A}/\mu\text{s}$		20	40	

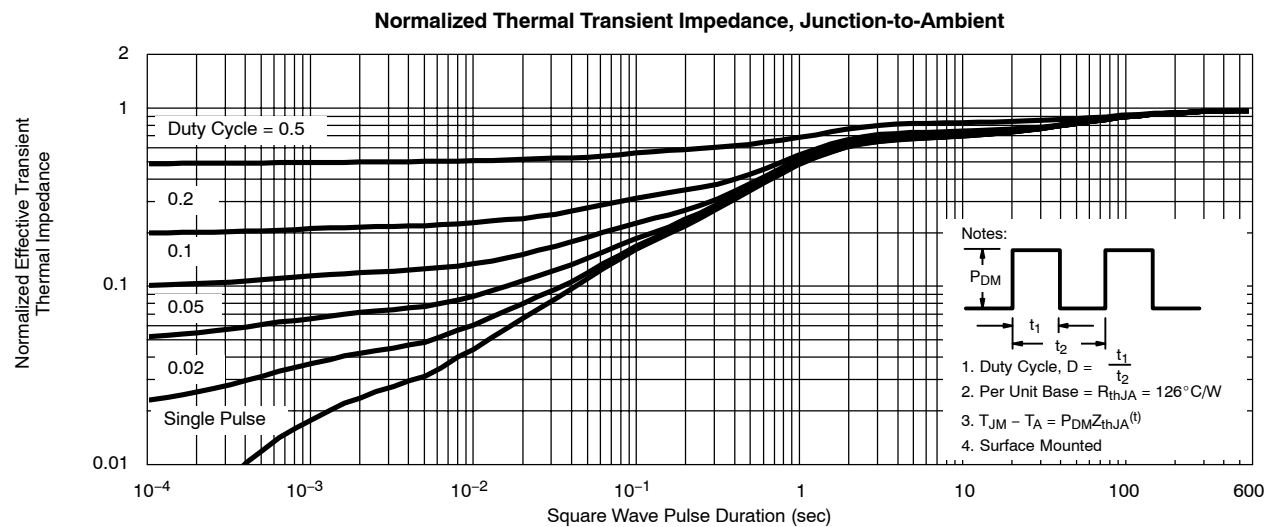
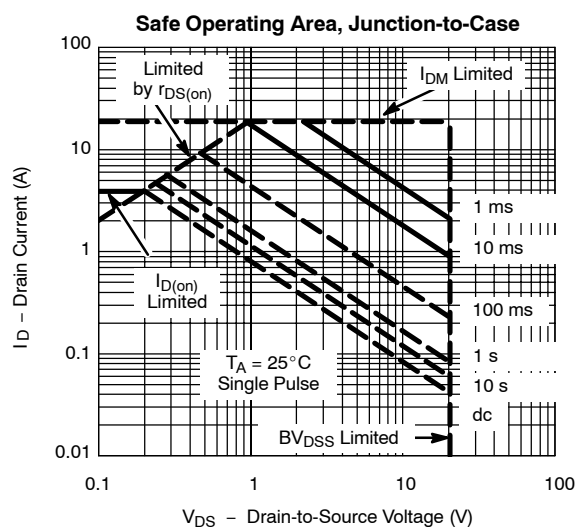
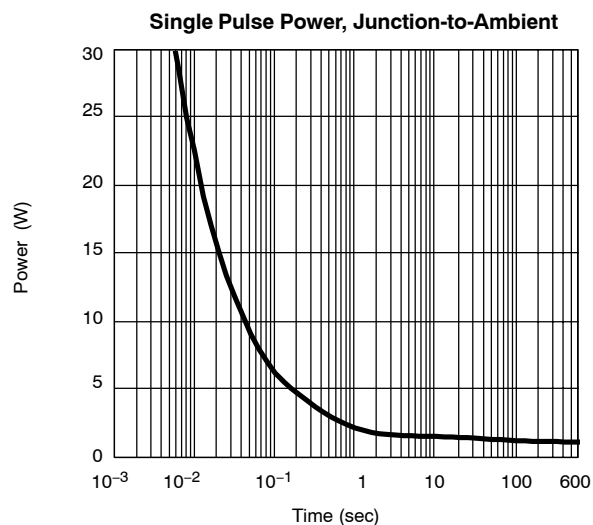
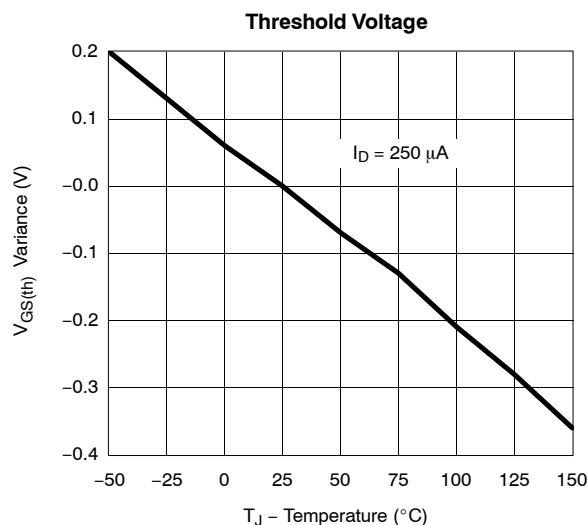
Notes

- a. Guaranteed by design, not subject to production testing.
b. Pulse test; pulse width $\leq 300\ \mu\text{s}$, duty cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

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

TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)

