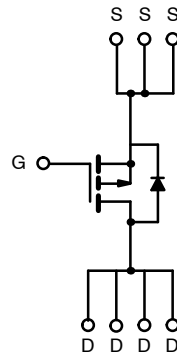
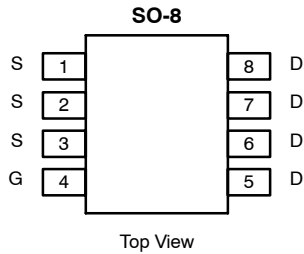




P-Channel 1.8-V (G-S) MOSFET

TrenchFET®
Power MOSFETs
1.8-V Rated

PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
-8	0.009 @ V _{GS} = -4.5 V	-14
	0.011 @ V _{GS} = -2.5 V	-12
	0.016 @ V _{GS} = -1.8 V	-10



Ordering Information: Si4465DY
Si4465DY-T1 (with Tape and Reel)

ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V _{DS}	-8	V
Gate-Source Voltage		V _{GS}	±8	
Continuous Drain Current (T _J = 150 °C) ^{a, b}	T _A = 25 °C	I _D	-14	A
	T _A = 70 °C		-11	
Pulsed Drain Current		I _{DM}	-40	
Continuous Source Current (Diode Conduction) ^{a, b}		I _S	-2.1	
Maximum Power Dissipation ^{a, b}	T _A = 25 °C	P _D	2.5	W
	T _A = 70 °C		1.6	
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 ≤ 10 sec	R _{thJA}		50	°C/W
	Steady State		80		

Notes

- a. Surface Mounted on FR4 Board.
- b. t ≤ 10 sec.

SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)

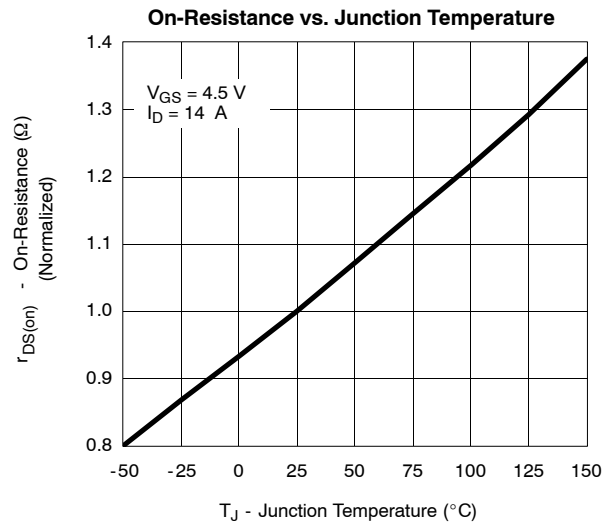
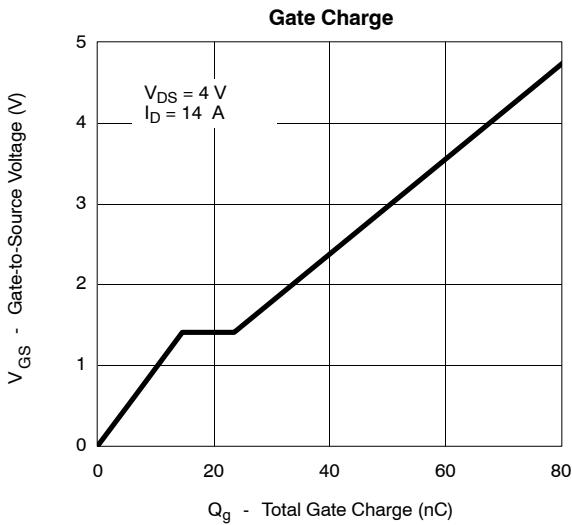
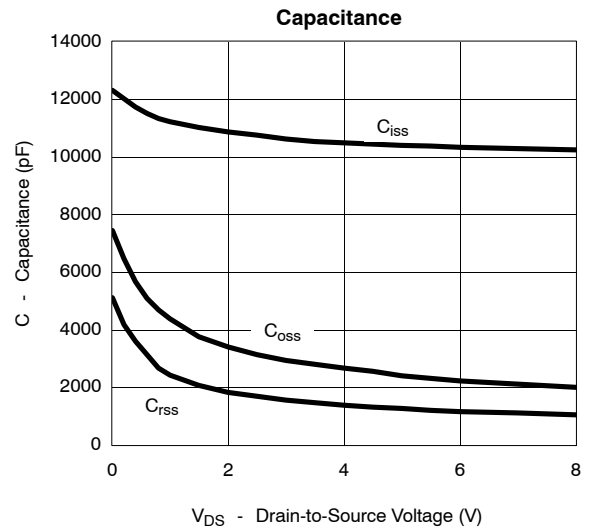
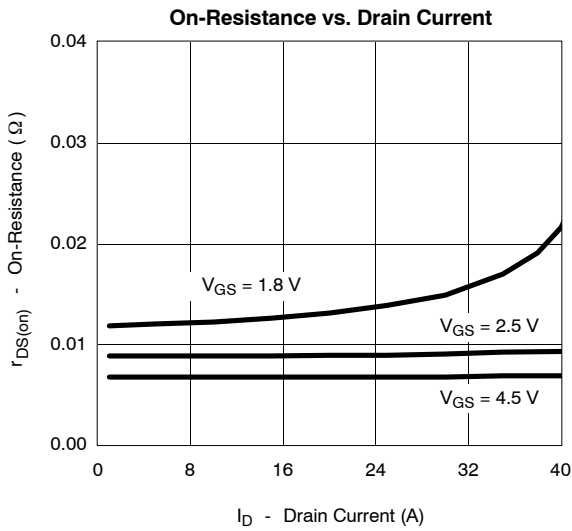
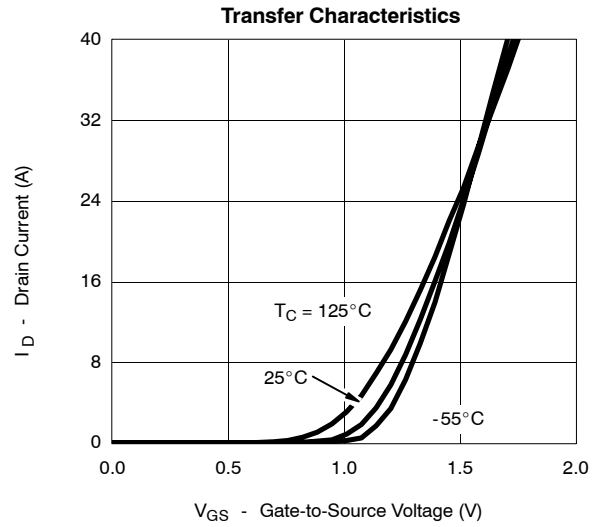
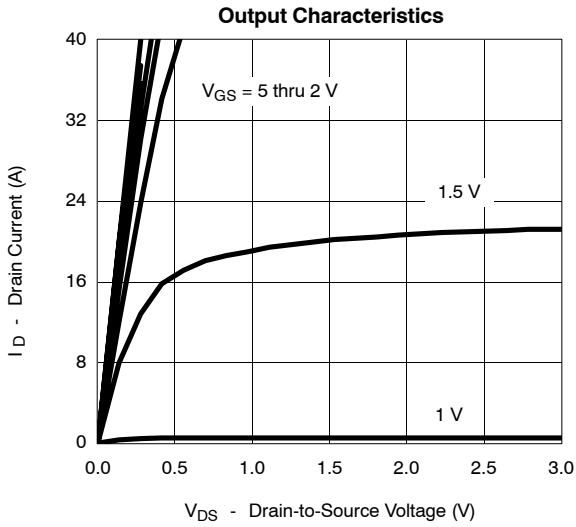
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.45			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -8 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -8 V, V _{GS} = 0 V, T _J = 55 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≥ -5 V, V _{GS} = -4.5 V	-20			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -14 A		0.007	0.009	Ω
		V _{GS} = -2.5 V, I _D = -12 A		0.009	0.011	
		V _{GS} = -1.8 V, I _D = -10 A		0.012	0.016	
Forward Transconductance ^a	g _{fs}	V _{DS} = -10 V, I _D = -14 A		60		S
Diode Forward Voltage ^a	V _{SD}	I _S = -2.1 A, V _{GS} = 0 V		0.7	-1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -4 V, V _{GS} = -4.5 V, I _D = -14 A		80	120	nC
Gate-Source Charge	Q _{gs}			15		
Gate-Drain Charge	Q _{gd}			9		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -4 V, R _L = 4 Ω I _D ≅ -1 A, V _{GEN} = -4.5 V, R _G = 6 Ω		45	90	ns
Rise Time	t _r			55	110	
Turn-Off Delay Time	t _{d(off)}			380	760	
Fall Time	t _f			190	380	
Source-Drain Reverse Recovery Time	t _{rr}		I _F = -2.1 A, di/dt = 100 A/μs		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)

