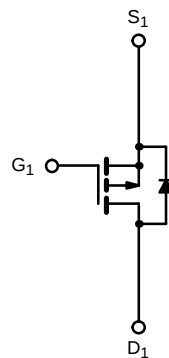
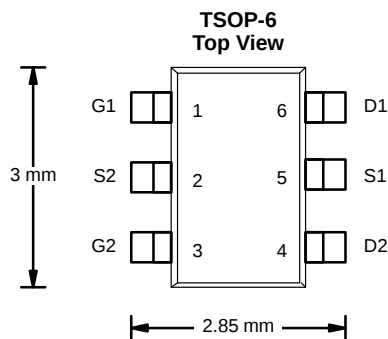




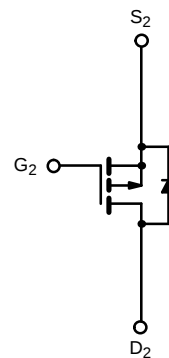
Dual P-Channel 20-V (D-S) MOSFET

PRODUCT SUMMARY

V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-20	0.200 @ $V_{GS} = -4.5$ V	± 1.8
	0.235 @ $V_{GS} = -3.6$ V	± 1.6
	0.340 @ $V_{GS} = -2.5$ V	± 1.3

TrenchFET[®]
Power MOSFETs
2.5-V Rated

P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	± 12	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^{a, b}	$T_A = 25^\circ\text{C}$	I_D	± 1.8	A
	$T_A = 70^\circ\text{C}$		± 1.2	
Pulsed Drain Current		I_{DM}	± 7	
Continuous Diode Current (Diode Conduction) ^{a, b}		I_S	-1.05	
Maximum Power Dissipation ^{a, b}	$T_A = 25^\circ\text{C}$	P_D	1.15	W
	$T_A = 70^\circ\text{C}$		0.73	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	$t \leq 5$ sec	R_{thJA}	93	110	$^\circ\text{C/W}$
	Steady State		130	150	
Maximum Junction-to-Lead	Steady State	R_{thJL}	75	90	

Notes

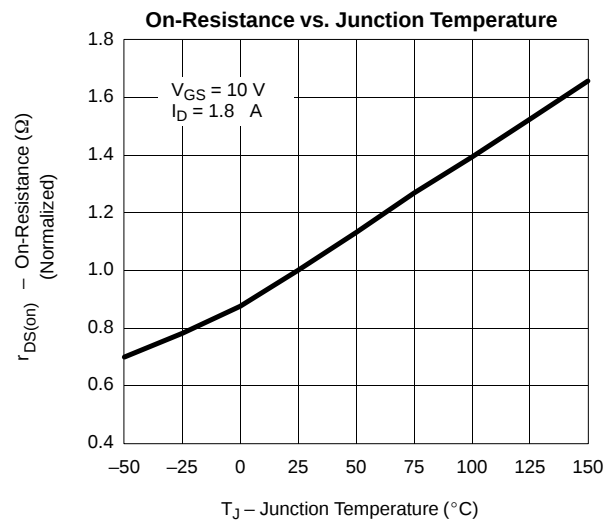
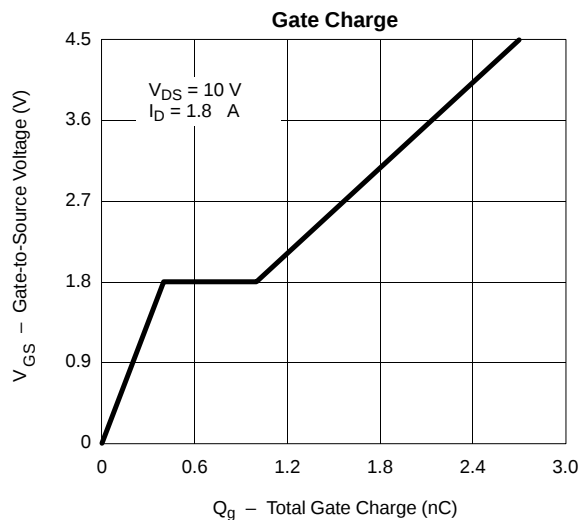
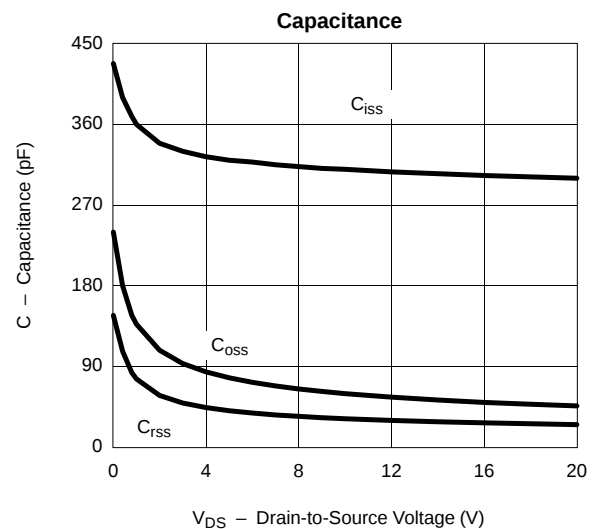
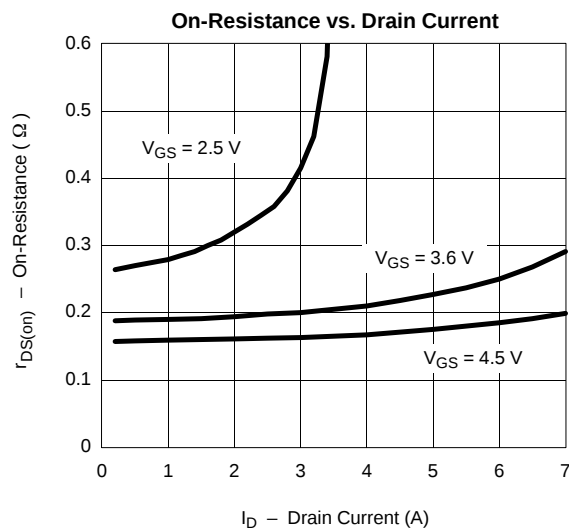
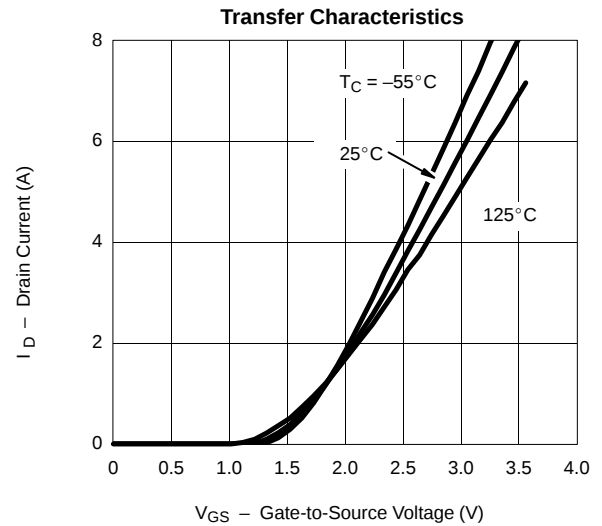
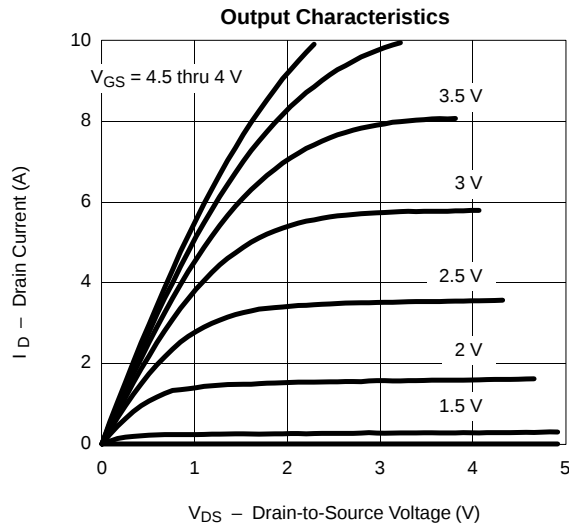
- a. Surface Mounted on FR4 Board.
b. $t \leq 5$ sec

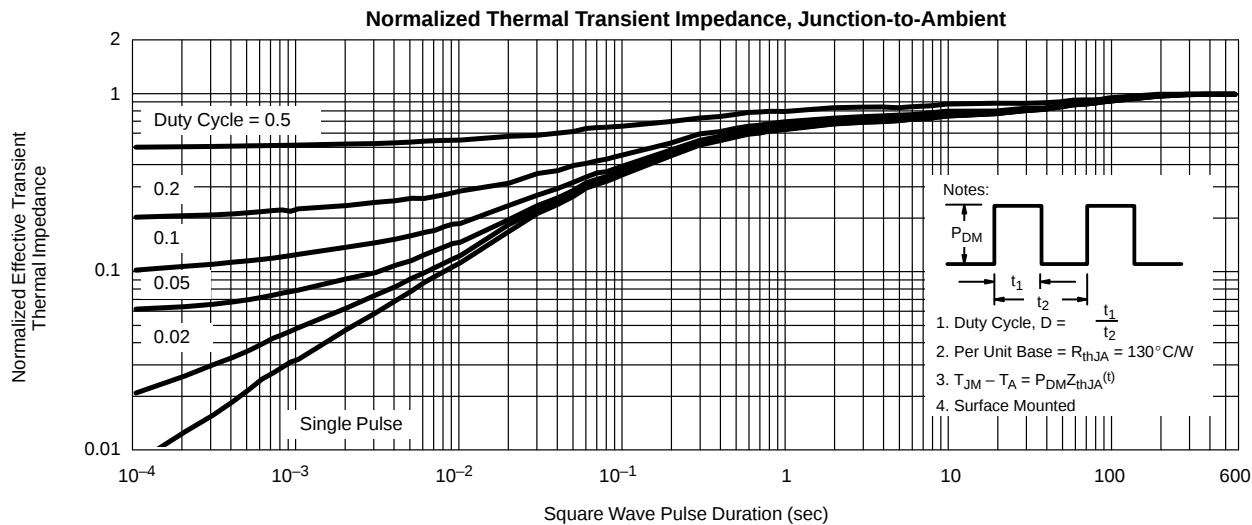
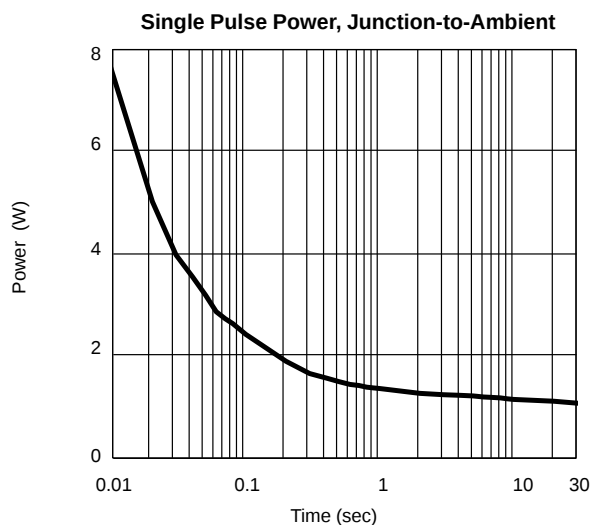
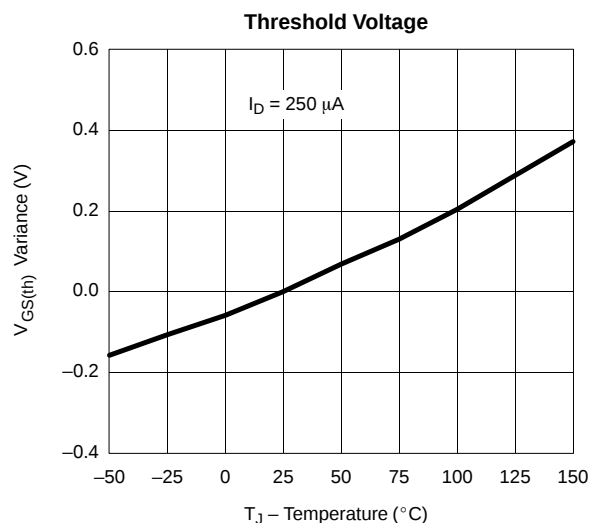
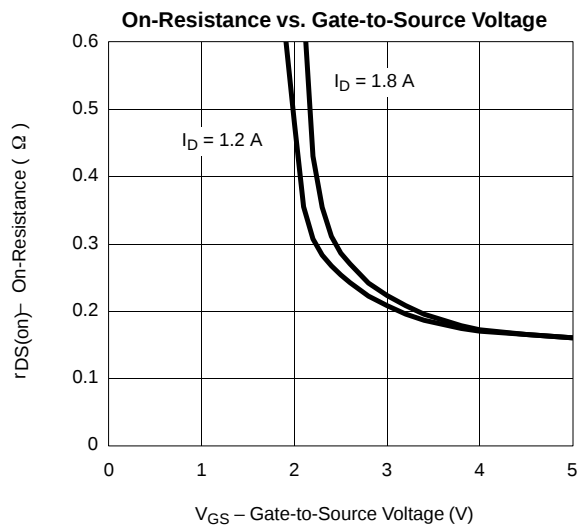
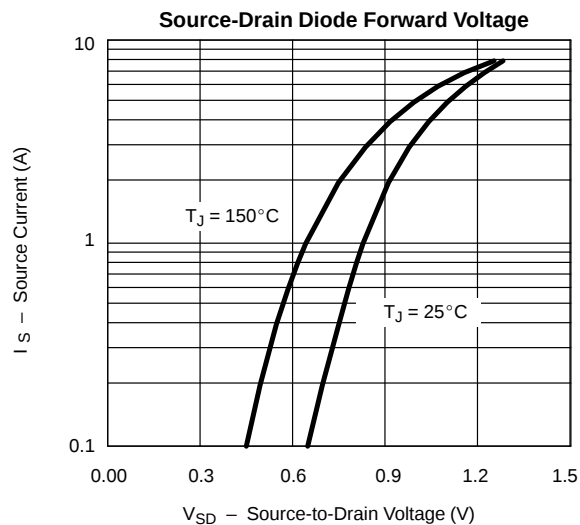
**SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.5			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±12 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -16 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -16 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	-5			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -1.8 A		0.160	0.200	Ω
		V _{GS} = -3.6 V, I _D = -1.6 A		0.190	0.235	
		V _{GS} = -2.5 V, I _D = -1 A		0.280	0.340	
Forward Transconductance ^a	g _{fs}	V _{DS} = -10 V, I _D = -1.8 A		3.6		S
Diode Forward Voltage ^a	V _{SD}	I _S = -1.05 A, V _{GS} = 0 V		-0.83	-1.1	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -10 V, V _{GS} = -4.5 V, I _D = -1.8 A		2.7	4.0	nC
Gate-Source Charge	Q _{gs}			0.4		
Gate-Drain Charge	Q _{gd}			0.6		
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		11	17	ns
Rise Time	t _r			34	50	
Turn-Off Delay Time	t _{d(off)}			19	30	
Fall Time	t _f			24	36	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -1.05 A, di/dt = 100 A/μs		20	40	ns

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)




TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

