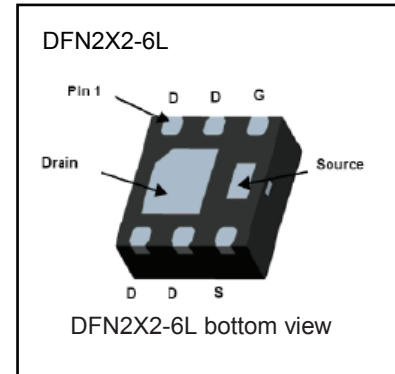
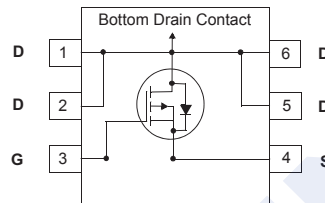


P-Channel MOSFET

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■ Features

- $V_{DS} (V) = -12V, I_D = -15A$
- $R_{DS(ON)} < 15m\Omega @ V_{GS} = -4.5V$
- $R_{DS(ON)} < 22m\Omega @ V_{GS} = -2.5V$
- $R_{DS(ON)} < 45m\Omega @ V_{GS} = -1.8V$
- $R_{DS(ON)} < 80m\Omega @ V_{GS} = -1.5V$

■ Absolute Maximum Ratings ($T_c = 25^\circ C$ Unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	± 12	
Continuous Drain Current	I_D	-15	A
Pulsed Drain Current (Note 1)	I_{DM}	-65	
Power Dissipation	P_D	18	W
Thermal Resistance, Junction- to-Ambient (Note 2)	R^{θ}_{JA}	50	$^\circ C/W$
Thermal Resistance, Junction- to-Case (Note 2)	R^{θ}_{JC}	6.9	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ C$

■ Electrical Characteristics ($T_c = 25^\circ C$ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = -250\mu A, V_{GS} = 0V$	-12			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -12V, V_{GS} = 0V$			-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.7	-1.0	V
Static Drain-Source On-Resistance (Note 3)	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -7A$		12	15	m Ω
		$V_{GS} = -2.5V, I_D = -6A$		18	22	
		$V_{GS} = -1.8V, I_D = -2.5A$		25	45	
		$V_{GS} = -1.5V, I_D = -1A$		50	80	
Body-Diode Continuous Current (Note 2)	I_S				-15	A
Diode Forward Voltage (Note 3)	V_{SD}	$I_{SD} = -8 A, V_{GS} = 0V$			-1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, $t \leq 10$ sec.
3. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production

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■ Typical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise noted)

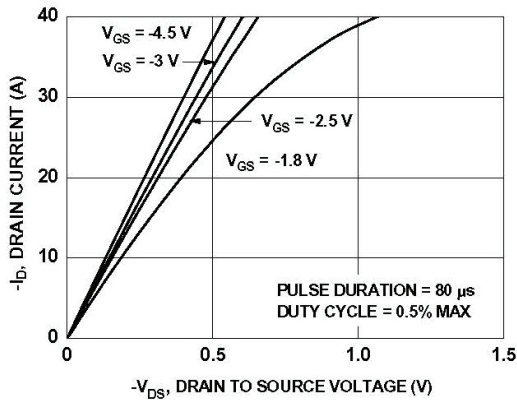


Figure 1. On-Region Characteristics

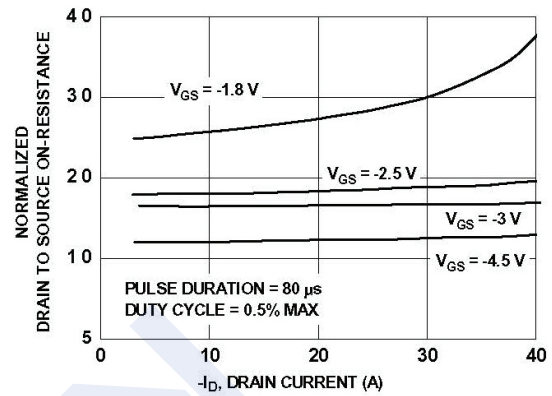


Figure 2. Normalized On-Resistance vs Drain Current and Gate Voltage

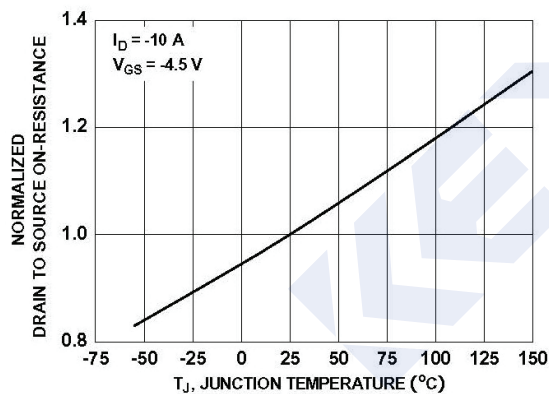


Figure 3. Normalized On-Resistance vs Junction Temperature

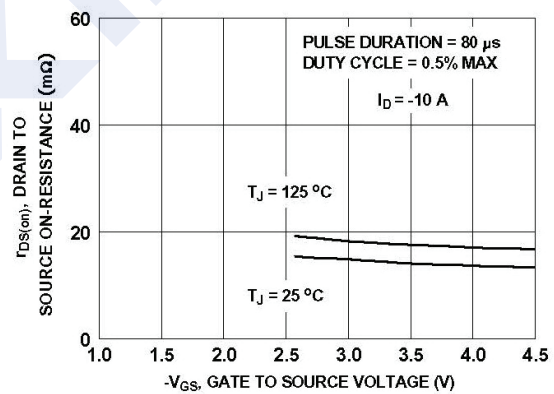


Figure 4. On-Resistance vs Gate to Source Voltage

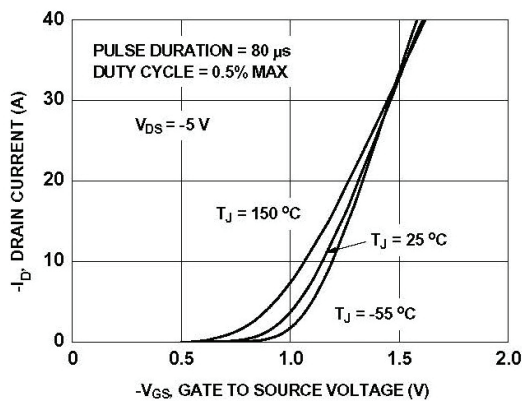


Figure 5. Transfer Characteristics

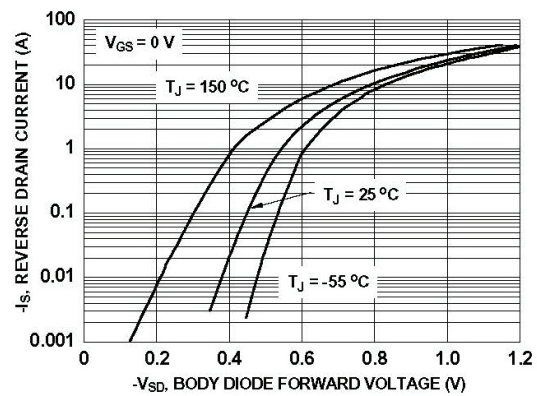


Figure 6. Source to Drain Diode Forward Voltage vs Source Current

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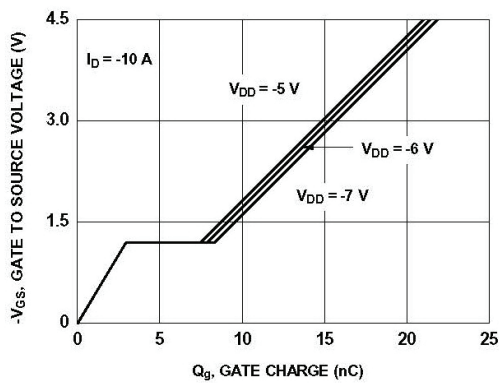


Figure 7. Gate Charge Characteristics

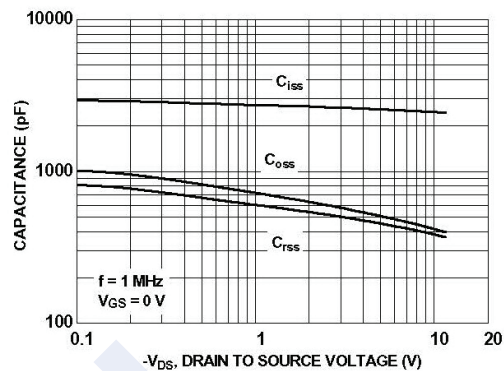


Figure 8. Capacitance vs Drain to Source Voltage

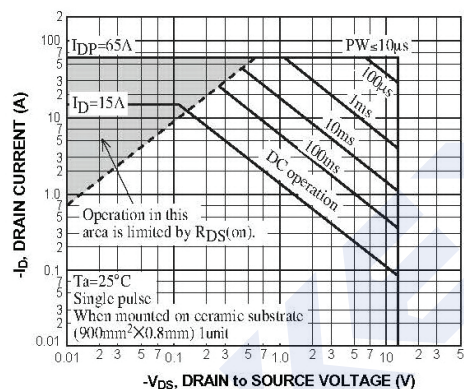


Figure 9. Forward Bias Safe Operating Area

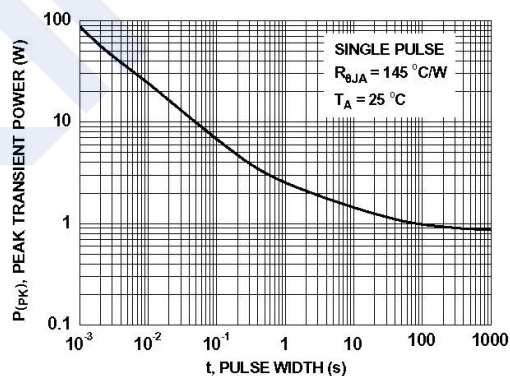


Figure 10. Single Pulse Maximum Power Dissipation

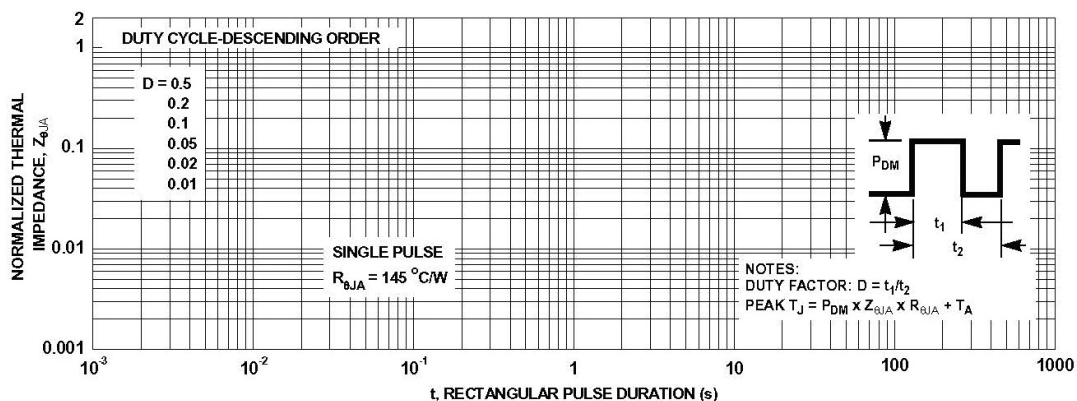
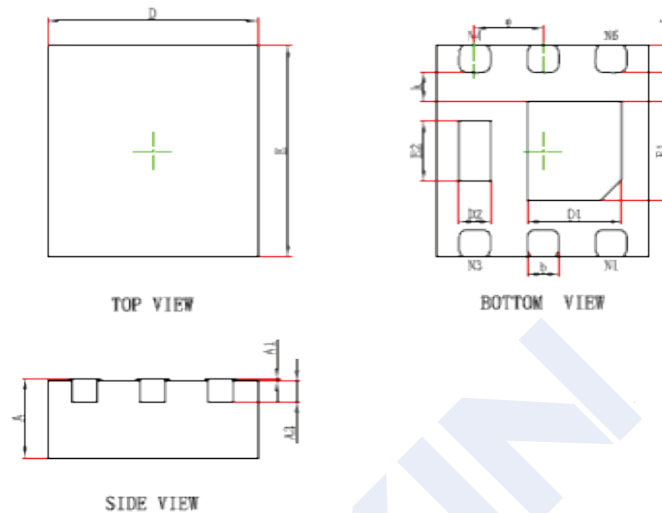


Figure 11. Junction-to-Ambient Transient Thermal Response Curve

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■ DFN2X2-6L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.924	2.076	0.076	0.082
E	1.924	2.076	0.076	0.082
D1	0.800	1.000	0.031	0.039
E1	0.850	1.050	0.033	0.041
D2	0.200	0.400	0.008	0.016
E2	0.460	0.660	0.018	0.026
k	0.200MIN.		0.008MIN.	
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
L	0.174	0.326	0.007	0.013

Notes

1. All dimensions are in millimeters.
2. Tolerance $\pm 0.10\text{mm}$ (4 mil) unless otherwise specified
3. Package body sizes exclude mold flash and gate burrs. Mold flash at the non-lead sides should be less than 5 mils.
4. Dimension L is measured in gauge plane.
5. Controlling dimension is millimeter, converted inch dimensions are not necessarily exact.