Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V_{DSS}	-20	V
Gate-Source Voltage			V_{GSS}	±8	V
Continuous Drain Current (Note 5) V_{GS} = -4.5V	Steady State	T_A = 25°C T_A = 70°C	I_D	-330 -260	mA
	t<10s	T_A = 25°C T_A = 70°C	I_D	-400 -310	mA
Continuous Drain Current (Note 5) V_{GS} = -1.8V	Steady State	T_A = 25°C T_A = 70°C	I_D	-250 -200	mA
	t<10s	T_A = 25°C T_A = 70°C	I_D	-310 -240	mA
Pulsed Drain Current (Note 6)			I_{DM}	-800	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Units
Total Power Dissipation (Note 5)	Steady state	P_D	400	mW
Thermal Resistance, Junction to Ambient (Note 5)	Steady state	$R_{\theta JA}$	310	°C/W
	t<10s		220	°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV_{DSS}	-20	-	-	V	V_{GS} = 0V, I_D = -250µA
Zero Gate Voltage Drain Current @T_c = 25°C	I_{DSS}	-	-	100	nA	V_{DS} = -16V, V_{GS} = 0V
		-	-	50		V_{DS} = -5V, V_{GS} = 0V
Gate-Source Leakage	I_{GSS}	-	-	±100	nA	V_{GS} = ±5V, V_{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	$V_{GS(th)}$	-0.4	-	-1.0	V	V_{DS} = V_{GS}, I_D = -250µA
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	-	1.2	1.9	Ω	V_{GS} = -4.5V, I_D = -100mA
		-	1.5	2.4		V_{GS} = -2.5V, I_D = -50mA
		-	2.1	3.4		V_{GS} = -1.8V, I_D = -20mA
		-	2.5	5		V_{GS} = -1.5V, I_D = -10mA
		-	4.0	-		V_{GS} = -1.2V, I_D = -1mA
Forward Transfer Admittance	$\|Y_{fs}\|$	100	450	-	mS	V_{DS} = -5V, I_D = -125mA
Diode Forward Voltage	V_{SD}	-	-0.6	-1.0	V	V_{GS} = 0V, I_S = -10mA
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C_{iss}	-	28.7	-	pF	V_{DS} = -15V, V_{GS} = 0V, f = 1.0MHz
Output Capacitance	C_{oss}	-	4.2	-	pF	
Reverse Transfer Capacitance	C_{rss}	-	2.9	-	pF	
Gate Resistance	R_G	-	0.4	-	Ω	V_{DS} = 0V, V_{GS} = 0V, f = 1.0MHz
Total Gate Charge	Q_g	-	0.4	-	nC	V_{GS} = -4.5V, V_{DS} =- 10V, I_D = -250mA
Gate-Source Charge	Q_{gs}	-	0.08	-	nC	
Gate-Drain Charge	Q_{gd}	-	0.06	-	nC	
Turn-On Delay Time	$t_{D(on)}$	-	5.8	-	ns	V_{DD} = -15V, V_{GS} = -4.5V, R_G = 2Ω, I_D = -200mA
Turn-On Rise Time	t_r	-	5.7	-	ns	
Turn-Off Delay Time	$t_{D(off)}$	-	31.1	-	ns	
Turn-Off Fall Time	t_f	-	16.4	-	ns	

Notes: 5. Device mounted on FR-4 PCB, with minimum recommended pad layout.
6. Device mounted on minimum recommended pad layout test board, 10µs pulse duty cycle = 1%.
7. Short duration pulse test used to minimize self-heating effect.
8. Guaranteed by design. Not subject to product testing.

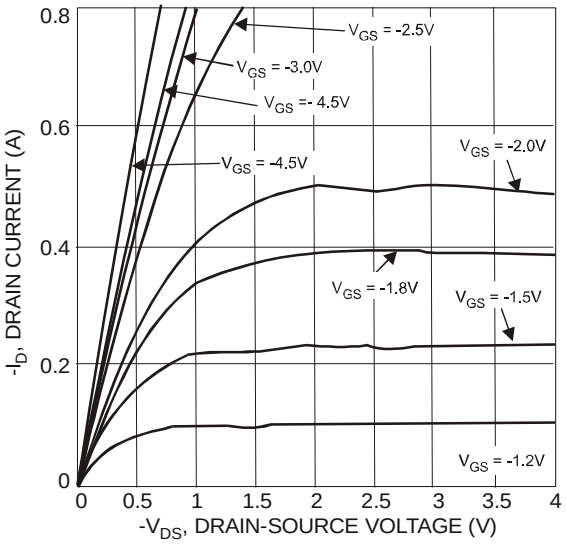


Fig. 1 Typical Output Characteristics

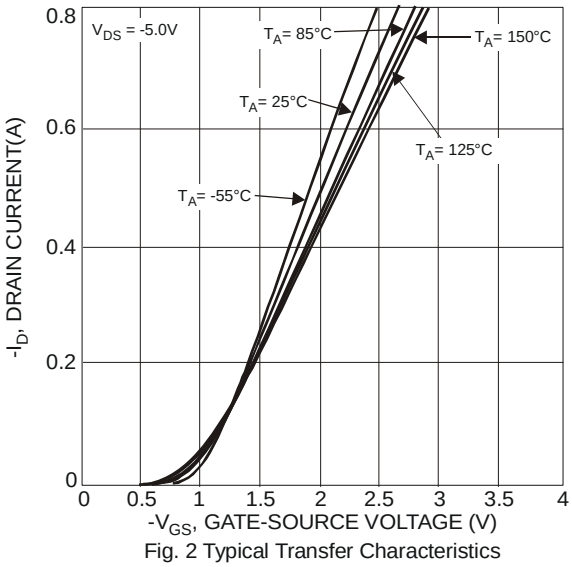


Fig. 2 Typical Transfer Characteristics

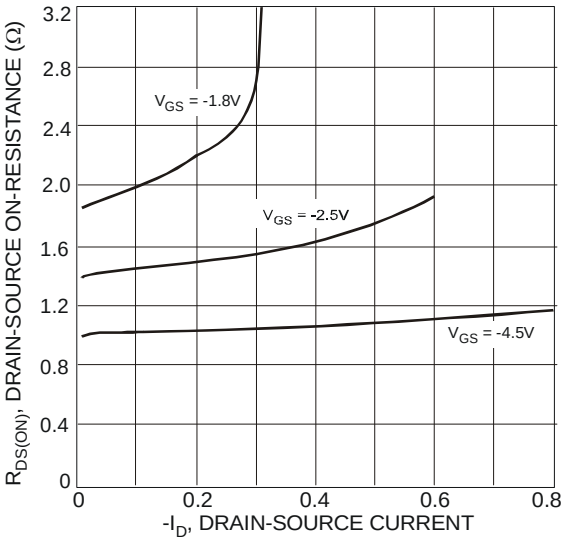


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

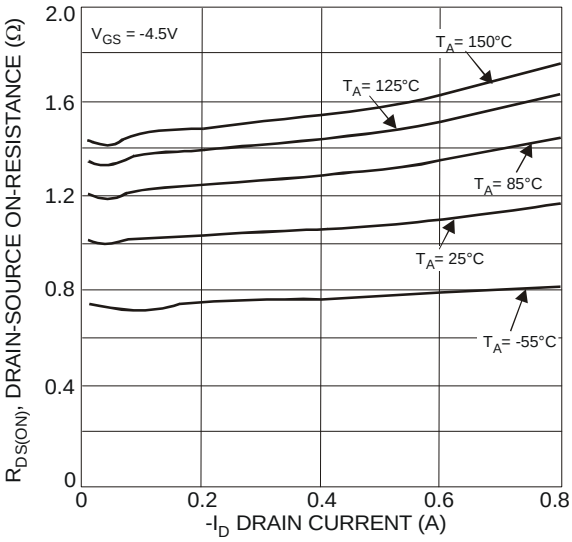


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

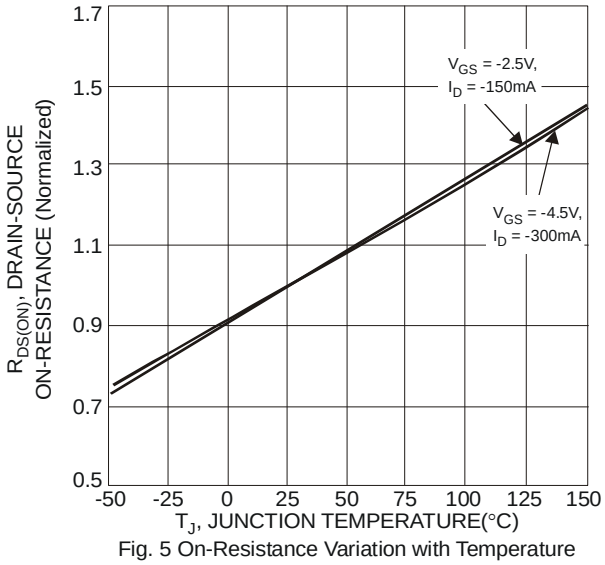


Fig. 5 On-Resistance Variation with Temperature

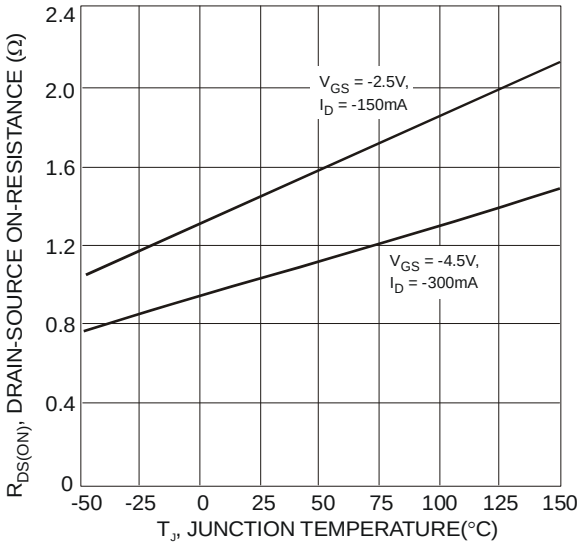


Fig. 6 On-Resistance Variation with Temperature

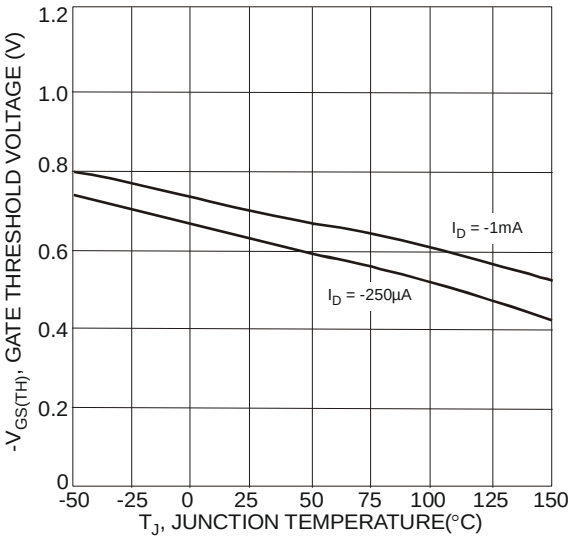


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

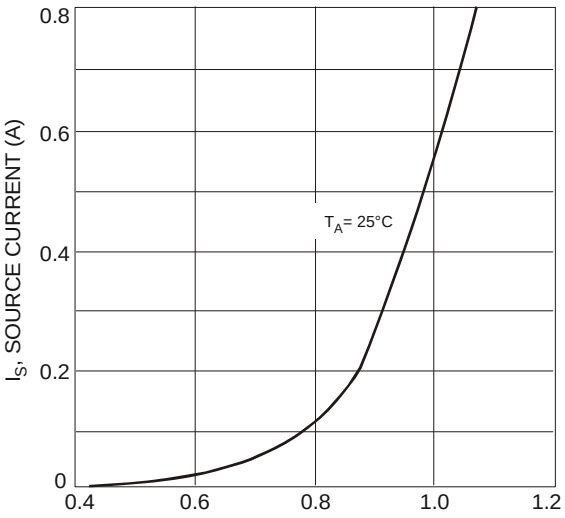


Fig. 8 Diodes Forward Voltage vs. Current

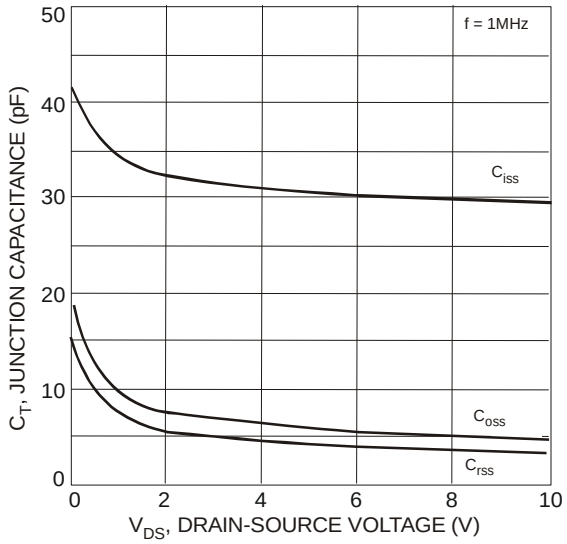


Fig. 9 Typical Junction Capacitance

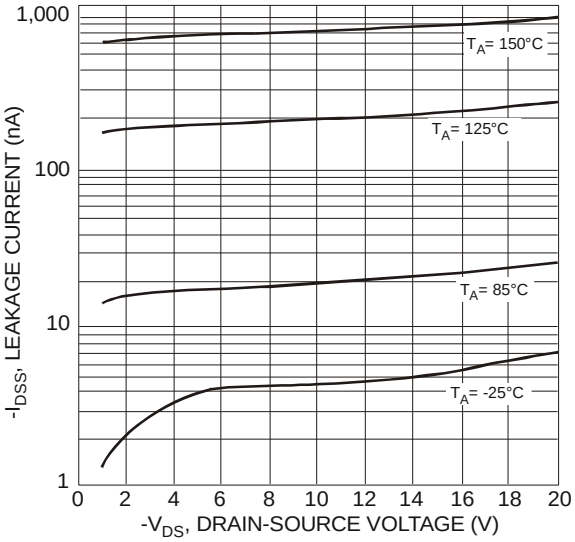


Fig. 10 Typical Leakage Current vs. Drain-Source Voltage

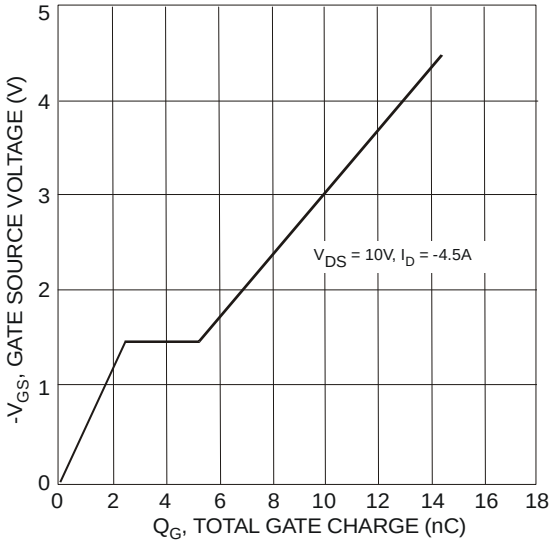
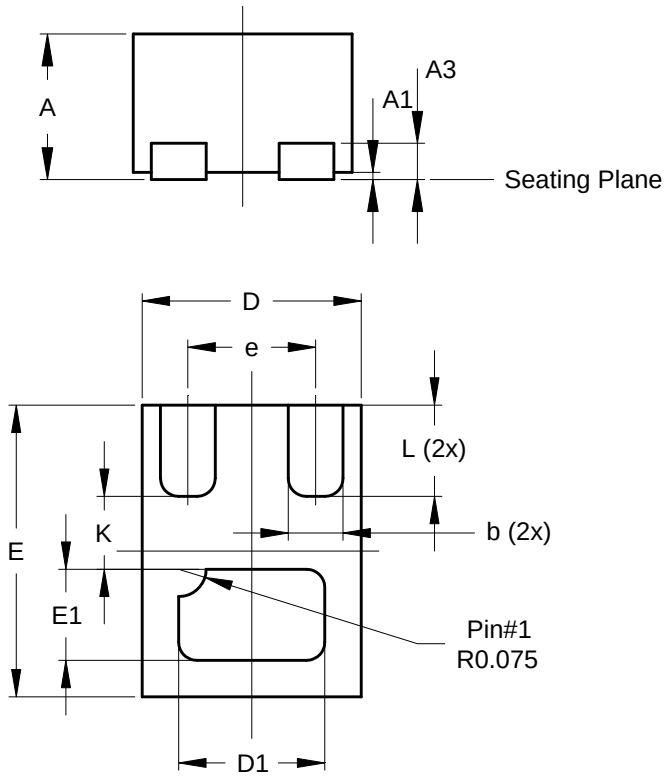


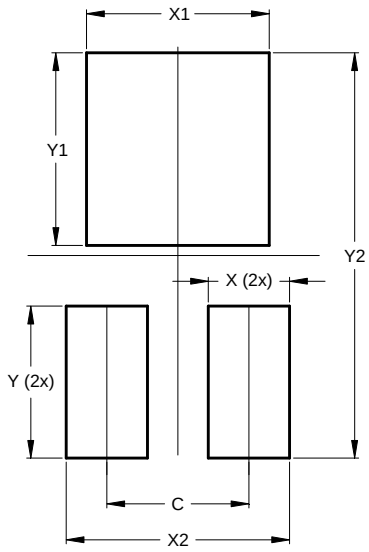
Fig. 11 Gate Charge Characteristics

Package Outline Dimensions



X2-DFN0806-3			
Dim	**Min**	**Max**	**Typ**
A	0.375	0.40	0.39
A1	0	0.05	0.02
A3	-	-	0.10
b	0.10	0.20	0.15
D	0.55	0.65	0.60
D1	0.35	0.45	0.40
E	0.75	0.85	0.80
E1	0.20	0.30	0.25
e	-	-	0.35
K	-	-	0.20
L	0.20	0.30	0.25
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
C	0.350
X	0.200
X1	0.450
X2	0.550
Y	0.375
Y1	0.475
Y2	1.000

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