28.7

V

Electrical Characteristics at T_j

Static Characteristics

Parameter	Symbol	Conditions		Value			Unit
				min	typ	max	
Drain to Source Breakdown Voltage	V	V_{GS}=0V, I_D=250μA		150	-	-	V
Gate Threshold Voltage	V	V_{GS}=V_{DS}, I_D=250μA		2	3	4	
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0V, V_{DS}=150V, T_j		-	-	1	μA
		V_{GS}=0V, V_{DS}=150V, T_j		-	-	100	
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V		-	-	±100	nA
Drain to Source on Resistance	R	V_{GS}=10V, I_D=10A	TO-263	-	38	48	mΩ
Drain to Source on Resistance	R	V_{GS}=10V, I_D=10A	TO-220	-	41	48	mΩ
Transconductance	g	V_{DS}=5V, I_D=10A		-	16	-	S
Gate Resistance	R_G	V_{GS}=0V, V_{DS}		-	5.9	-	Ω

Dynamic Characteristics

Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}	-	500	-	pF
Output Capacitance	C_{oss}		-	57	-	
	C_{rss}		-	9.9	-	
Total Gate Charge	Q_g	V_{DD}=75V, I_D=10A, V_{GS}=10V	-	10	-	nC
Gate to Source Charge	Q_{gs}		-	3.2	-	
	Q_{gd}		-	3.8	-	
Turn on Delay Time	t	V_{DD}=75V, I_D=10A, V_{GS}=10V, R_G=10Ω,	-	11	-	ns
Rise time	t_r		-	7	-	
	t		-	12	-	
Fall Time	t		-	3	-	

Reverse Diode Characteristics

Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_F=20A	-	0.9	1.2	V
Reverse Recovery Time	t_{rr}	V_R=75V, I_F=10A, dI_F μs	-	64	-	ns
Reverse Recovery Charge	Q_{rr}		-	96	-	nC

Fig 1. Typical Output Characteristics	Figure 2. On-Resistance vs. Gate-Source Voltage

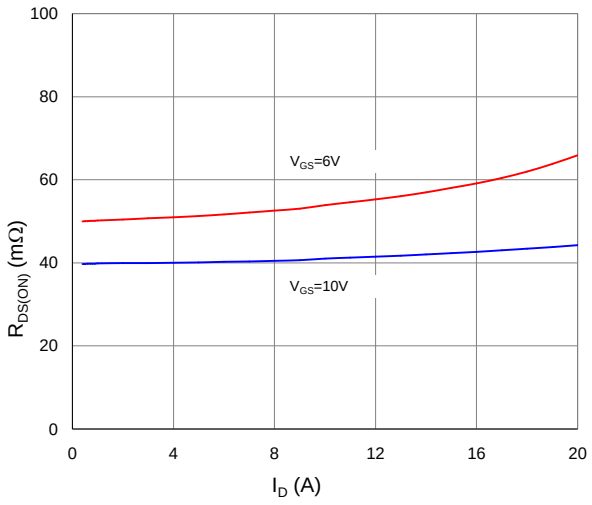
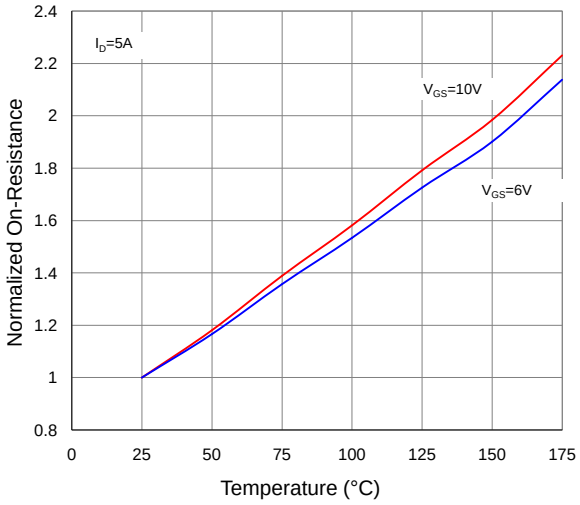
Figure 3. On-Resistance vs. Drain Current and Gate Voltage	
	

	Figure 6. Typical Source-Drain Diode Forward Voltage

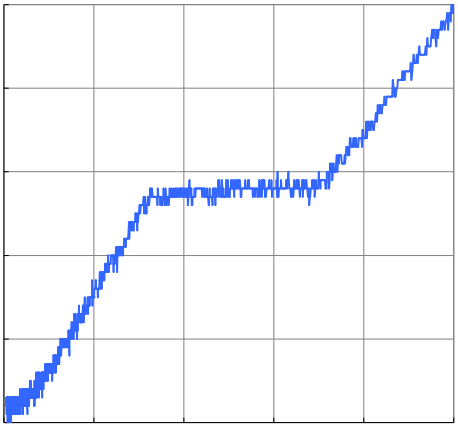
Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage	Figure 8. Typical Capacitance vs. Drain-to-Source Voltage
	

	Figure 10. Maximun Drain Current vs. Case Temperature

Inductive switching Test	

Gate Charge Test	

Diode Recovery Test	