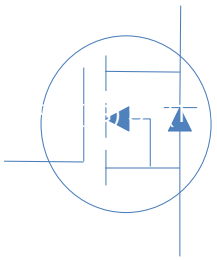


Absolute Maximum Ratings at T_j=25 (unless otherwise specified)

Parameter	Conditions	Value	Unit

Absolute Maximum Ratings

Parameter	Symbol	Max	Unit

Electrical Characteristics at T_j=25 (unless otherwise specified)

Static Characteristics

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250μA	150	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	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=25	-	-	1	μA
		V_{GS}=0V, V_{DS}=150V, T_j=100	-	-	100	
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
Drain to Source on Resistance	$R_{DS(on)}$	V_{GS}=10V, I_D=20A	-	9.6	11.5	mΩ
Transconductance	g_{fs}	V_{DS}=5V, I_D=20A	-	65	-	S
Gate Resistance	R_G	V_{GS}=0V, V_{DS} Open, f=1MHz	-	2.8	-	Ω

Dynamic Characteristics

Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=75V, f=1MHz	-	3365	-	pF
Output Capacitance	C_{oss}		-	239	-	
Reverse Transfer Capacitance	C_{rss}		-	6.5	-	
Total Gate Charge	Q_g(10V)	V_{DD}=75V, I_D=20A, V_{GS}=10V	-	42	-	nC
Gate to Source Charge	Q_{gs}		-	14	-	
Gate to Drain (Miller) Charge	Q_{gd}		-	7	-	
Turn on Delay Time	$t_{d(on)}$	V_{DD}=75V, I_D=20A, V_{GS}=10V, R_G=10Ω,	-	17	-	ns
Rise time	t_r		-	8	-	
Turn off Delay Time	$t_{d(off)}$		-	26	-	
Fall Time	t_f		-	10	-	

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=20A, dI_F/dt=100A/μs	-	80	-	ns
Reverse Recovery Charge	Q_{rr}		-	160	-	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 4. Normalized On-Resistance vs. Junction Temperature

Figure 5. Typical Transfer Characteristics	Figure 6. Typical Source-Drain Diode Forward Voltage

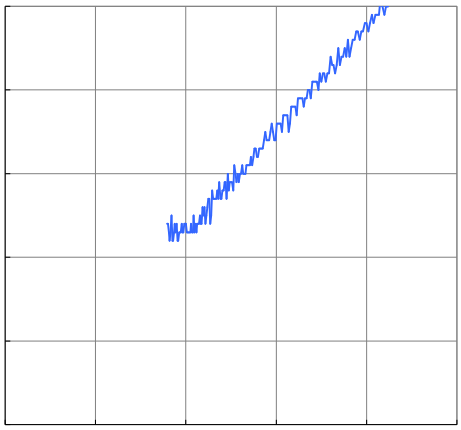
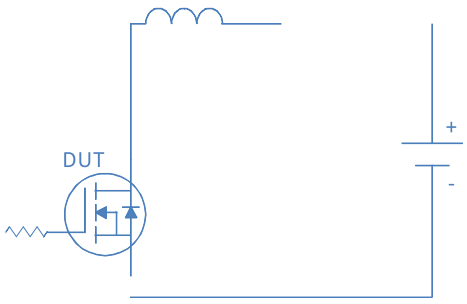
Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage	Figure 8. Typical Capacitance vs. Drain-to-Source Voltage
	

Figure 9. Maximum Safe Operating Area	Figure 10. Maximun Drain Current vs. Case Temperature

Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Ambient

Inductive switching Test	

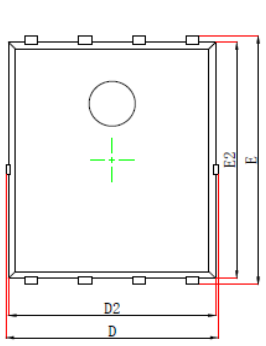
Gate Charge Test	

Uclamped Inductive Switching (UIS) Test	
	

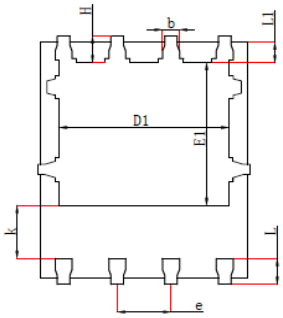
Diode Recovery Test	

Package Outline

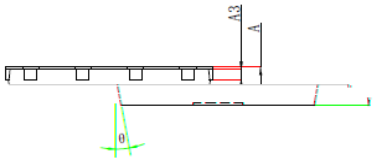
DFN5x6_P, 8 Leads



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A3	0.254 REF		0.010REF	
D	4.680	5.120	0.184	0.202
E	5.900	6.126	0.232	0.241
3.610	4.110	0.142	0.162	D1
3.380	3.780	0.133	0.149	E1
4.800	5.000	0.189	0.197	D2
5.674	5.826	0.223	0.229	E2
1.100	1.390	0.043	0.055	k
0.330	0.510	0.013	0.020	b
1.270TYP		1.270TYP		e
0.510	0.711	0.020	0.028	L
0.076	0.017	0.023	L1	0.424
0.126		0.016	0.029	0.410
θ	0°	12°	0°	12°