

## 80V N-Ch Power MOSFET

 $V_{DS}$ 

Pulsed Drain Current

 $I_{DM}$ 

Avalanche Energy, Single Pulse

 $E_{AS}$

## Electrical Characteristics at $T_j=25$ (unless otherwise specified)

### Static Characteristics

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	80	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	2.0	2.8	4.0	
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{GS}=0V, V_{DS}=80V, T_j=25$	-	-	1	$\mu A$
		$V_{GS}=0V, V_{DS}=80V, T_j=100$	-	-	100	
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	$\pm 100$	nA
Drain to Source on Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$	-	3	3.6	$m\Omega$
Transconductance	$g_{fs}$	$V_{DS}=5V, I_D=20A$	-	48	-	S
Gate Resistance	$R_G$	$V_{GS}=0V, V_{DS}$ Open, $f=1MHz$	-	2.0	-	$\Omega$

### Dynamic Characteristics

Input Capacitance	$C_{iss}$	$V_{GS}=0V, V_{DS}=40V, f=1MHz$	-	-	-	pF
Reverse Transfer Capacitance	$C_{rss}$					

Fig 1. Typical Output Characteristics

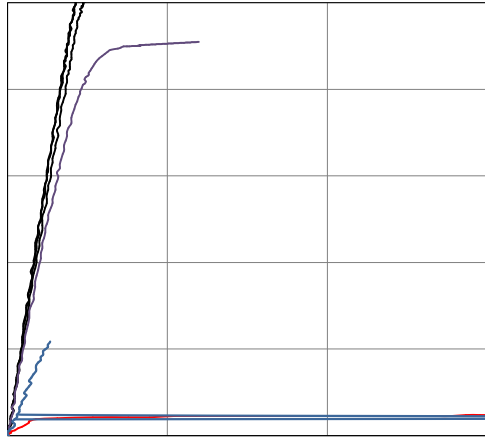


Figure 2. On-Resistance vs. Gate-Source Voltage

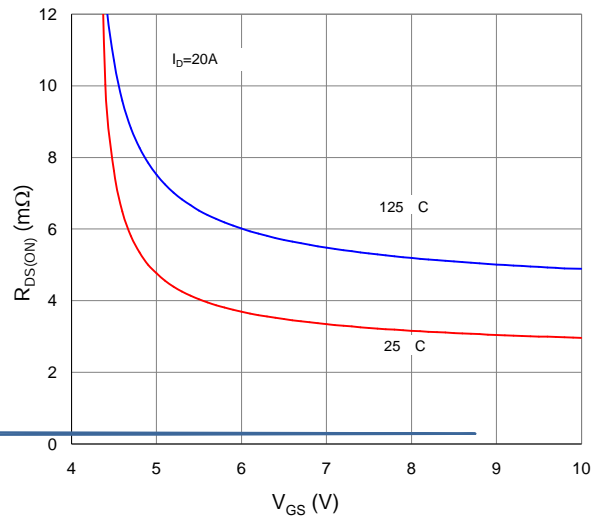


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

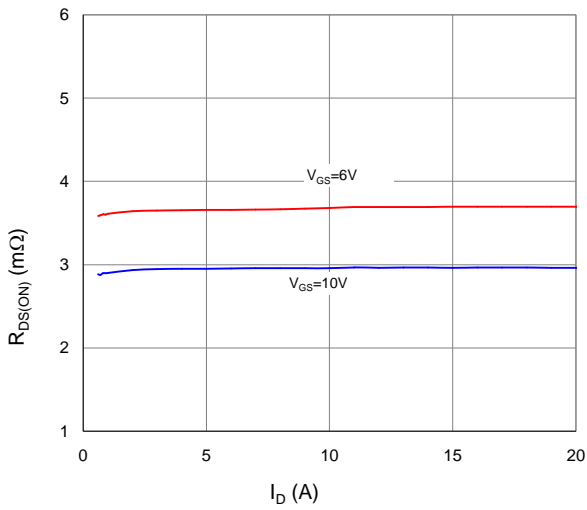


Figure 4. Normalized On-Resistance vs. Junction Temperature

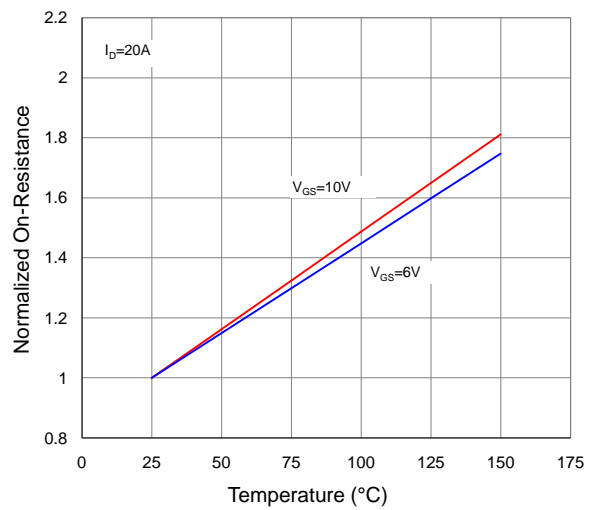


Figure 5. Typical Transfer Characteristics

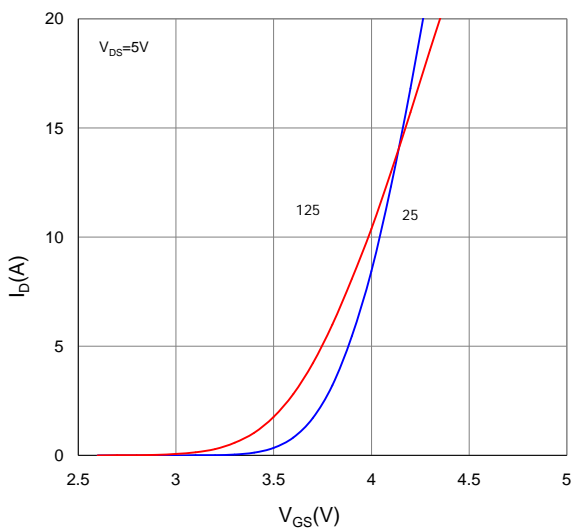
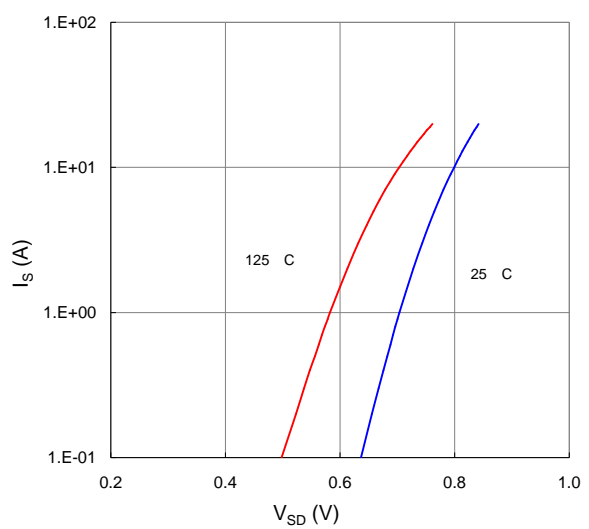


Figure 6. Typical Source-Drain Diode Forward Voltage





Figure

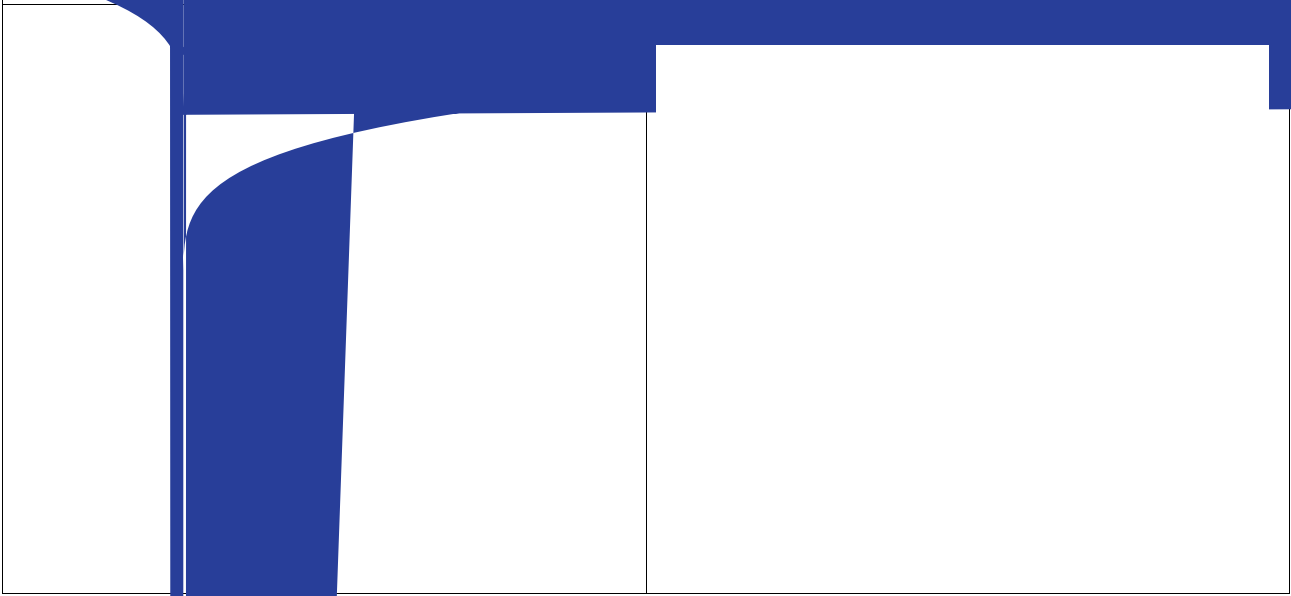


Figure 9. Maximum [redacted] Area

Figure 10. Maximum Drain Current vs. Case Temperature

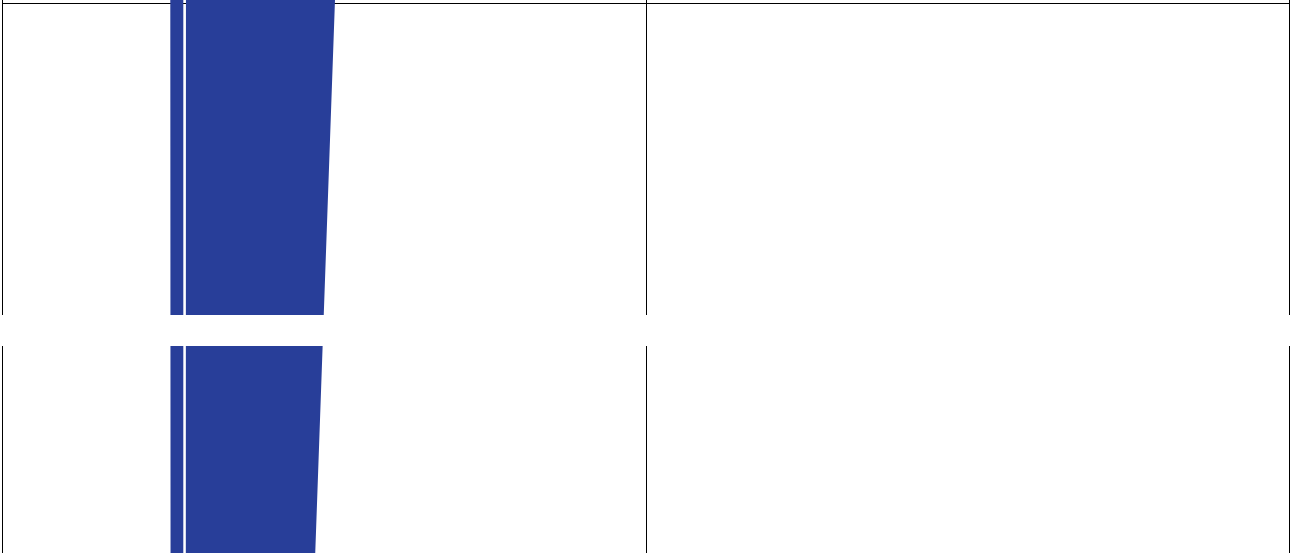


Figure 11. Normalized Maximum Transient Thermal Impedance Junction to Ambient

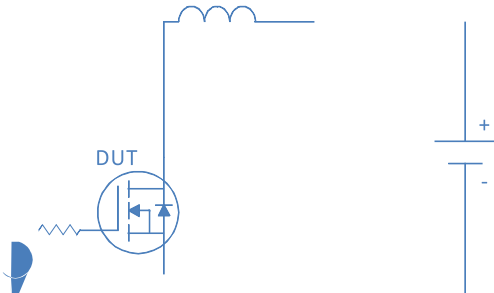
Inductive switching Test

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Gate Charge Test

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Uclamped Inductive Switching (UIS) Test

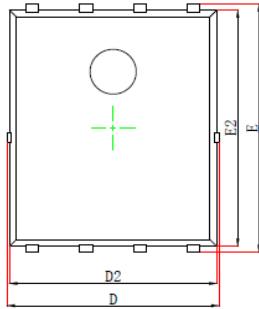
 <p>The diagram illustrates the UIS test setup. It shows a MOSFET (DUT) in a common-emitter configuration. The MOSFET's gate is connected to a DC source through a resistor. The drain is connected to an inductor, which is in series with a diode. The diode's cathode is connected to the MOSFET's drain, and its anode is connected to the MOSFET's source. The MOSFET's source is connected to the negative terminal of the DC source. The positive terminal of the DC source is connected to the inductor. A blue arrow points to the MOSFET symbol.</p>	
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Diode Recovery Test

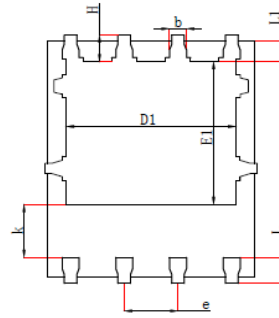
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Package Outline

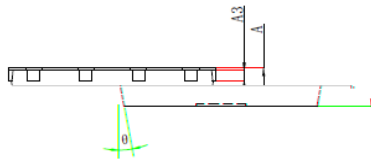
DFN5x6\_P, 8 Leads



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		0.010 REF	
D	4.680	5.120	0.184	0.202
E	4.680	5.120	0.184	0.202
D1	3.610	4.110	0.142	0.162
E1	3.380	3.780	0.133	0.149
D2	4.800	5.000	0.189	0.197
E2	5.674	5.826	0.223	0.229
k	1.100	1.390	0.043	0.055
b	0.330	0.510	0.013	0.020
e	1.2/0TYP		1.2/0TYP	
L	0.510	0.711	0.020	0.028
L1	0.424	0.576	0.017	0.023

