

100V N-Ch Power MOSFET

Feature

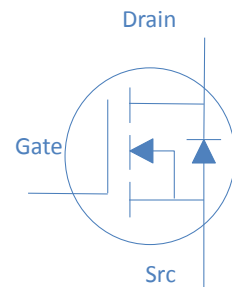
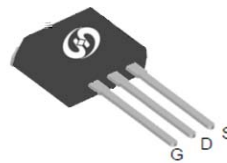
- Optimized for high speed smooth switching, Logic level
- Enhanced Body diode dv/dt capability
- Enhanced Avalanche Ruggedness
- 100% UIS Tested, 100% Rg Tested

V_{DS}		100	V
$R_{DS(on),typ}$	$V_{GS}=10V$	4.9	m Ω
$R_{DS(on),typ}$	$V_{GS}=4.5V$	5.8	m Ω
I_D (Silicon Limited)		153	A
I_D (Package Limited)		120	A

Application

- DC-DC Conversion
- Hard Switching and High Speed Circuit
- Power Tools
- UPS
- SSR

TO-262



Part Number	Package	Marking
	TO-262	

Absolute Maximum Ratings at T_J

Parameter	Symbol	Conditions	Value	Unit
Continuous Drain Current (Silicon Limited)	I_D	T_C	153	A
		T_C	108	
		T_C	120	
Continuous Drain Current (Package Limited)		T_C	120	
Drain to Source Voltage	V_{DS}	-	100	V
Gate to Source Voltage	V_{GS}	-	± 20	V
Pulsed Drain Current	I_{DM}	-	350	A
Avalanche Energy, Single Pulse	E_{AS}	$L=0.3mH, T_C$	240	mJ
Power Dissipation	P_D	T_C	214	
Operating and Storage Temperature	T_J, T_{stg}	-	-55 to 175	

Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-Case	$R_{\theta JC}$	0.7	
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	50	



$R_{DS(on)}$ $V_{GS}=4.5V, I_D=20A$ - 5.8 7.3
 $V_{DS}=5V, I_D=20A$ S

323

8 - nC

8 ns

- nC

Fig 1. Typical Output Characteristics

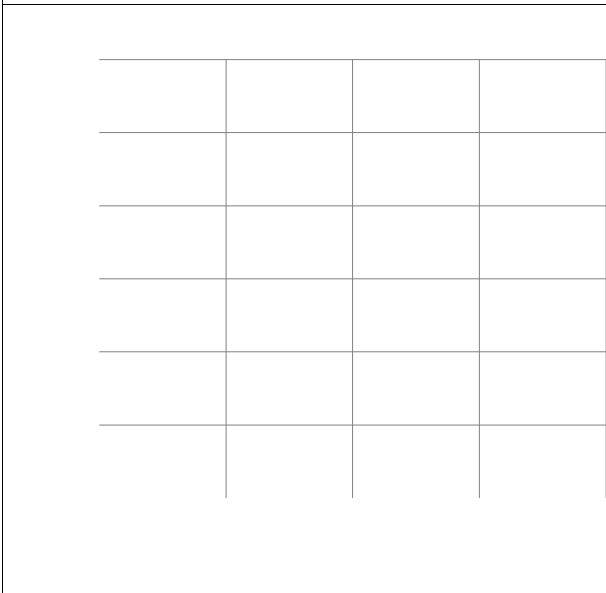


Figure 2. On-Resistance vs. Gate-Source Voltage

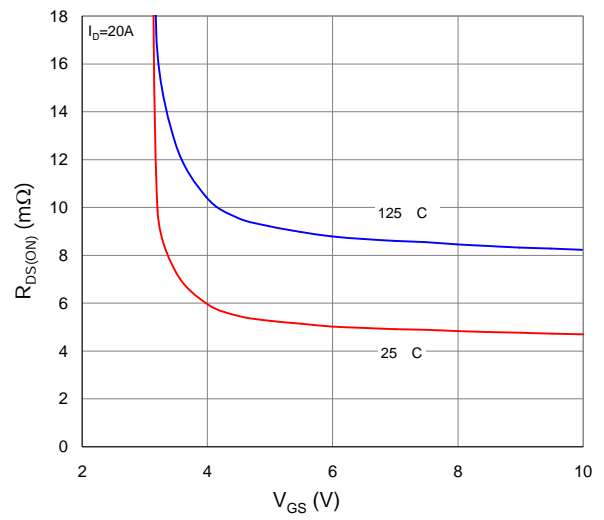


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

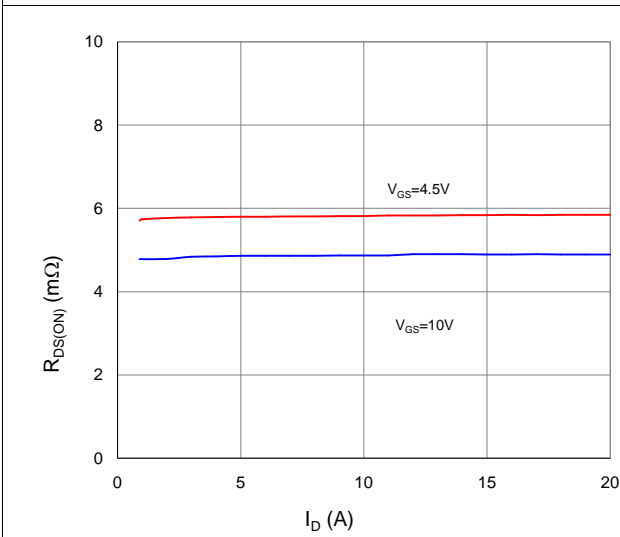
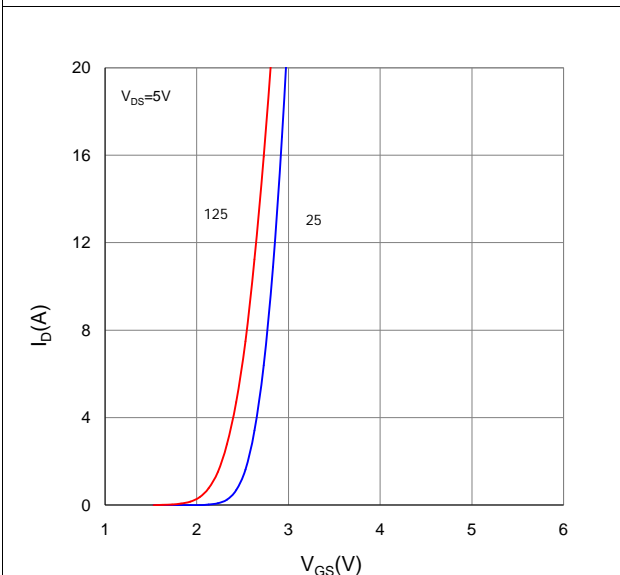
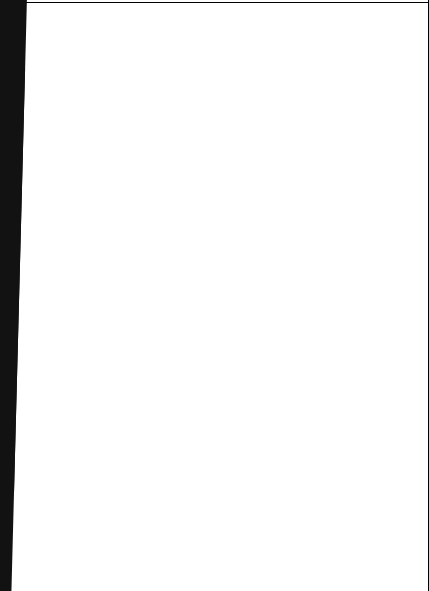


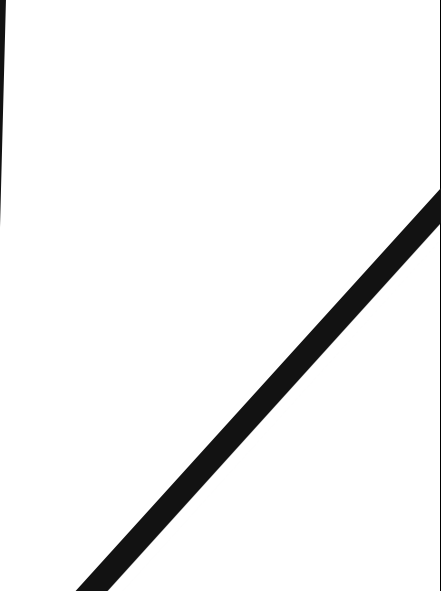
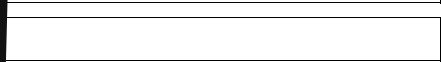
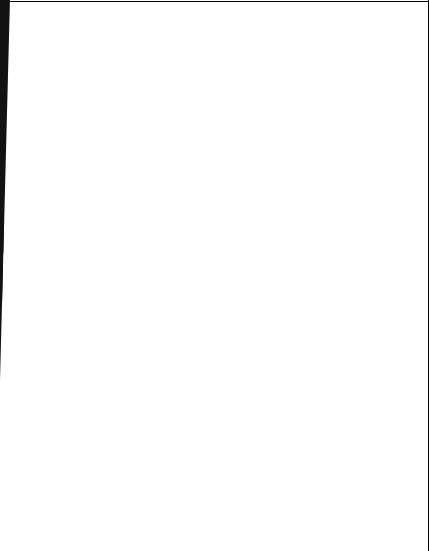
Figure 6. Typical Source-Drain Diode Forward Voltage



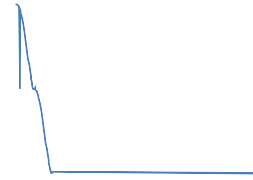
nce vs. Drain-to-Source Voltage



in Current vs. Case Temperature

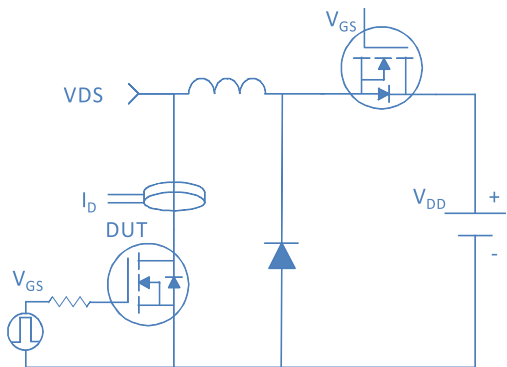


Inductive switching Test



Gate Charge Test

Uclamped Inductive Switching (UIS) Test

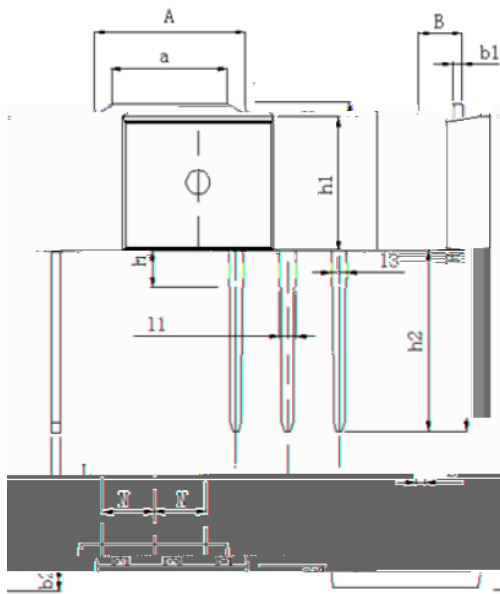


Diode Recovery Test

Package Outline

TO-262, 3 leads

Unit: mm



DIM	MILLIMETERS
A	9.98±0.2
a	7.4±0.4
B	4.5±0.2
b1	1.3±0.05
b2	2.4±0.2
H	23.9±0.3
h	3.1±0.2
h1	9.16±0.2
h2	13.2±0.2
L	0.5±0.1
l1	1.3±0.1
l2	0.8±0.1
N	2.45±0.1