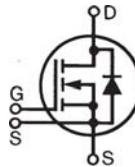


Power MOSFET

Single Die MOSFET

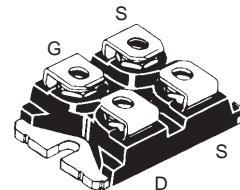
IXFN230N10

N-Channel Enhancement Mode
Avalanche Rated, High dv/dt, Low t_{rr}



$V_{DSS} = 100V$
 $I_{D25} = 230A$
 $R_{DS(on)} \leq 6.0m\Omega$
 $t_{rr} \leq 250ns$

miniBLOC, SOT-227 B
 E153432



G = Gate D = Drain
S = Source

Either Source terminal at miniBLOC can be used as Main or Kelvin Source

Symbol	Test Conditions	Maximum Ratings		
V_{DSS}	$T_J = 25^\circ C$ to $150^\circ C$	100		V
V_{DGR}	$T_J = 25^\circ C$ to $150^\circ C$, $R_{GS} = 1M\Omega$	100		V
V_{GSS}	Continuous	± 20		V
V_{GSM}	Transient	± 30		V
I_{D25}	$T_C = 25^\circ C$, Chip capability	230		A
$I_{L(RMS)}$	External lead current limit	200		A
I_{DM}	$T_C = 25^\circ C$, pulse width limited by T_{JM}	920		A
I_A	$T_C = 25^\circ C$	100		A
E_{AS}	$T_C = 25^\circ C$	4		J
dV/dt	$I_S \leq I_{DM}$, $V_{DD} \leq V_{DSS}$, $T_J \leq 150^\circ C$	10		V/ns
P_d	$T_C = 25^\circ C$	700		W
T_J		-55 ... +150		°C
T_{JM}		150		°C
T_{stg}		-55 ... +150		°C
V_{ISOL}	50/60 Hz, RMS $t = 1min$ $I_{ISOL} \leq 1mA$ $t = 1s$	2500 3000	V~ V~	
M_d	Mounting torque Terminal connection torque	1.5/13 1.3/11.5	Nm/lb.in. Nm/lb.in.	
Weight		30		g

Symbol	Test Conditions ($T_J = 25^\circ C$, unless otherwise specified)	Characteristic Values		
		Min.	Typ.	Max.
BV_{DSS}	$V_{GS} = 0V$, $I_D = 3mA$	100		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 8mA$	2.0	4.0	V
I_{GSS}	$V_{GS} = \pm 20V$, $V_{DS} = 0V$		± 200	nA
I_{DSS}	$V_{DS} = V_{DSS}$ $V_{GS} = 0V$		100 2	μA mA
$R_{DS(on)}$	$V_{GS} = 10V$, $I_D = 0.5 \cdot I_{D25}$, Note 1		6.0	mΩ

Advantages

- Easy to mount
- Space savings
- High power density

Applications

- DC-DC converters
- Battery chargers
- Switched-mode and resonant-mode power supplies
- DC choppers
- Temperature and lighting controls

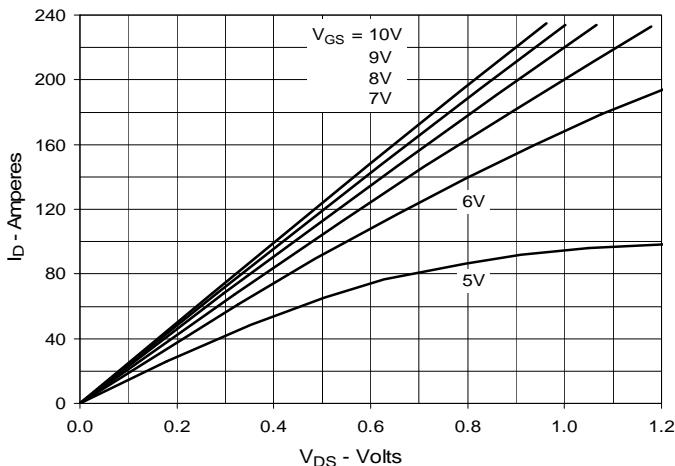
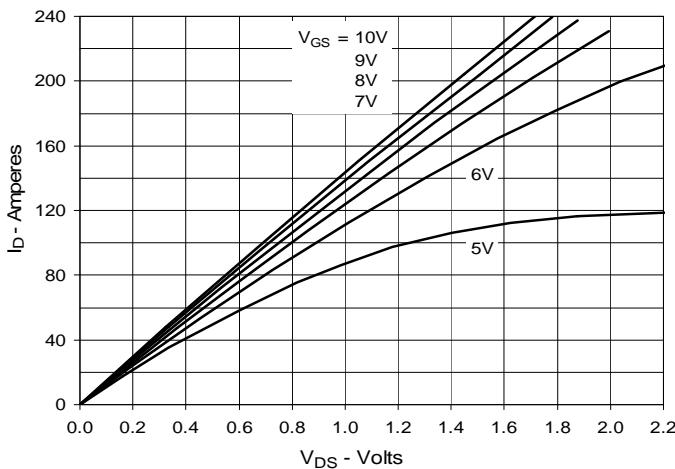
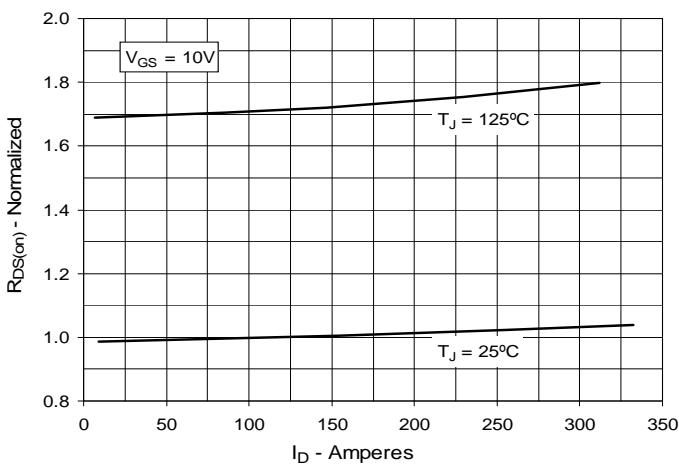
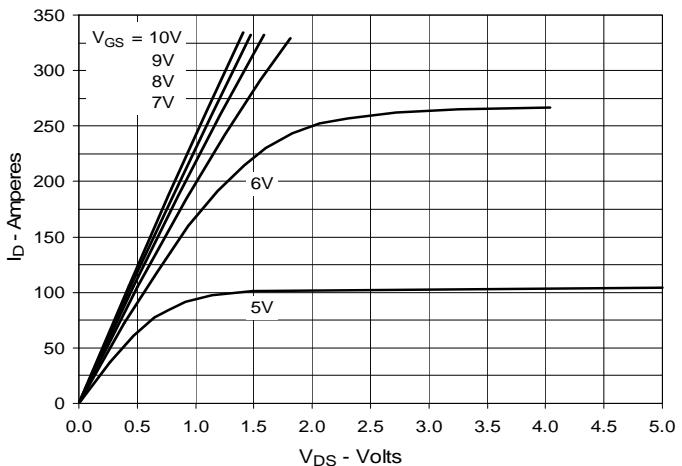
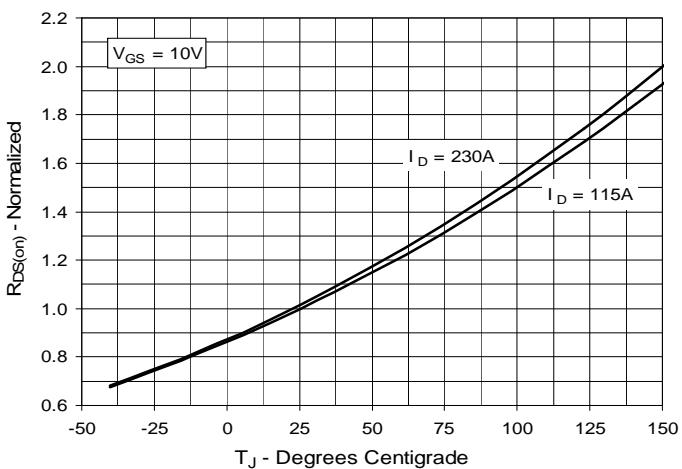
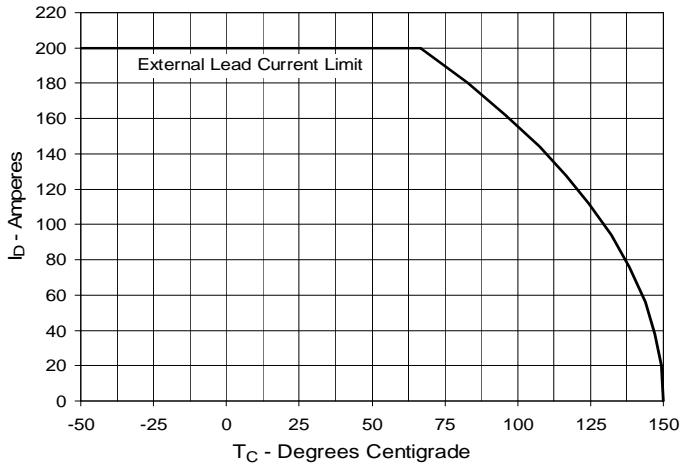
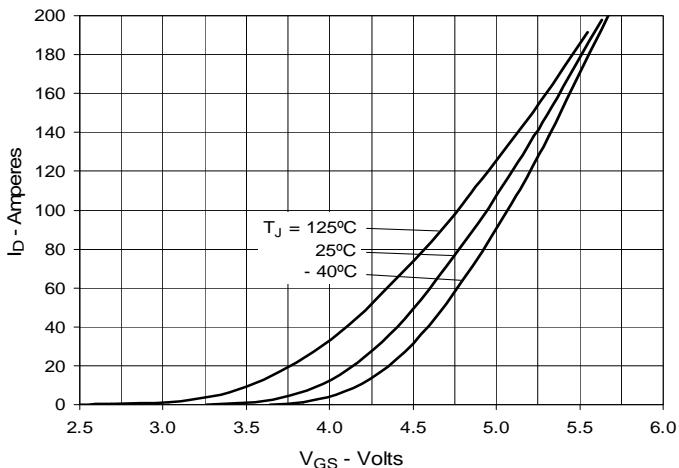
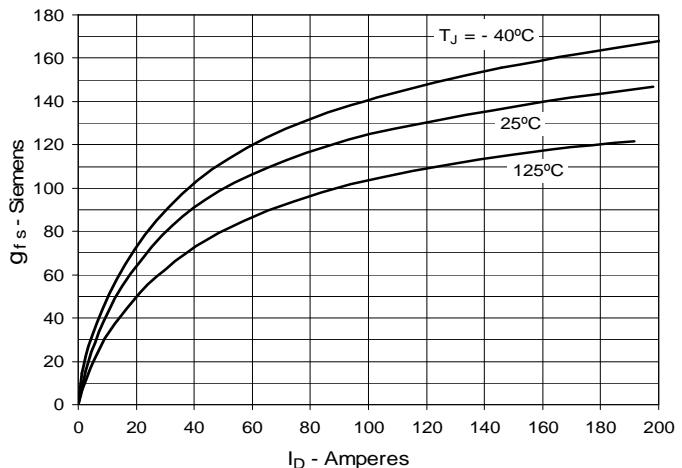
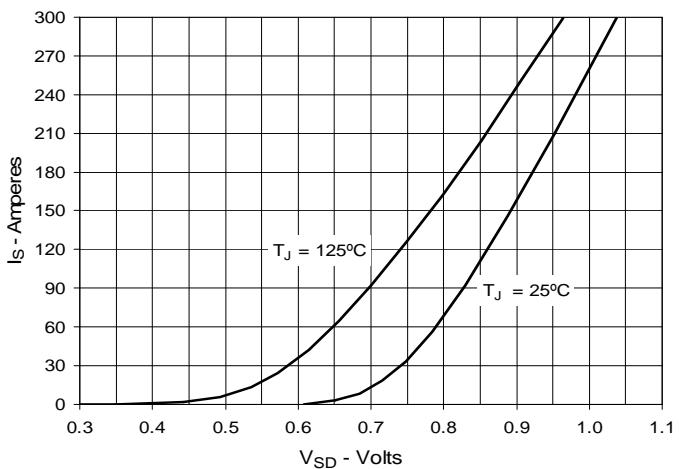
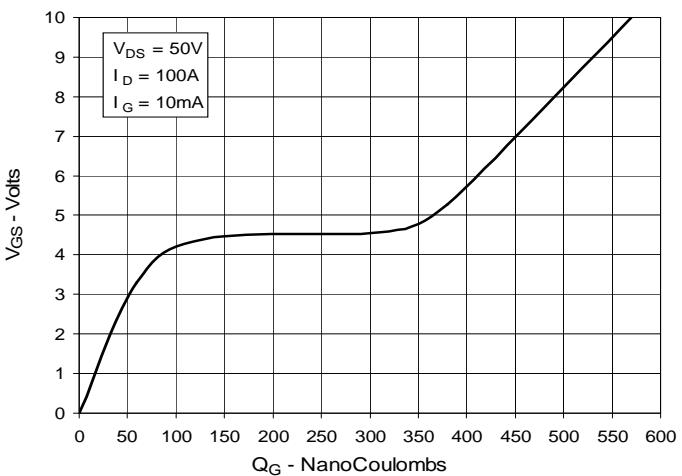
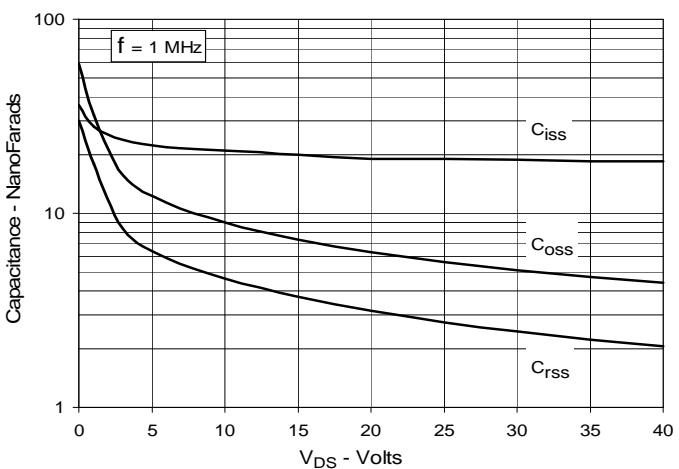
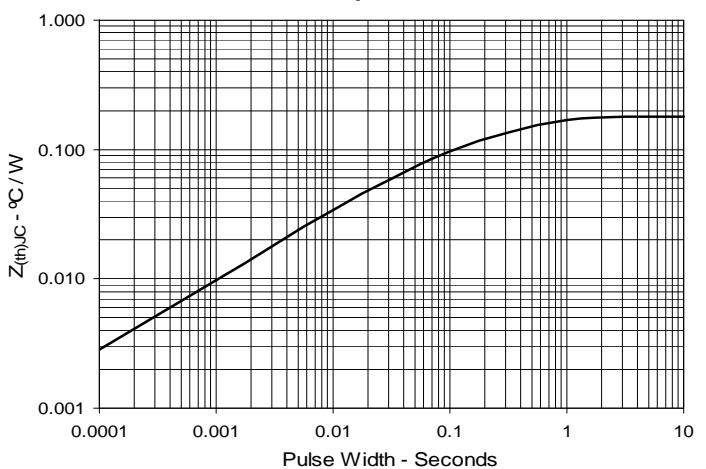
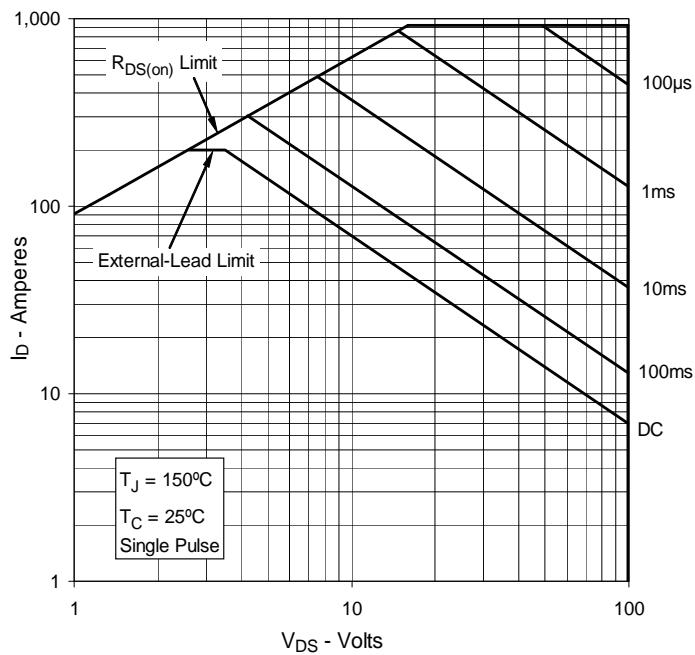
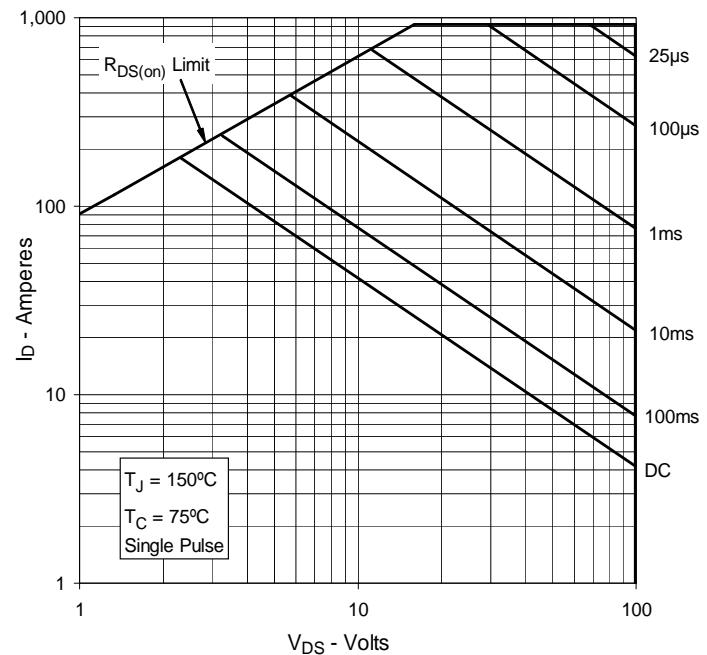
**Fig. 1. Output Characteristics
@ 25°C****Fig. 3. Output Characteristics
@ 125°C****Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 115A$ Value
vs. Drain Current****Fig. 2. Extended Output Characteristics
@ 25°C****Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 115A$ Value
vs. Junction Temperature****Fig. 6. Maximum Drain Current vs.
Case Temperature**

Fig. 7. Input Admittance**Fig. 8. Transconductance****Fig. 9. Forward Voltage Drop of Intrinsic Diode****Fig. 10. Gate Charge****Fig. 11. Capacitance****Fig. 12. Maximum Transient Thermal Impedance**

**Fig. 13. Forward-Bias Safe Operating Area
@ $T_C = 25^\circ\text{C}$**



**Fig. 14. Forward-Bias Safe Operating Area
@ $T_C = 75^\circ\text{C}$**





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