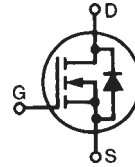


MegaMOS™ FET

IXTH / IXTM 67N10
IXTH / IXTM 75N10
IXTT 75N10

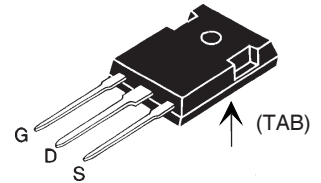
N-Channel Enhancement Mode



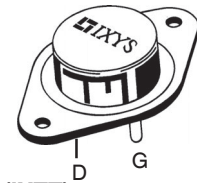
V_{DSS}	I_{D25}	$R_{DS(on)}$
100 V	67 A	25 mΩ
100 V	75 A	20 mΩ

Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^\circ\text{C}$ to 150°C	100	V
V_{DGR}	$T_J = 25^\circ\text{C}$ to 150°C ; $R_{GS} = 1\text{ M}\Omega$	100	V
V_{GS}	Continuous	± 20	V
V_{GSM}	Transient	± 30	V
I_{D25}	$T_C = 25^\circ\text{C}$	67N10	67 A
		75N10	75 A
I_{DM}	$T_C = 25^\circ\text{C}$, pulse width limited by T_{JM}	67N10	268 A
		75N10	300 A
P_D	$T_C = 25^\circ\text{C}$	300	W
T_J		-55 ... +150	$^\circ\text{C}$
T_{JM}		150	$^\circ\text{C}$
T_{stg}		-55 ... +150	$^\circ\text{C}$
M_d	Mounting torque	1.13/10	Nm/lb.in.
Weight		TO-204	18 g
		TO-247	6 g
		TO-268	5 g
Maximum lead temperature for soldering 1.6 mm (0.062 in.) from case for 10 s		10	$^\circ\text{C}$

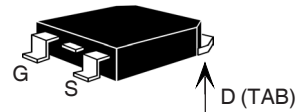
TO-247 AD (IXTH)



TO-204 AE (IXTM)



TO-268 (IXTT)



G = Gate, D = Drain,
S = Source, TAB = Drain

Features

- International standard packages
- Low $R_{DS(on)}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- Unclamped Inductive Switching (UIS) rated
- Low package inductance
 - easy to drive and to protect
- Fast intrinsic Rectifier

Applications

- DC-DC converters
- Synchronous rectification
- Battery chargers
- Switched-mode and resonant-mode power supplies
- DC choppers
- AC motor control
- Temperature and lighting controls
- Low voltage relays

Advantages

- Easy to mount with 1 screw (TO-247) (isolated mounting screw hole)
- Space savings
- High power density

Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	$V_{GS} = 0\text{ V}$, $I_D = 250\ \mu\text{A}$	100		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 4\text{ mA}$	2.0		V
I_{GSS}	$V_{GS} = \pm 20\text{ V}_{DC}$, $V_{DS} = 0$			$\pm 100\text{ nA}$
I_{DSS}	$V_{DS} = 0.8 \cdot V_{DSS}$ $V_{GS} = 0\text{ V}$	$T_J = 25^\circ\text{C}$		250 μA
		$T_J = 125^\circ\text{C}$		1 mA
$R_{DS(on)}$	$V_{GS} = 10\text{ V}$, $I_D = 0.5 I_{D25}$ Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$	67N10		0.025 Ω
		75N10		0.020 Ω

Fig. 1 Output Characteristics

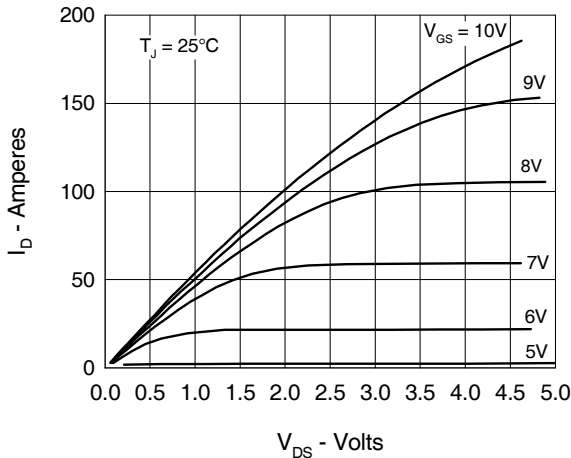


Fig. 3 $R_{DS(on)}$ vs. Drain Current

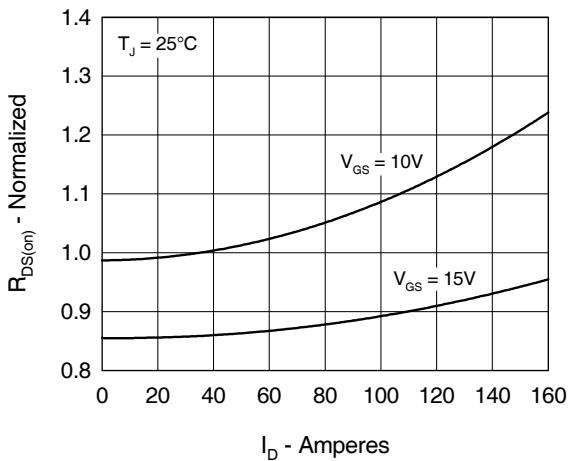


Fig. 5 Drain Current vs. Case Temperature

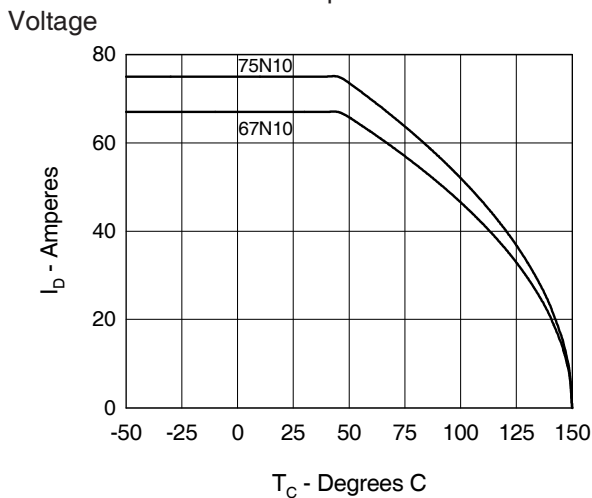


Fig. 2 Input Admittance

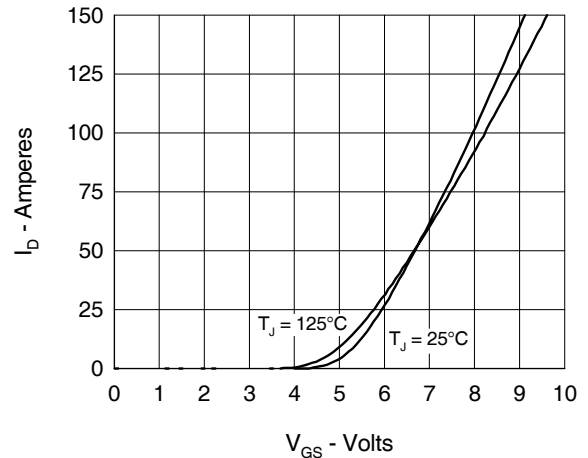


Fig. 4 Temperature Dependence of Drain to Source Resistance

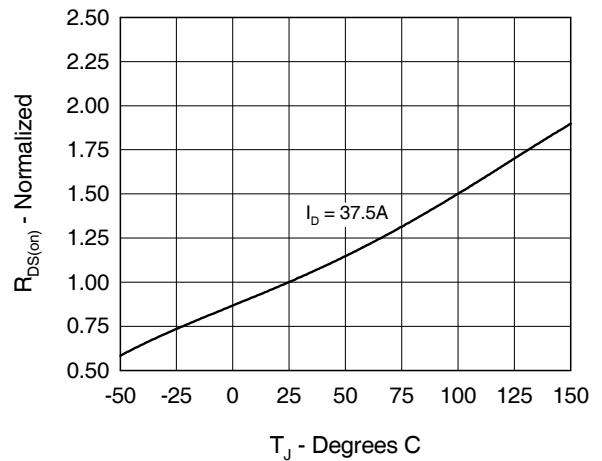


Fig. 6 Temperature Dependence of Breakdown and Threshold

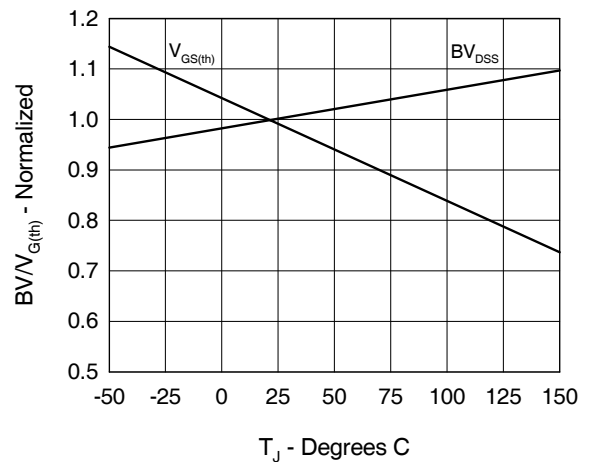


Fig.7 Gate Charge Characteristic Curve

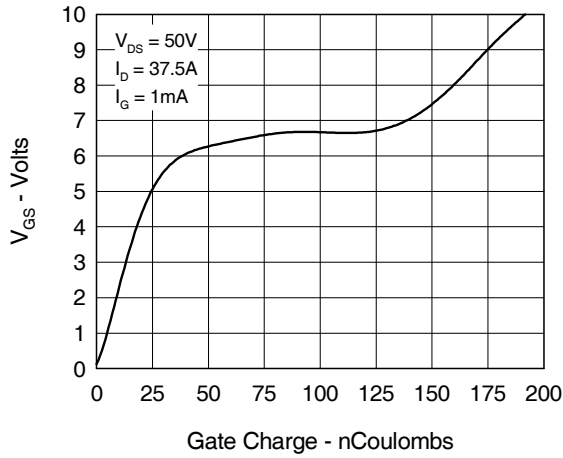


Fig.9 Capacitance Curves

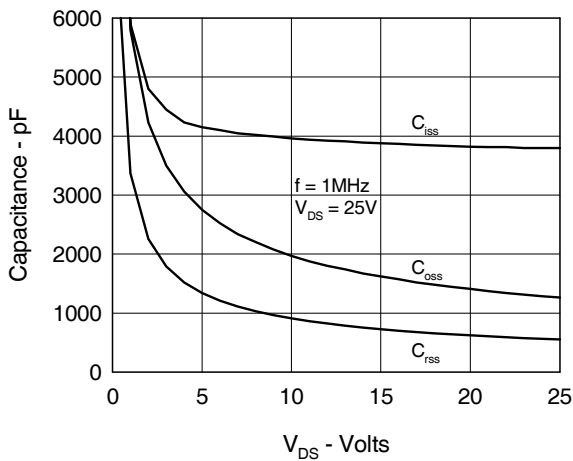


Fig.11 Transient Thermal Impedance

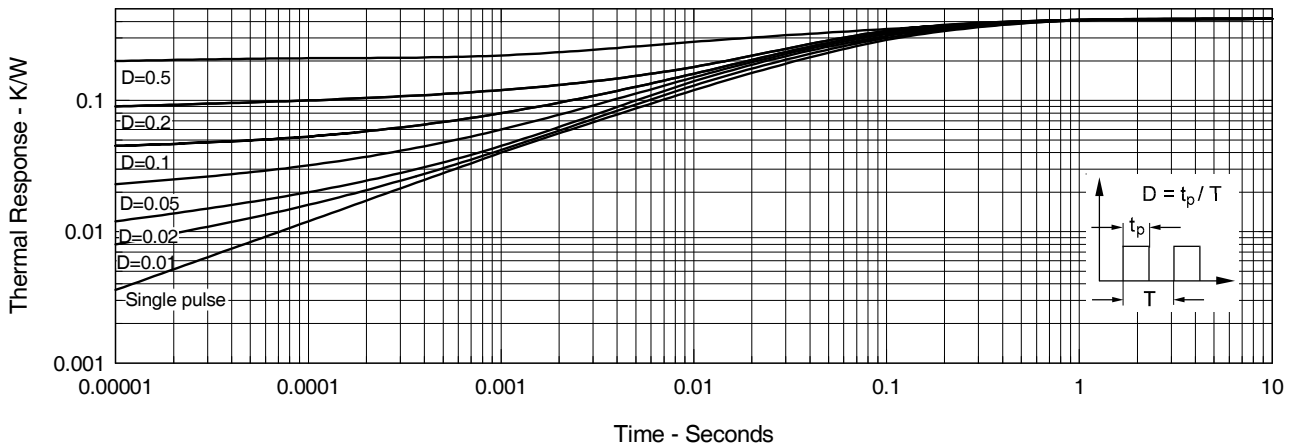


Fig.8 Forward Bias Safe Operating Area

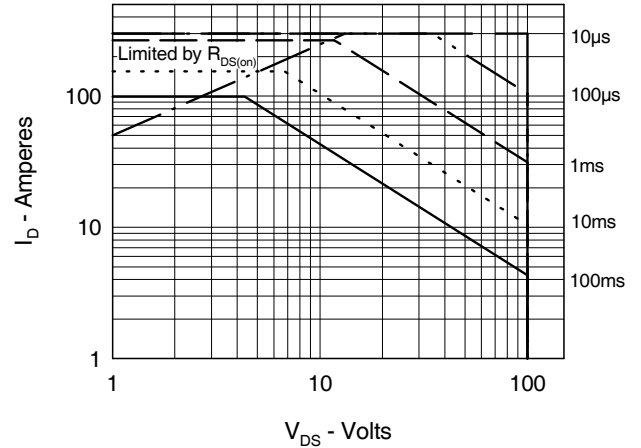


Fig.10 Source Current vs. Source to Drain Voltage

