

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.

جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.



مشاهده قیمت و خرید

برای خرید و مشاهده سایر محصولات کلیک کنید



IXYS

HiPerFET™

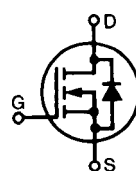
Power MOSFETs

IXFH/~~IXFM~~42N20
IXFH/~~IXFM~~/IXFT50N20
IXFH/IXFT58N20N-Channel Enhancement Mode
High dv/dt, Low t_{rr} , HDMOS™ Family

Obsolete:

IXFM42N20

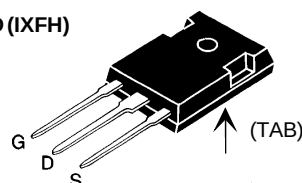
IXFM50N20



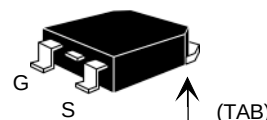
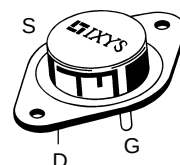
V_{DSS}	I_{D25}	$R_{DS(on)}$
200 V	42 A	60mΩ
200 V	50 A	45mΩ
200 V	58 A	40mΩ

 $t_{rr} \leq 200 \text{ ns}$

TO-247 AD (IXFH)



TO-268 (D3) Case Style

~~TO-204 AE (IXFM)~~Package
unavailableG = Gate,
S = Source,D = Drain,
TAB = Drain

Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^\circ\text{C}$ to 150°C	200	V
V_{DGR}	$T_J = 25^\circ\text{C}$ to 150°C ; $R_{GS} = 1 \text{ M}\Omega$	200	V
V_{GS}	Continuous	± 20	V
V_{GSM}	Transient	± 30	V
I_{D25}	$T_C = 25^\circ\text{C}$	42N20: 42 50N20: 50 58N20: 58	A
I_{DM}	$T_C = 25^\circ\text{C}$, pulse width limited by T_{JM}	42N20: 168 50N20: 200 58N20: 232	A
I_{AR}	$T_C = 25^\circ\text{C}$	42N20: 42 50N20: 50 58N20: 58	A
E_{AR}	$T_C = 25^\circ\text{C}$	30	mJ
dv/dt	$I_S \leq I_{DM}$, $di/dt \leq 100 \text{ A}/\mu\text{s}$, $V_{DD} \leq V_{DSS}$, $T_J \leq 150^\circ\text{C}$, $R_G = 2 \Omega$	5	V/ns
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	$^\circ\text{C}$
T_L	1.6 mm (0.062 in.) from case for 10 s	300	$^\circ\text{C}$
M_d	Mounting torque	1.13/10	Nm/lb.in.
Weight		TO-204 = 18 g, TO-247 = 6 g	

Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	$V_{GS} = 0 \text{ V}$, $I_D = 250 \mu\text{A}$	200		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 4 \text{ mA}$	2		V
I_{GSS}	$V_{GS} = \pm 20 \text{ V}_{DC}$, $V_{DS} = 0$			$\pm 100 \text{ nA}$
I_{DSS}	$V_{DS} = 0.8 \cdot V_{DSS}$, $V_{GS} = 0 \text{ V}$			$200 \mu\text{A}$ 1 mA
	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$			

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)
- High power surface mountable package
- High power density

Fig. 1 Output Characteristics

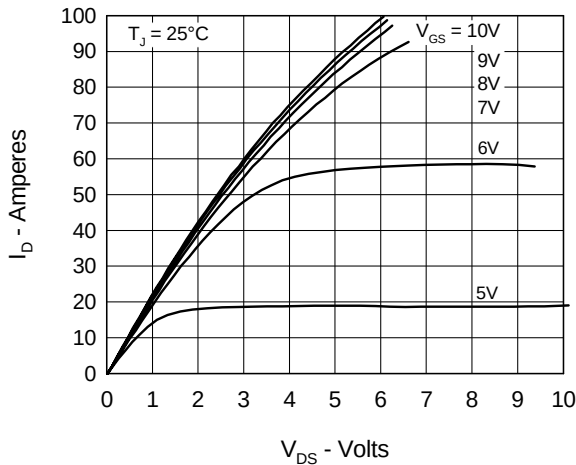


Fig. 2 Input Admittance

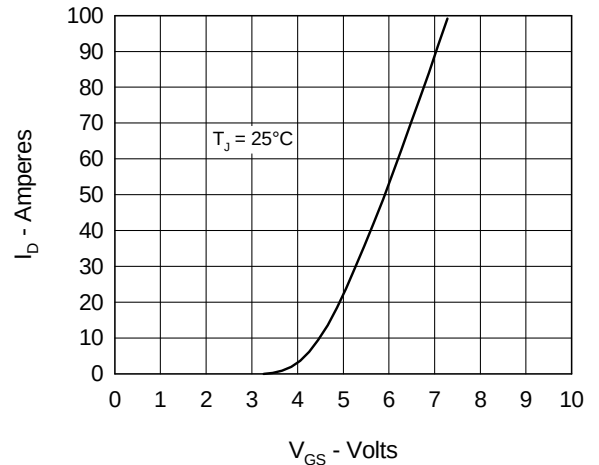
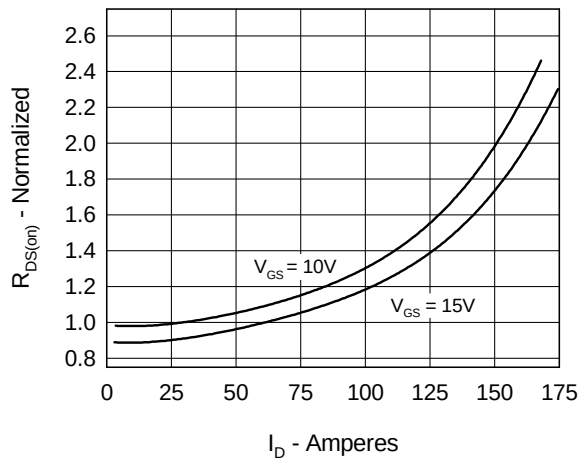

Fig. 3 $R_{DS(on)}$ vs. Drain Current


Fig. 4 Temperature Dependence of Drain to Source Resistance

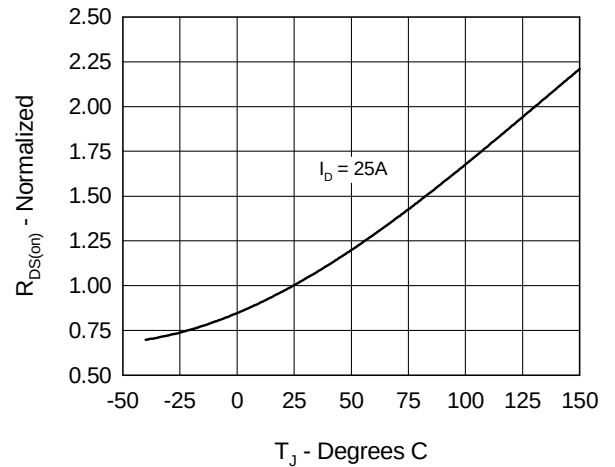


Fig. 5 Drain Current vs. Case Temperature

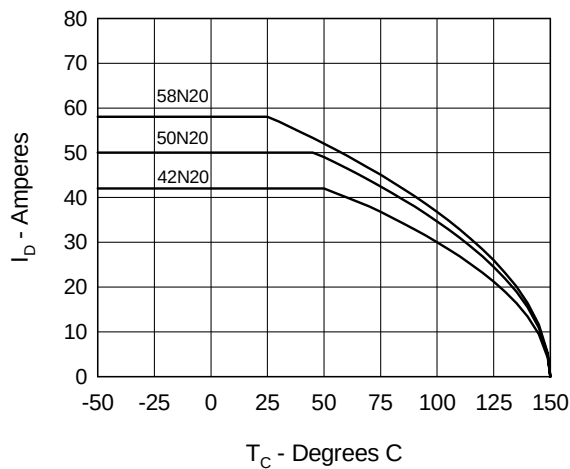


Fig. 6 Temperature Dependence of Breakdown and Threshold Voltage

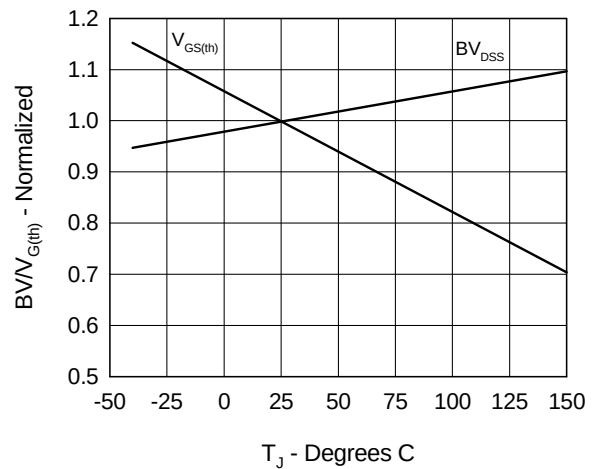


Fig.7 Gate Charge Characteristic Curve

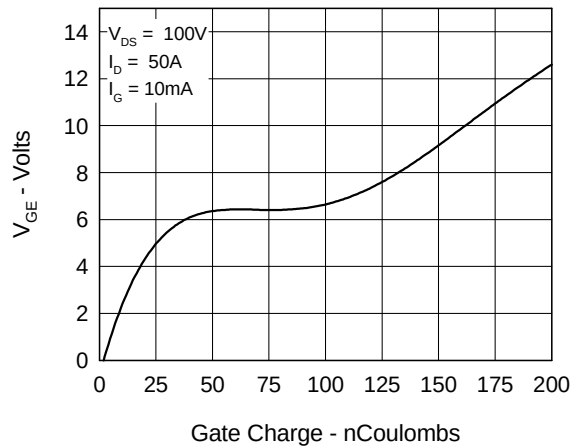


Fig.8 Forward Bias Safe Operating Area

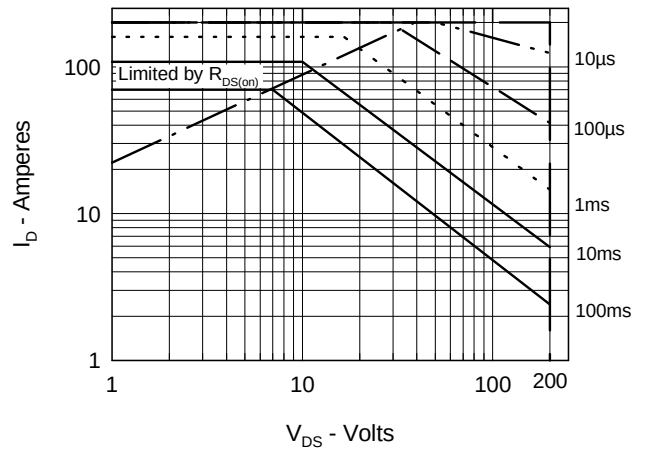


Fig.9 Capacitance Curves

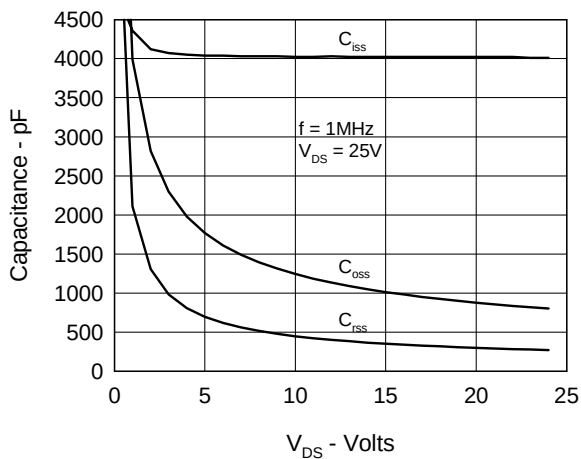


Fig.10 Source Current vs. Source to Drain Voltage

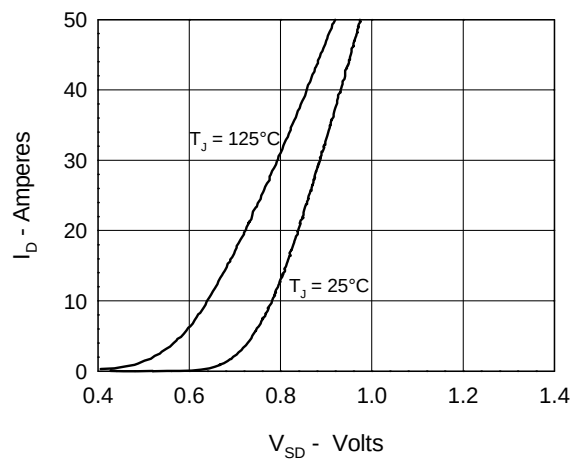
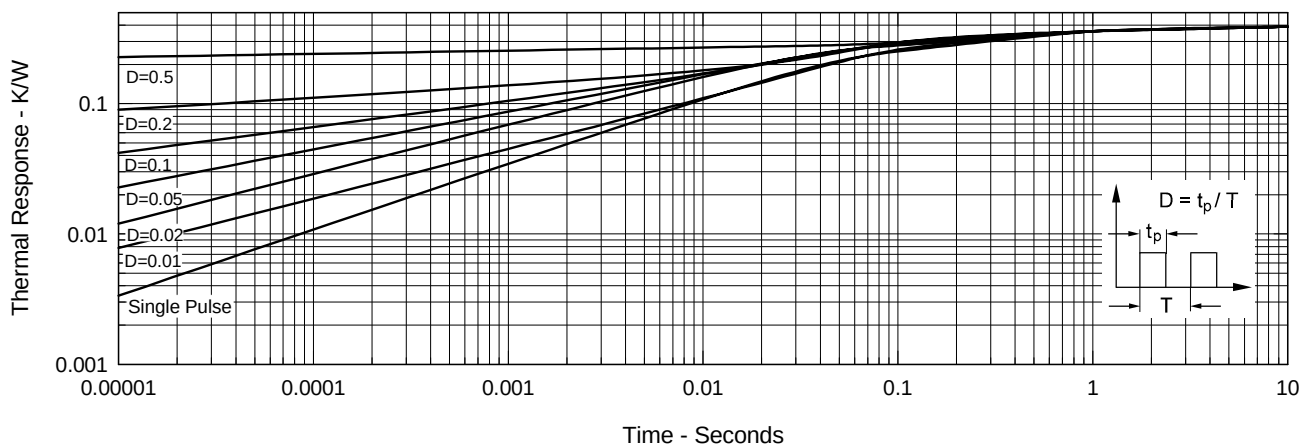


Fig.11 Transient Thermal Impedance





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