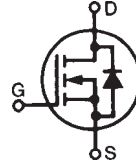


High Voltage Power MOSFET

IXTA05N100 IXTP05N100

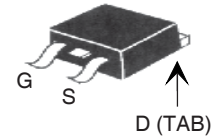
$V_{DSS} = 1000V$
 $I_{D25} = 750mA$
 $R_{DS(on)} \leq 17\Omega$

N-Channel Enhancement Mode
Avalanche Rated

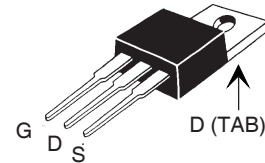


Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^\circ C$ to $150^\circ C$	1000	V
V_{DGR}	$T_J = 25^\circ C$ to $150^\circ C$, $R_{GS} = 1M\Omega$	1000	V
V_{GSS}	Continuous	± 30	V
V_{GSM}	Transient	± 40	V
I_{D25}	$T_C = 25^\circ C$	750	mA
I_{DM}	$T_C = 25^\circ C$, pulse width limited by T_{JM}	3	A
I_A	$T_C = 25^\circ C$	1	A
E_{AS}	$T_C = 25^\circ C$	100	mJ
dv/dt	$I_S \leq I_{DM}$, $V_{DD} \leq V_{DSS}$, $T_J = 150^\circ C$	3	V/ns
P_D	$T_C = 25^\circ C$	40	W
T_J		-55 ... +150	$^\circ C$
T_{JM}		150	$^\circ C$
T_{stg}		-55 ... +150	$^\circ C$
T_L	1.6mm (0.062 in.) from case for 10s	300	$^\circ C$
T_{SOLD}	Plastic body for 10s	260	$^\circ C$
M_d	Mounting torque (TO-220)	1.13 / 10	Nm/lb.in.
Weight	TO-220	3.0	g
	TO-263	2.5	g

TO-263 (IXTA)



TO-220 (IXTP)



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

Features

- International standard packages
- Fast intrinsic diode
- Fast switching times
- Avalanche Rated
- High voltage, $R_{ds(on)}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- Extended FBSOA

Applications

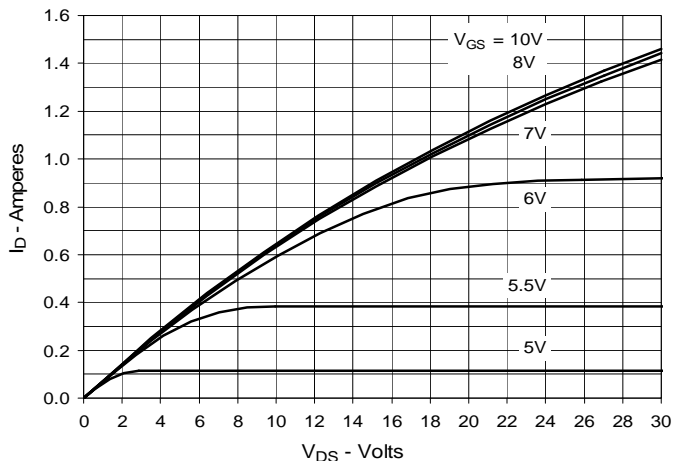
- Switch-mode and resonant-mode power supplies
- Flyback inverters
- DC choppers
- High frequency matching

Advantages

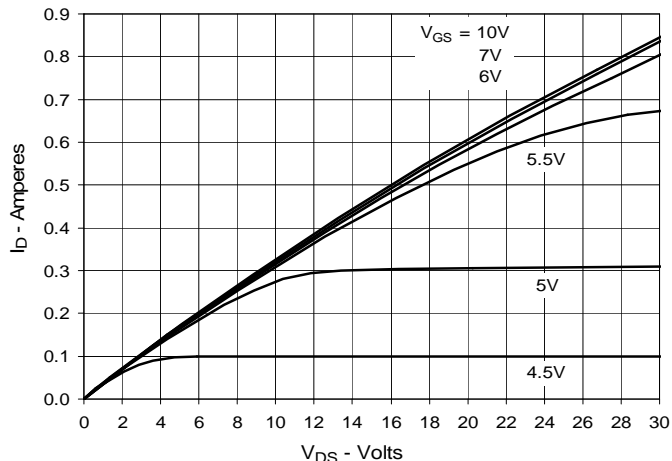
- High power density
- Space savings

Symbol	Test Conditions ($T_J = 25^\circ C$, unless otherwise specified)	Characteristic Values		
		Min.	Typ.	Max.
BV_{DSS}	$V_{GS} = 0V$, $I_D = 250\mu A$	1000		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\mu A$	2.5		V
I_{GSS}	$V_{GS} = \pm 30V$, $V_{DS} = 0V$			± 100 nA
I_{DSS}	$V_{DS} = V_{DSS}$			25 μA
	$V_{GS} = 0V$			500 μA
$R_{DS(on)}$	$V_{GS} = 10V$, $I_D = 375mA$, Note 1			17 Ω

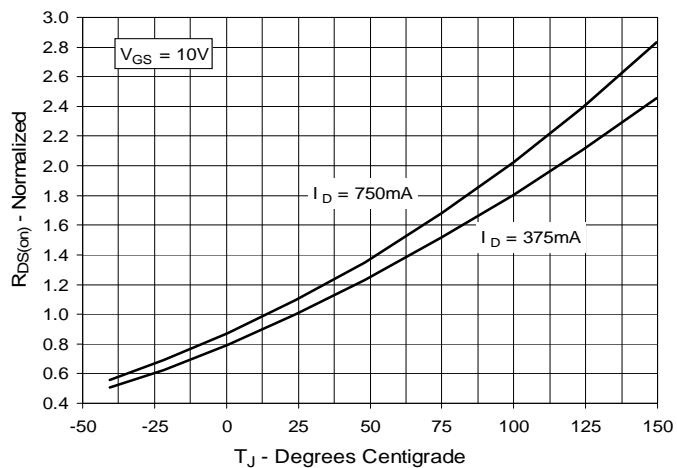
**Fig. 1. Output Characteristics
@ 25°C**



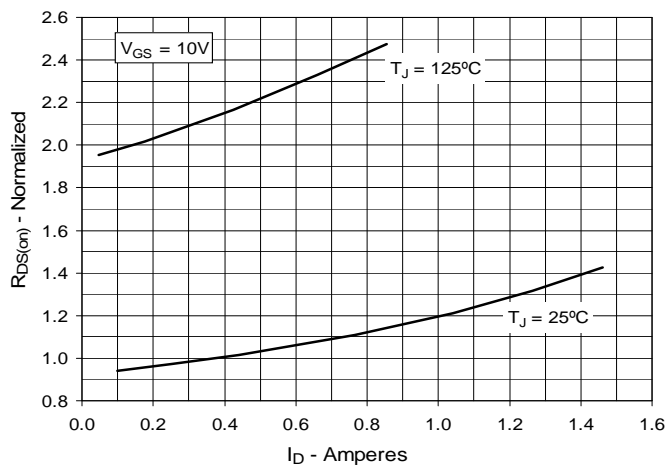
**Fig. 2. Output Characteristics
@ 125°C**



**Fig. 3. $R_{DS(on)}$ Normalized to $I_D = 375mA$
Value vs. Junction Temperature**



**Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 375mA$
Value vs. Drain Current**



**Fig. 5. Maximum Drain Current vs.
Case Temperature**

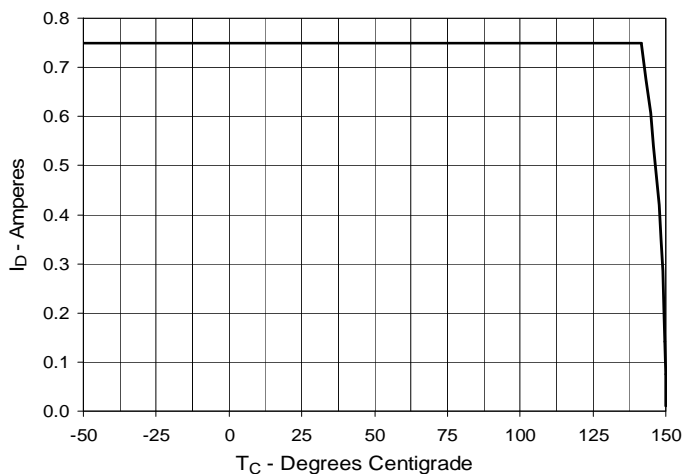


Fig. 6. Input Admittance

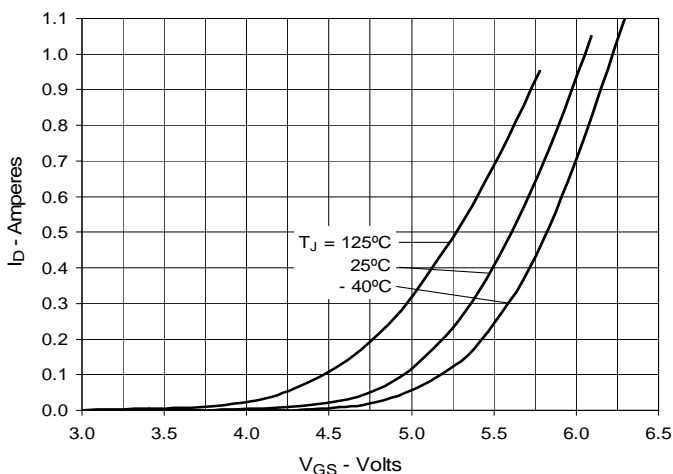


Fig. 7. Transconductance

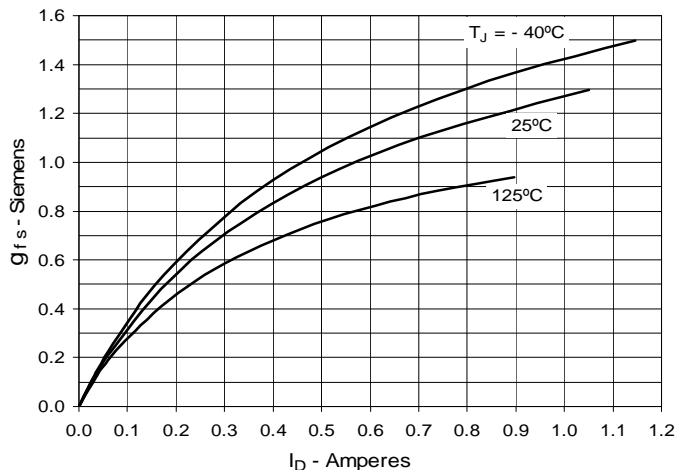


Fig. 8. Forward Voltage Drop of Intrinsic Diode

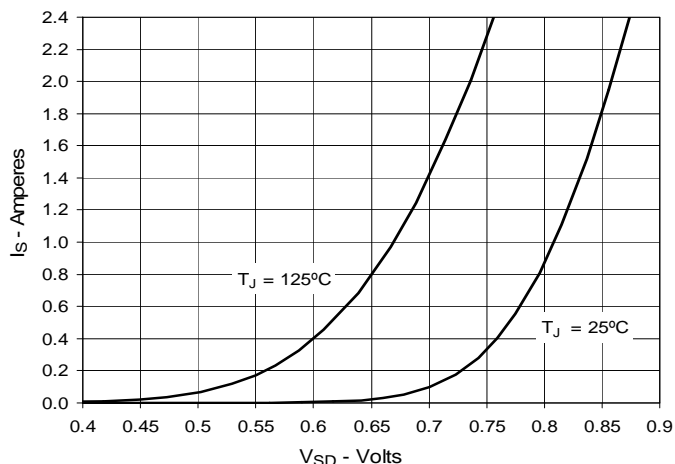


Fig. 9. Gate Charge

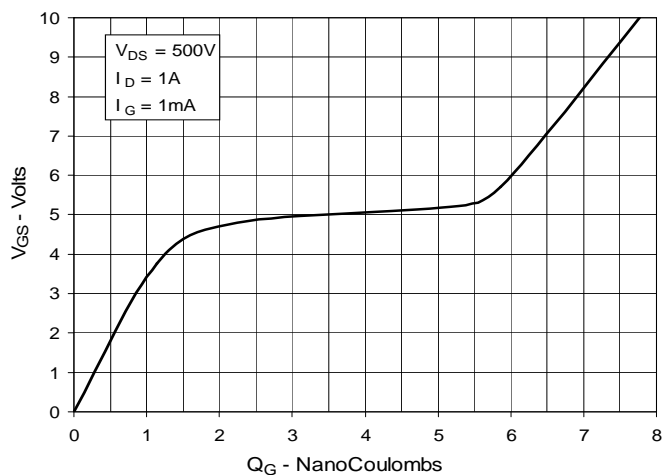


Fig. 10. Capacitance

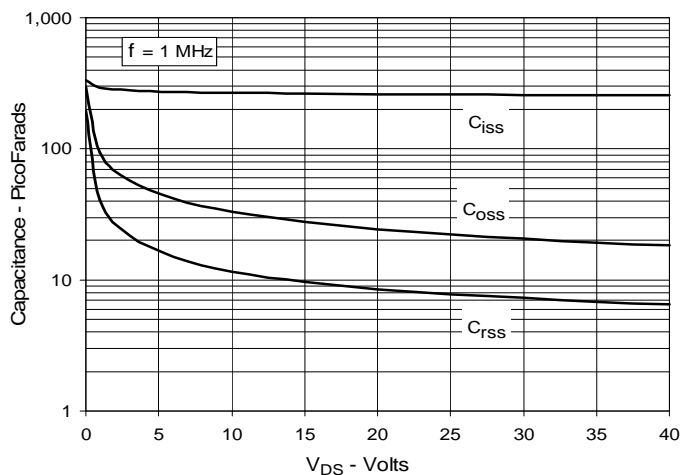


Fig. 11. Maximum Transient Thermal Impedance

