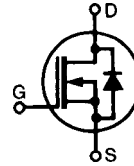


High Voltage MOSFET IXTP 01N100D

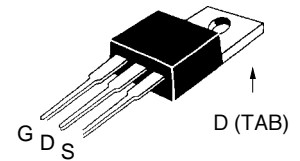
N-Channel, Depletion Mode

$V_{DSS} = 1000 \text{ V}$
 $I_{D25} = 100 \text{ mA}$
 $R_{DS(on)} = 110 \text{ } \Omega$



Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^\circ\text{C}$ to 150°C	1000	V
V_{DGR}	$T_J = 25^\circ\text{C}$ to 150°C ; $R_{GS} = 1 \text{ M}\Omega$	1000	V
V_{GS}	Continuous	± 20	V
V_{GSM}	Transient	± 30	V
I_{D25}	$T_C = 25^\circ\text{C}$; $T_J = 25^\circ\text{C}$ to 150°C	100	mA
I_{DM}	$T_C = 25^\circ\text{C}$, pulse width limited by T_J	400	mA
P_D	$T_C = 25^\circ\text{C}$	25	W
	$T_A = 25^\circ\text{C}$	1.1	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 (0.063 in.) from case for 10 s	300	$^\circ\text{C}$
Weight		1	g

TO-220AB (IXTP)



Features

- Normally ON mode
- Low $R_{DS(on)}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- Fast switching speed

Applications

- Level shifting
- Triggers
- Solid state relays
- Current regulators

Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	$V_{GS} = -10 \text{ V}$, $I_D = 25 \text{ } \mu\text{A}$	1000		V
$V_{GS(off)}$	$V_{DS} = 25 \text{ V}$, $I_D = 25 \text{ } \mu\text{A}$	-2.5		V
I_{GSS}	$V_{GS} = \pm 20 \text{ V}_{DC}$, $V_{DS} = 0$			$\pm 100 \text{ nA}$
$I_{DSS(off)}$	$V_{DS} = V_{DSS}$, $V_{GS} = -10 \text{ V}$	$T_J = 25^\circ\text{C}$		10 μA
		$T_J = 125^\circ\text{C}$		250 μA
$R_{DS(on)}$	$V_{GS} = 0 \text{ V}$, $I_D = 50 \text{ mA}$ Note 1	90	110	Ω
$I_{D(on)}$	$V_{GS} = 0 \text{ V}$, $V_{DS} = 50 \text{ V}$ Note 1	250		mA

Symbol	Test Conditions		Characteristic Values		
			min.	typ.	max.
g_{fs}	$V_{DS} = 50\text{ V}; I_D = I_{D25}$	Note 1	100	150	mS
C_{iss}	$V_{GS} = -10\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$			120	pF
C_{oss}			15	pF	
C_{rss}			3	pF	
$t_{d(on)}$	$V_{gs} = 0\text{ V, to } -10\text{ V}, I_D = 50\text{ mA}$			8	ns
t_r			6	ns	
$t_{d(off)}$			30	ns	
t_f			51	ns	
R_{thJC}				5	K/W

Source-Drain Diode		Characteristic Values		
		$(T_J = 25^\circ\text{C}, \text{ unless otherwise specified})$		
Symbol	Test Conditions	min.	typ.	max.
V_{SD}	$V_{GS} = -10\text{ V}, I_F = I_{D25}$	Note 1	1.0	1.5 V
t_{rr}	$I_F = 0.75\text{ A}, -di/dt = 10\text{ A}/\mu\text{s},$ $V_{DS} = 25\text{ V}, V_{GS} = -10\text{ V}$			1.5 μs

Note 1: Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$

TO-220 AD Dimensions

Pins: 1 - Gate, 2 - Drain, 3 - Source, 4 - Drain Bottom Side

SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.170	.190	4.32	4.83
b	.025	.040	0.64	1.02
b1	.045	.065	1.15	1.65
c	.014	.022	0.35	0.56
D	.580	.630	14.73	16.00
E	.390	.420	9.91	10.66
e	.100 BSC		2.54 BSC	
F	.045	.055	1.14	1.40
H1	.230	.270	5.85	6.85
J1	.090	.110	2.29	2.79
k	0	.015	0	0.38
L	.500	.550	12.70	13.97
L1	.110	.230	2.79	5.84
ØP	.139	.161	3.53	4.08
Q	.100	.125	2.54	3.18

IXYS reserves the right to change limits, test conditions, and dimensions.

IXYS MOSFETS and IGBTs are covered by one or more of the following U.S. patents: 4,835,592 4,881,106 5,017,508 5,049,961 5,187,117 5,486,715
4,850,072 4,931,844 5,034,796 5,063,307 5,237,481 5,381,025