Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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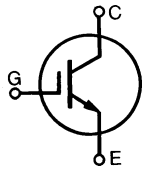
IXYS

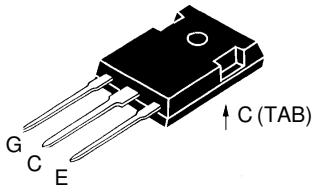
HiPerFAST™ IGBT IXGH32N60B

V_{CES} = 600 V
I_{C25} = 60 A
$V_{CE(sat)}$ = 2.5 V
t_{fi} = 80 ns



Symbol	Test Conditions	Maximum Ratings	
V_{CES}	T_J = 25°C to 150°C	600	V
V_{CGR}	T_J = 25°C to 150°C; R_{GE} = 1 MΩ	600	V
V_{GES}	Continuous	±20	V
V_{GEM}	Transient	±30	V
I_{C25}	T_C = 25°C	60	A
I_{C90}	T_C = 90°C	32	A
I_{CM}	T_C = 25°C, 1 ms	120	A
SSOA (RBSOA)	V_{GE} = 15 V, T_{VJ} = 125°C, R_G = 33 Ω Clamped inductive load, L = 100 μH	I_{CM} = 64 @ 0.8 V_{CES}	A
P_C	T_C = 25°C	200	W
T_J		-55 ... +150	°C
T_{JM}		150	°C
T_{stg}		-55 ... +150	°C
Maximum lead temperature for soldering 1.6 mm (0.062 in.) from case for 10 s		300	°C
M_d	Mounting torque (M3)	1.13/10	Nm/lb.in.
Weight	TO-247 AD	6	g

TO-247 AD



G = Gate, C = Collector,
E = Emitter, TAB = Collector

Symbol	Test Conditions		Characteristic Values (T_J = 25°C, unless otherwise specified) min.	typ.	max.	
BV_{CES}	I_C = 250 μA, V_{GE} = 0 V		600			V
$V_{GE(th)}$	I_C = 250 μA, V_{CE} = V_{GE}		2.5		5	V
I_{CES}	V_{CE} = 0.8 • V_{CES}	T_J = 25°C			200	μA
	V_{GE} = 0 V	T_J = 125°C			1	mA
I_{GES}	V_{CE} = 0 V, V_{GE} = ±20 V				±100	nA
$V_{CE(sat)}$	I_C = I_{C90}, V_{GE} = 15 V				2.5	V

Features

- International standard package JEDEC TO-247 AD
- High current handling capability
- Newest generation HDMOS™ process
- MOS Gate turn-on
  - drive simplicity

Applications

- PFC circuits
- AC motor speed control
- DC servo and robot drives
- DC choppers
- Uninterruptible power supplies (UPS)
- Switched-mode and resonant-mode power supplies

Advantages

- High power density
- Very fast switching speeds for high frequency applications

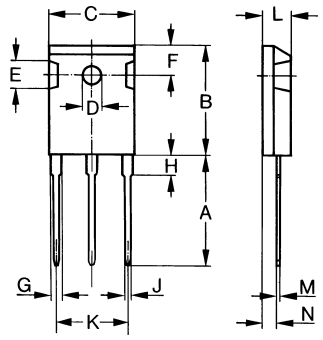
IXYS reserves the right to change limits, test conditions, and dimensions.

95566B (7/00)

Symbol	Test Conditions (T_J = 25°C, unless otherwise specified)	Characteristic Values min.	typ.	max.	
g_{fs}	$I_C = I_{C90}$; V_{CE} = 10 V, Pulse test, t ≤ 300 µs, duty cycle ≤ 2 %	15	20		S
C_{ies}	V_{CE} = 25 V, V_{GE} = 0 V, f = 1 MHz		2500		pF
C_{oes}			230		pF
C_{res}			70		pF
Q_g	$I_C = I_{C90}$, V_{GE} = 15 V, V_{CE} = 0.5 V_{CES}		125	150	nC
Q_{ge}			23	35	nC
Q_{gc}			50	75	nC
$t_{d(on)}$	**Inductive load, T_J = 25°C**		25		ns
t_{ri}	$I_C = I_{C90}$, V_{GE} = 15 V, L = 100 µH,		30		ns
$t_{d(off)}$	V_{CE} = 0.8 V_{CES}, $R_G = R_{off}$ = 4.7 Ω		100	200	ns
t_{fi}	Remarks: Switching times may increase for V_{CE} (Clamp) > 0.8 • V_{CES},		80	150	ns
E_{off}	higher T_J or increased R_G		0.8	1.6	mJ
$t_{d(on)}$	**Inductive load, T_J = 125°C**		25		ns
t_{ri}	$I_C = I_{C90}$, V_{GE} = 15 V, L = 100 µH		35		ns
E_{on}	V_{CE} = 0.8 V_{CES}, $R_G = R_{off}$ = 4.7 Ω		0.3		mJ
$t_{d(off)}$	Remarks: Switching times may		120		ns
t_{fi}	increase for V_{CE} (Clamp) > 0.8 • V_{CES},		120		ns
E_{off}	higher T_J or increased R_G		1.4		mJ
R_{thJC}				0.62	K/W
R_{thCK}			0.25		K/W

IXGH 32N60B characteristic curves are located in the IXGH 32N60BU1 data sheet.

TO-247 AD (IXGH) Outline



Dim.	Millimeter Min.	Max.	Inches Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102