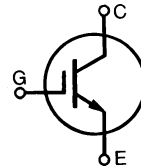


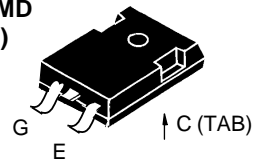
# HiPerFAST™ IGBT

**IXGH32N50B**  
**IXGH32N50BS**

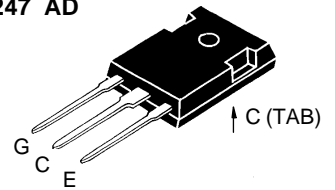
$V_{CES} = 500 \text{ V}$   
 $I_{C25} = 60 \text{ A}$   
 $V_{CE(sat)} = 2.0 \text{ V}$   
 $t_{fi} = 80 \text{ ns}$



**TO-247 SMD (32N50BS)**



**TO-247 AD**



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

Symbol	Test Conditions	Maximum Ratings	
$V_{CES}$	$T_J = 25^\circ\text{C to } 150^\circ\text{C}$	500	V
$V_{CGR}$	$T_J = 25^\circ\text{C to } 150^\circ\text{C}; R_{GE} = 1 \text{ M}\Omega$	500	V
$V_{GES}$	Continuous	$\pm 20$	V
$V_{GEM}$	Transient	$\pm 30$	V
$I_{C25}$	$T_C = 25^\circ\text{C}$	60	A
$I_{C90}$	$T_C = 90^\circ\text{C}$	32	A
$I_{CM}$	$T_C = 25^\circ\text{C}, 1 \text{ ms}$	120	A
<b>SSOA (RBSOA)</b>	$V_{GE} = 15 \text{ V}, T_{VJ} = 125^\circ\text{C}, R_G = 33 \Omega$ Clamped inductive load, $L = 100 \mu\text{H}$	$I_{CM} = 64$ @ $0.8 V_{CES}$	A
$P_C$	$T_C = 25^\circ\text{C}$	200	W
$T_J$		-55 ... +150	$^\circ\text{C}$
$T_{JM}$		150	$^\circ\text{C}$
$T_{stg}$		-55 ... +150	$^\circ\text{C}$
Maximum lead temperature for soldering 1.6 mm (0.062 in.) from case for 10 s		300	$^\circ\text{C}$
$M_d$	Mounting torque (M3)	1.13/10Nm/lb.in.	
<b>Weight</b>	TO-247 AD	6	g
	TO-247 SMD	4	g

Symbol	Test Conditions	Characteristic Values ( $T_J = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$BV_{CES}$	$I_C = 250 \mu\text{A}, V_{GE} = 0 \text{ V}$	500		V
$V_{GE(th)}$	$I_C = 250 \mu\text{A}, V_{CE} = V_{GE}$	2.5		V
$I_{CES}$	$V_{CE} = 0.8 \cdot V_{CES}$ $V_{GE} = 0 \text{ V}$	$T_J = 25^\circ\text{C}$		200 $\mu\text{A}$
		$T_J = 125^\circ\text{C}$		1 mA
$I_{GES}$	$V_{CE} = 0 \text{ V}, V_{GE} = \pm 20 \text{ V}$			$\pm 100 \text{ nA}$
$V_{CE(sat)}$	$I_C = I_{C90}, V_{GE} = 15 \text{ V}$			2.0 V

## Features

- ~ International standard packages JEDEC TO-247 SMD surface mountable and 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

