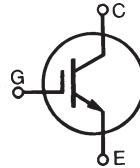


# High Voltage IGBT

**IXGH 24N170A**  
**IXGT 24N170A**

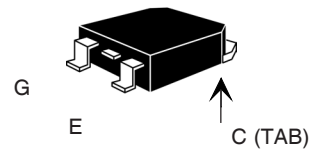
$V_{CES} = 1700 \text{ V}$   
 $I_{C25} = 24 \text{ A}$   
 $V_{CE(sat)} = 6.0 \text{ V}$   
 $t_{fi(typ)} = 45 \text{ ns}$

## Preliminary Data Sheet

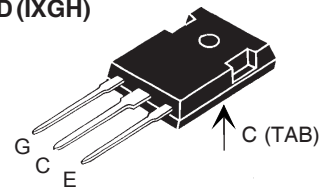


Symbol	Test Conditions	Maximum Ratings	
$V_{CES}$	$T_J = 25^\circ\text{C to } 150^\circ\text{C}$	1700	V
$V_{CGR}$	$T_J = 25^\circ\text{C to } 150^\circ\text{C}; R_{GE} = 1 \text{ M}\Omega$	1700	V
$V_{GES}$	Continuous	$\pm 20$	V
$V_{GEM}$	Transient	$\pm 30$	V
$I_{C25}$	$T_C = 25^\circ\text{C}$	24	A
$I_{C90}$	$T_C = 90^\circ\text{C}$	16	A
$I_{CM}$	$T_C = 25^\circ\text{C}, 1 \text{ ms}$	75	A
<b>SSOA (RBSOA)</b>	$V_{GE} = 15 \text{ V}, T_{VJ} = 125^\circ\text{C}, R_G = 5\Omega$ Clamped inductive load	$I_{CM} = 50$ @ $0.8 V_{CES}$	A
$t_{SC}$	$T_J = 125^\circ\text{C}, V_{CE} = 1200 \text{ V}; V_{GE} = 15 \text{ V}, R_G = 22\Omega$	10	$\mu\text{s}$
$P_C$	$T_C = 25^\circ\text{C}$	250	W
$T_J$		-55 ... +150	$^\circ\text{C}$
$T_{JM}$		150	$^\circ\text{C}$
$T_{stg}$		-55 ... +150	$^\circ\text{C}$
$M_d$	Mounting torque (M3) (TO-247)	1.13/10Nm/lb.in.	
Maximum lead temperature for soldering 1.6 mm (0.062 in.) from case for 10 s		300	$^\circ\text{C}$
<b>Weight</b>		TO-247 TO-268	6 4 g

### TO-268 (IXGT)



### TO-247 AD (IXGH)



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

### Features

- International standard packages JEDEC TO-268 and JEDEC TO-247 AD
- High current handling capability
- MOS Gate turn-on - drive simplicity
- Rugged NPT structure
- Molding epoxies meet UL 94 V-0 flammability classification

### Applications

- Capacitor discharge & pulser 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
- Suitable for surface mounting
- Easy to mount with 1 screw, (isolated mounting screw hole)

Symbol	Test Conditions	Characteristic Values ( $T_J = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$BV_{CES}$	$I_C = 250 \mu\text{A}, V_{GE} = 0 \text{ V}$	1700		V
$V_{GE(th)}$	$I_C = 250 \mu\text{A}, V_{CE} = V_{GE}$	3.0		V
$I_{CES}$	$V_{CE} = 0.8 \cdot V_{CES}$ $V_{GE} = 0 \text{ V}$		$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	50 1000 $\mu\text{A}$
$I_{GES}$	$V_{CE} = 0 \text{ V}, V_{GE} = \pm 20 \text{ V}$			$\pm 100 \text{ nA}$
$V_{CE(sat)}$	$I_C = I_{C90}, V_{GE} = 15 \text{ V}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	4.5 4.8	V V

