

# IGBT Transistor

## **GT15J102**

600V / 15A

# DATASHEET

OEM – Toshiba

Source: Toshiba Databook 1995/96


## MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC              | SYMBOL | RATING  | UNIT |
|-----------------------------|--------|---------|------|
| Collector-Emitter Voltage   | Vces   | 600     | V    |
| Gate-Emitter Voltage        | Vges   | +/-20   | V    |
| Collector Current           | DC     | IC      | 15   |
|                             | 1ms    | Icp     | 30   |
| Collector Power Dissipation | Pc     | 35      | W    |
| Junction Temperature        | Tj     | 150     | °C   |
| Storage Temperature Range   | Tstg   | -55~150 | °C   |

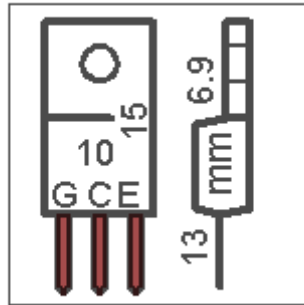
Source: Toshiba IGBT Databook 95/96

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTICS                      | SYMBOL        | TEST CONDITION            | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---------------|---------------------------|------|------|------|------|
| Gate Leakage Current                 | Iges          | Uge=+/-20V, Vce=0         | -    | -    | +500 | nA   |
| Collector Cut-off Current            | Ices          | Uce=600V, Uge=0           | -    | -    | 1.0  | mA   |
| Collector-Emitter Breakdown Voltage  | U(br) CES     | Ic=2mA, Uge=0             | 600  | -    | -    | V    |
| Gate-Emitter Cut-off Voltage         | Uge (off)     | Ic=15mA, Uce=5V           | 3.0  | -    | 6.0  | V    |
| Collector-Emitter Saturation Voltage | Uce (sat)     | IC=15A, Uge=15V           | -    | 3.0  | 4.0  | V    |
| Input Capacitance                    | Cies          | Uce=10V, Uge=0,<br>f=1MHz | -    | 1100 | -    | pF   |
| Switching Time                       | Rise Time     | tr                        | -    | 0.30 | 0.60 | uS   |
|                                      | Turn-on Time  | ton                       | -    | 0.40 | 0.80 |      |
|                                      | Fall Time     | tf                        | -    | 0.15 | 0.35 |      |
|                                      | Turn-off Time | toff                      | -    | 0.50 | 1.00 |      |



2-10R1C



EQUIVALENT CIRCUIT

