

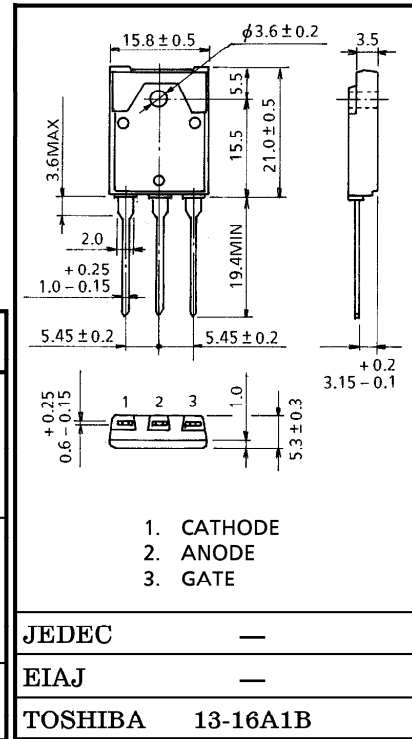
MEDIUM POWER CONTROL APPLICATIONS.

Unit in mm

- Repetitive Peak Off-State Voltage :  $V_{DRM}$   
 Repetitive Peak Reverse Voltage :  $V_{RRM}$  } = 400, 600V
- Average On-State Current :  $I_{T(AV)} = 16A$
- Isolation Voltage :  $V_{Isol} = 1500V$  AC

**MAXIMUM RATINGS**

| CHARACTERISTIC  |          | SYMBOL                 | RATING     | UNIT        |
|---|----------|------------------------|------------|-------------|
| Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage                   | SF16GZ51 | $V_{DRM}$<br>$V_{RRM}$ | 400        | V           |
|   | SF16JZ51 |                        | 600        |             |
| Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j = 0 \sim 125^\circ C$ ) | SF16GZ51 | $V_{RSM}$              | 500        | V           |
|   | SF16JZ51 |                        | 720        |             |
| Average On-State Current (Half Sine Waveform)   |          | $I_{T(AV)}$            | 16         | A           |
| R.M.S On-State Current  |          | $I_{T(RMS)}$           | 25         | A           |
| Peak One Cycle Surge On-State Current (Non-Repetitive)                                  |          | $I_{TSM}$              | 250 (50Hz) | A           |
|   |          |                        | 275 (60Hz) |             |
| $I^2t$ Limit Value ( $t = 1 \sim 10ms$ )  |          | $I^2t$                 | 312        | $A^2s$      |
| Critical Rate of Rise of On-State Current (Note)  |          | $di / dt$              | 100        | $A / \mu s$ |
| Peak Gate Power Dissipation   |          | $P_{GM}$               | 5          | W           |
| Average Gate Power Dissipation  |          | $P_{G(AV)}$            | 0.5        | W           |
| Peak Forward Gate Voltage   |          | $V_{FGM}$              | 10         | V           |
| Peak Reverse Gate Voltage   |          | $V_{RGM}$              | -5         | V           |
| Peak Forward Gate Current   |          | $I_{GM}$               | 2          | A           |
| Junction Temperature  |          | $T_j$                  | -40~125    | $^\circ C$  |
| Storage Temperature Range   |          | $T_{stg}$              | -40~125    | $^\circ C$  |
| Isolation Voltage (AC, $t = 1min.$ )  |          | $V_{Isol}$             | 1500       | V           |



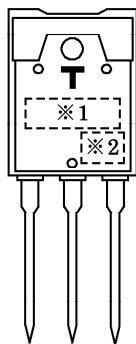
Weight : 5.9g

# SF16GZ51, SF16JZ51

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

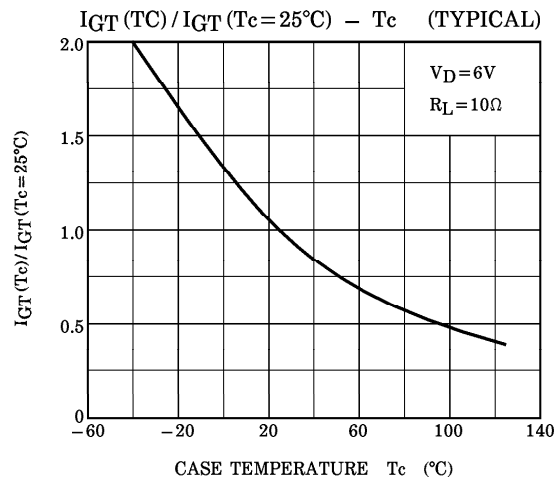
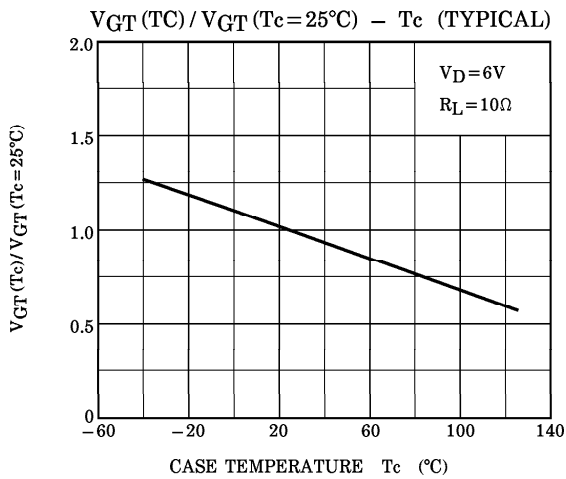
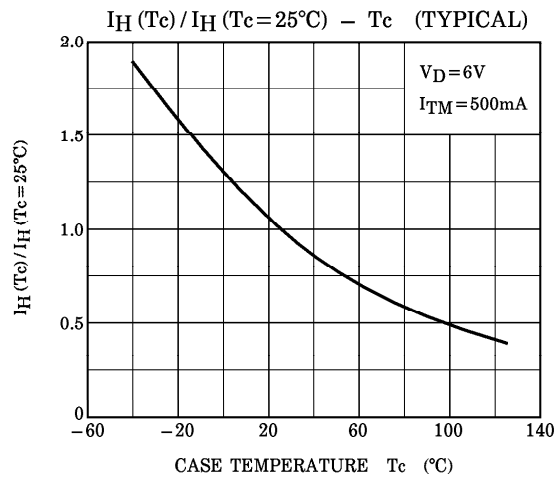
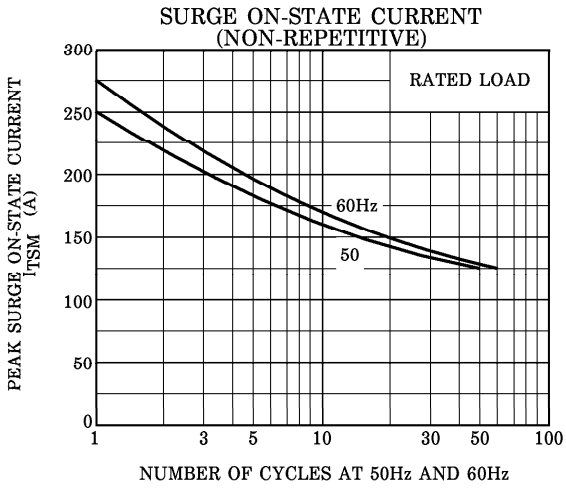
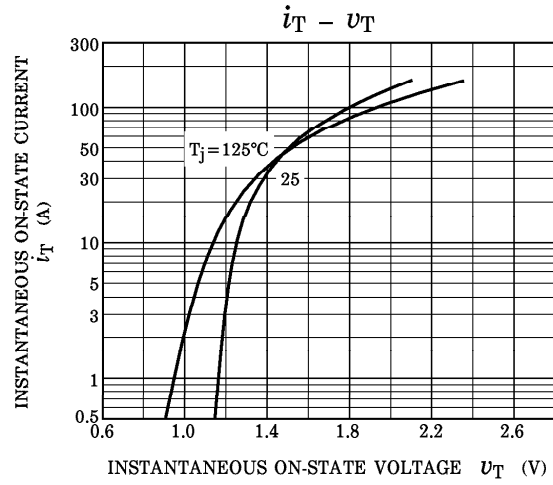
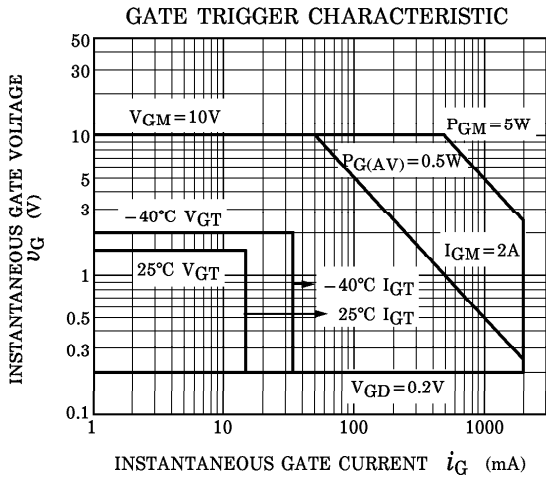
| CHARACTERISTIC  | SYMBOL                 | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT                        |
|---|------------------------|---|------|------|------|-----------------------------|
| Repetitive Peak Off-State Current and Repetitive Peak Reverse Current | $I_{DRM}$<br>$I_{RRM}$ | $V_{DRM} = V_{RRM} = \text{Rated}$                                    | —    | —    | 20   | $\mu\text{A}$               |
| Peak On-State Voltage   | $V_{TM}$               | $I_{TM} = 50\text{A}$   | —    | —    | 1.5  | V                           |
| Gate Trigger Voltage  | $V_{GT}$               | $V_D = 6\text{V}, R_L = 10\Omega$                                     | —    | —    | 1.5  | V                           |
| Gate Trigger Current  | $I_{GT}$               |   | —    | —    | 15   | mA                          |
| Holding Current   | $I_H$                  | $V_D = 6\text{V}, I_{TM} = 500\text{mA}$                              | —    | —    | 50   | mA                          |
| Critical Rate of Rise of Off-State Voltage                            | $dv/dt$                | $V_{DRM} = \text{Rated}, T_c = 125^\circ\text{C}$<br>Exponential Rise | —    | 50   | —    | $\text{V} / \mu\text{s}$    |
| Thermal Resistance  | $R_{th(j-c)}$          | Junction to Case  | —    | —    | 1.5  | $^\circ\text{C} / \text{W}$ |

MARK

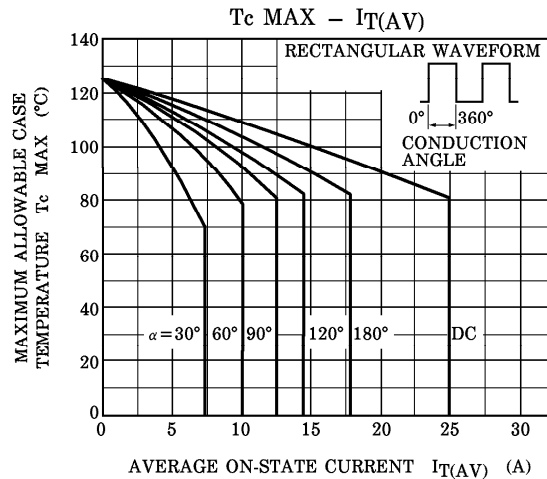
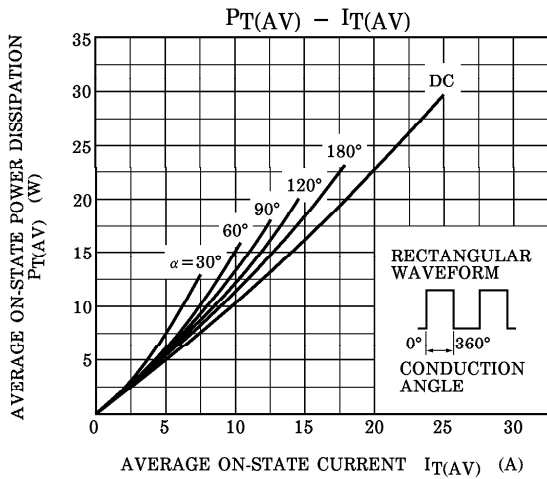
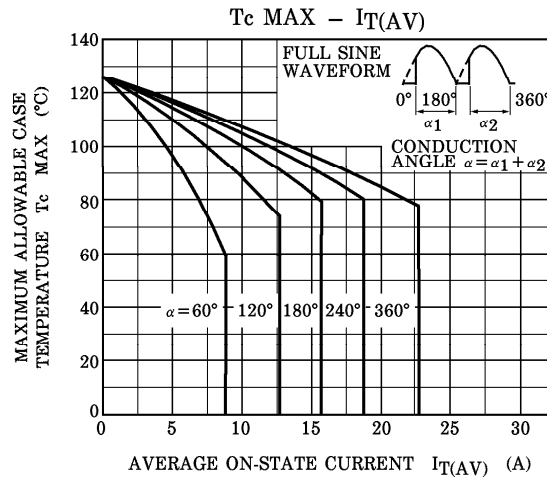
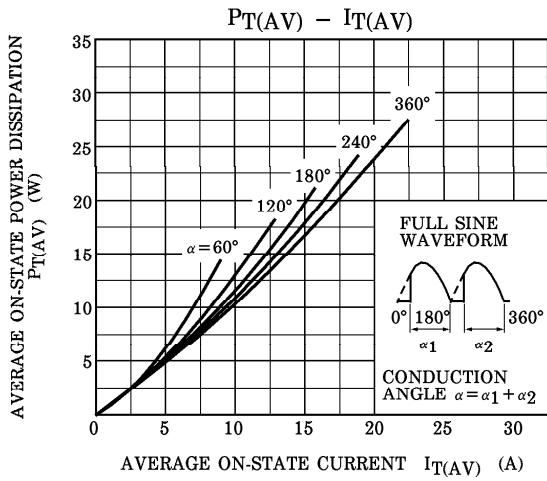
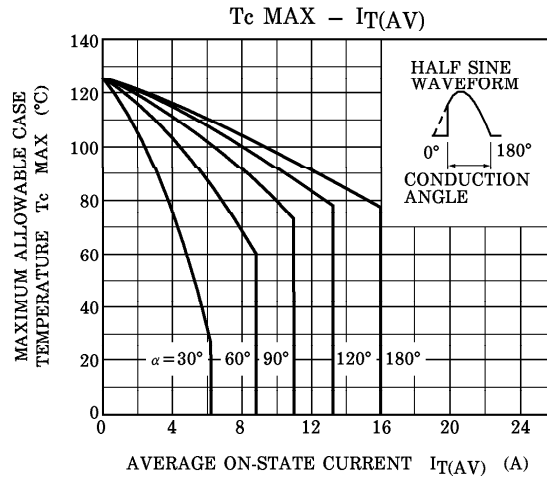
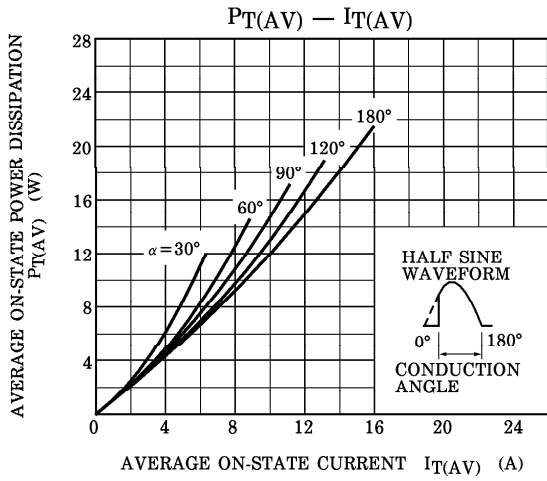


| NUMBER | SYMBOL  |          | MARK   |
|--------|---|----------|--|
| ※1     | TYPE  | SF16GZ51 | F16GZ51  |
|        |   | SF16JZ51 | F16JZ51  |
| ※2     | Lot Number<br>Month (Starting from )<br>(Alphabet A )<br>Year (Last Number of )<br>(the Christian Era ) |          | Example<br>2A : January 1992<br>2B : February 1992<br>2L : December 1992 |

# SF16GZ51, SF16JZ51



# SF16GZ51, SF16JZ51



# SF16GZ51, SF16JZ51

