

# SG10SC4M

## Schottky Barrier Diodes

40V, 10A

### Feature

- High Recovery Speed
- $T_j=175^{\circ}\text{C}$
- Low  $V_F$
- Pb free terminal
- RoHS:Yes

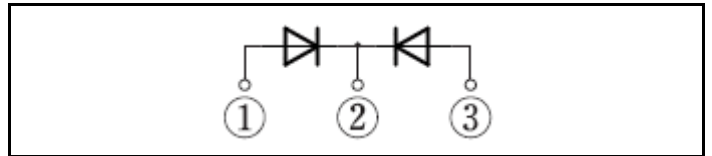
### OUTLINE

Package (House Name): FTO-220G

Package (JEITA Code): SC-91



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : $T_c=25^{\circ}\text{C}$ )

| Item                                  | Symbol     | Conditions                                                                                                    | Ratings    | Unit                    |
|---------------------------------------|------------|---------------------------------------------------------------------------------------------------------------|------------|-------------------------|
| Storage temperature                   | $T_{stg}$  |                                                                                                               | -55 to 175 | $^{\circ}\text{C}$      |
| Junction temperature                  | $T_j$      |                                                                                                               | -55 to 175 | $^{\circ}\text{C}$      |
| Repetitive peak reverse voltage       | $V_{RRM}$  |                                                                                                               | 40         | V                       |
| Repetitive peak surge reverse voltage | $V_{RRSM}$ | Pulse width 0.5ms, duty=1/40                                                                                  | 45         | V                       |
| Average forward current               | $I_F(AV)$  | 50Hz sine wave, Resistance load, Rating for each diode $I_F(AV)/2$ , With heatsink, $T_c=150^{\circ}\text{C}$ | 10         | A                       |
| Surge forward current                 | $I_{FSM}$  | 50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$                                 | 150        | A                       |
| Dielectric strength                   | $V_{dis}$  | Terminals to case backside, AC 1 minute.                                                                      | 1.5        | kV                      |
| Mounting torque                       | TOR        | (Recommended torque : $0.3\text{N}\cdot\text{m}$ )                                                            | 0.5        | $\text{N}\cdot\text{m}$ |

※ : See the original Specifications

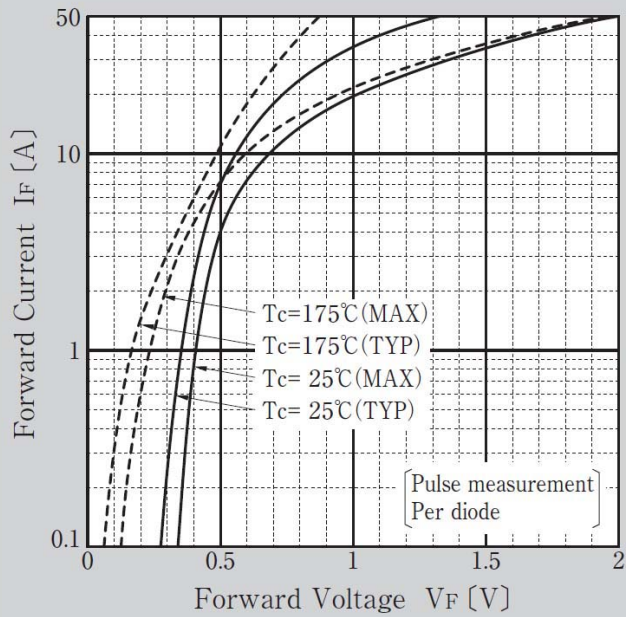
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

| Item               | Symbol               | Conditions                                        | Ratings |      |      | Unit |
|--------------------|----------------------|---------------------------------------------------|---------|------|------|------|
|                    |                      |                                                   | MIN     | TYP  | MAX  |      |
| Forward voltage    | V <sub>F</sub>       | I <sub>F</sub> =5A, Pulse measurement, per diode  |         | 0.46 | 0.52 | V    |
| Reverse current    | I <sub>R</sub>       | V <sub>R</sub> =40V, Pulse measurement, per diode |         |      | 0.5  | mA   |
| Total capacitance  | C <sub>t</sub>       | f=1MHz, V <sub>R</sub> =10V, per diode            |         | 157  |      | pF   |
| Thermal resistance | R <sub>th(j-c)</sub> | Junction to case, With heatsink                   |         |      | 3    | °C/W |

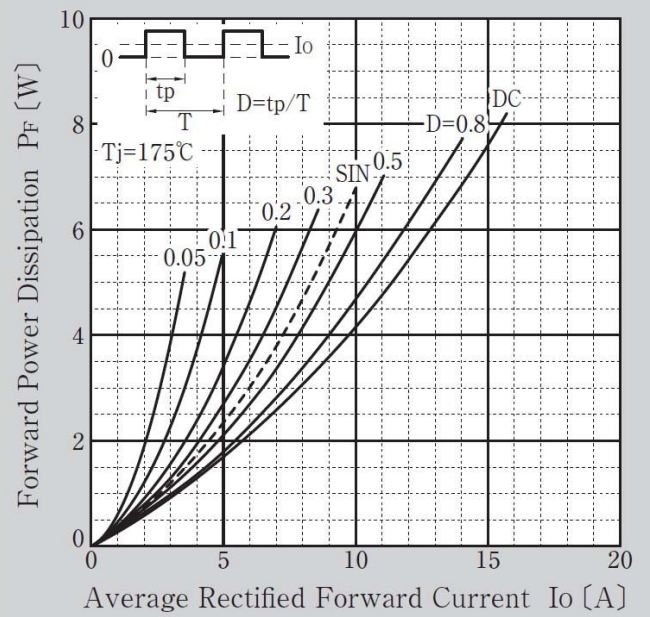
\* : See the original Specifications

# CHARACTERISTIC DIAGRAMS

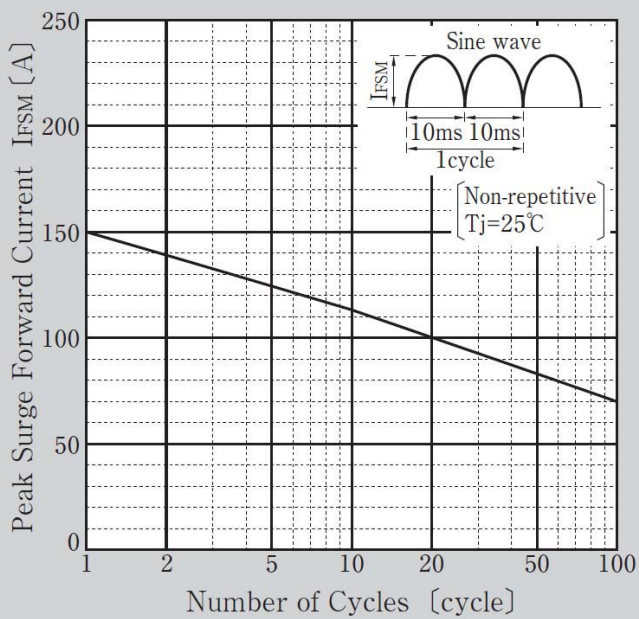
### Forward Voltage



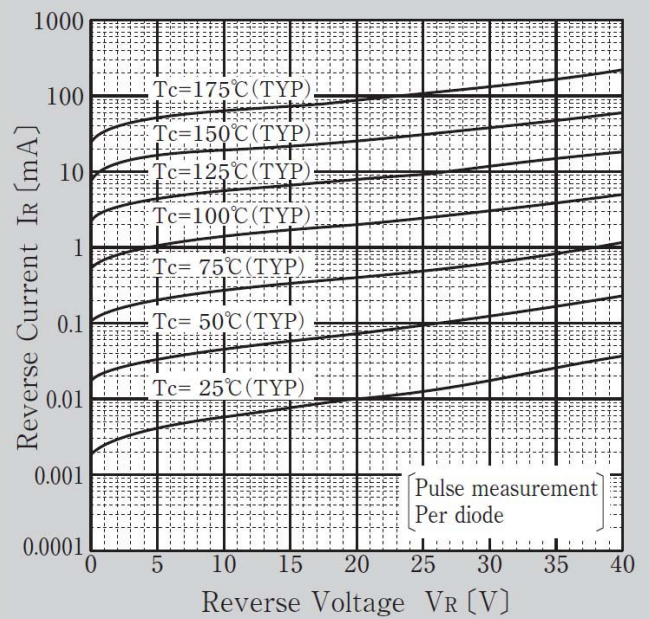
### Forward Power Dissipation



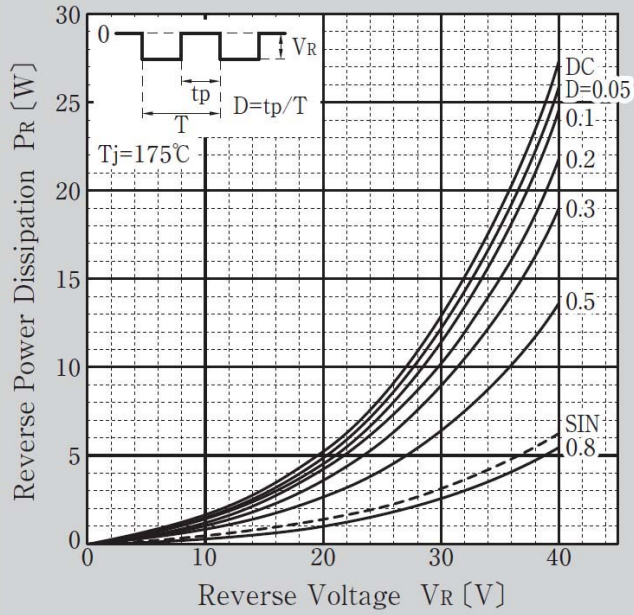
### Peak Surge Forward Current Capability



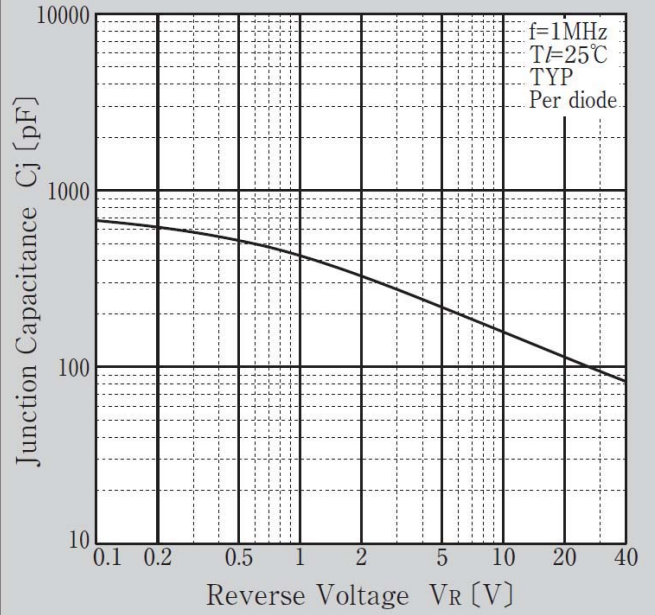
### Reverse Current



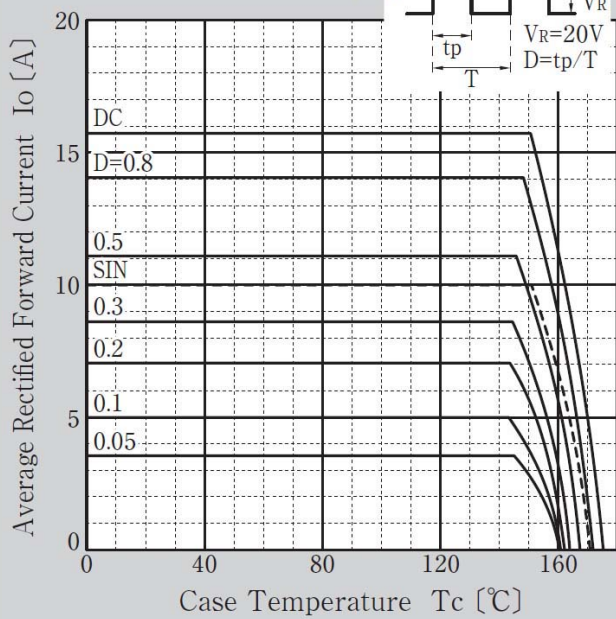
### Reverse Power Dissipation



### Junction Capacitance

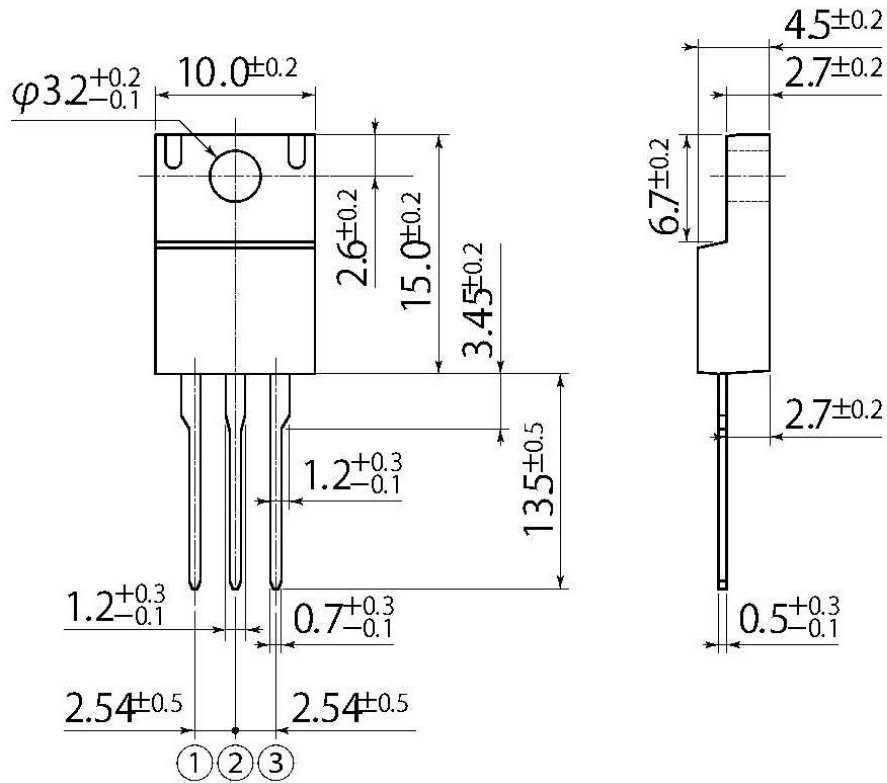


### Derating Curve



J9

|            |                |
|------------|----------------|
| JEDEC Code | -              |
| JEITA Code | SC-91          |
| House Name | FTO-220G(3pin) |



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