

TOSHIBA FAST RECOVERY DIODE SILICON DIFFUSED TYPE

**50FXFG13, 50FXFH13**

HIGH SPEED RECTIFIER APPLICATIONS

Unit in mm

- Repetitive Peak Reverse Voltage :  $V_{RRM}=3300V$
- Average Forward Current :  $I_F(AV)=50A$
- Reverse Recovery Time ( $T_j=25^\circ C$ ) :  $t_{rr}=2.0\mu s$

## MAXIMUM RATINGS

| CHARACTERISTIC                                                                             | SYMBOL    | RATING                     | UNIT       |
|--------------------------------------------------------------------------------------------|-----------|----------------------------|------------|
| Repetitive Peak Reverse Voltage                                                            | $V_{RRM}$ | 3300                       | V          |
| Non-Repetitive Peak Reverse Voltage (Non-Repetitive $\leq 5ms$ , $T_j=0\sim 125^\circ C$ ) | $V_{RSM}$ | 3400                       | V          |
| Average Forward Current                                                                    | $I_F(AV)$ | 50                         | A          |
| Peak One Cycle Surge Forward Current (Non-Repetitive)                                      | $I_{FSM}$ | 1000 (50Hz)<br>1100 (60Hz) | A          |
| Junction Temperature Range                                                                 | $T_j$     | $-40\sim 125$              | $^\circ C$ |
| Storage Temperature Range                                                                  | $T_{stg}$ | $-40\sim 125$              | $^\circ C$ |
| Screw Torque                                                                               | —         | 1.6                        | N·m        |

|         |          |          |
|---------|----------|----------|
|         | 50FXFG13 | 50FXFH13 |
| 1       | ANODE    | CATHODE  |
| 2       | CATHODE  | ANODE    |
| JEDEC   | —        |          |
| EIAJ    | —        |          |
| TOSHIBA | 3-29A1A  | 3-29A1B  |

Weight : 100g

## ELECTRICAL CHARACTERISTICS

| CHARACTERISTIC                  | SYMBOL        | TEST CONDITION                      | MIN.                                  | MAX.       | UNIT         |
|---------------------------------|---------------|-------------------------------------|---------------------------------------|------------|--------------|
| Repetitive Peak Reverse Current | $I_{RRM}$     | $V_{RRM}=3300V$ , $T_j=125^\circ C$ | —                                     | 50         | mA           |
| Peak Forward Voltage            | $V_{FM}$      | $I_{FM}=150A$ ( $T_j=25^\circ C$ )  | —                                     | 1.7        | V            |
| Reverse Recovery Time           | $t_{rr}$      | $I_F=50A$<br>$di_F/dt=100A/\mu s$   | $T_j=25^\circ C$<br>$T_j=125^\circ C$ | 2.0<br>2.5 | $\mu s$      |
| Thermal Resistance              | $R_{th(j-c)}$ | Junction to Fin                     | —                                     | 0.26       | $^\circ C/W$ |

Note : Contact thermal resistance  $R_{th(c-f)}=0.07^\circ C/W$  (Applied silicone grease)

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