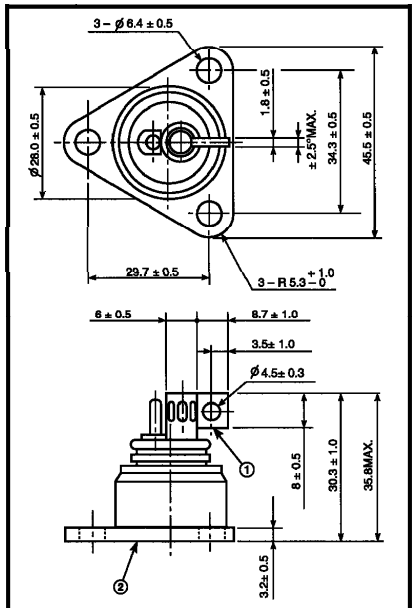
TOSHIBA FAST RECOVERY DIODE SILICON DIFFUSED TYPE

# 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°C) : $t_{rr}$ = 2.0 μs




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

Weight : 100g

MAXIMUM RATINGS

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 3300 | V |
| Non-Repetitive Peak Reverse Voltage (Non-Repetitive ≦ 5ms, $T_j$ = 0~125°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) | A |
| | | 1100 (60Hz) | |
| Junction Temperature Range | $T_j$ | −40~125 | °C |
| Storage Temperature Range | $T_{stg}$ | −40~125 | °C |
| Screw Torque | — | 1.6 | N·m |

ELECTRICAL CHARACTERISTICS

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

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

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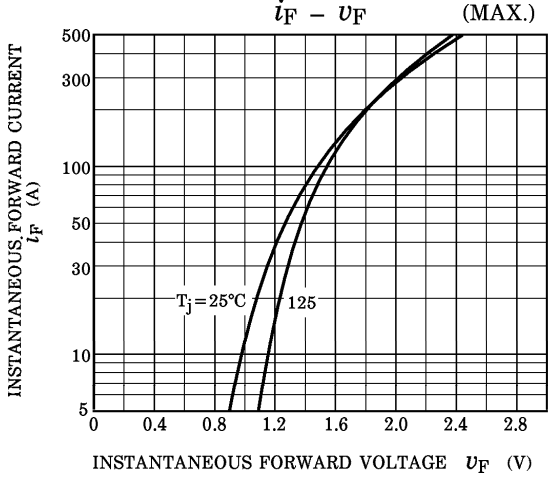
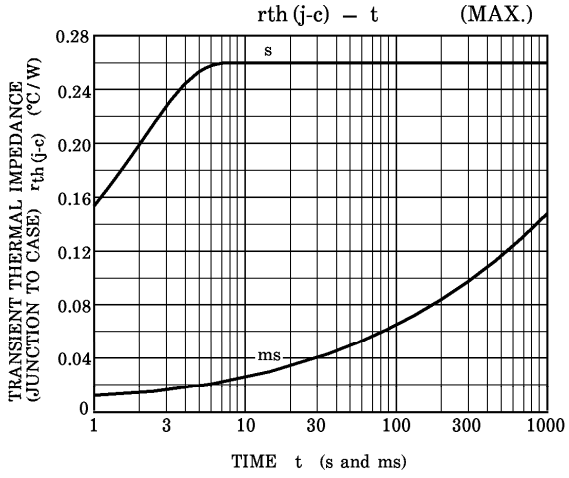
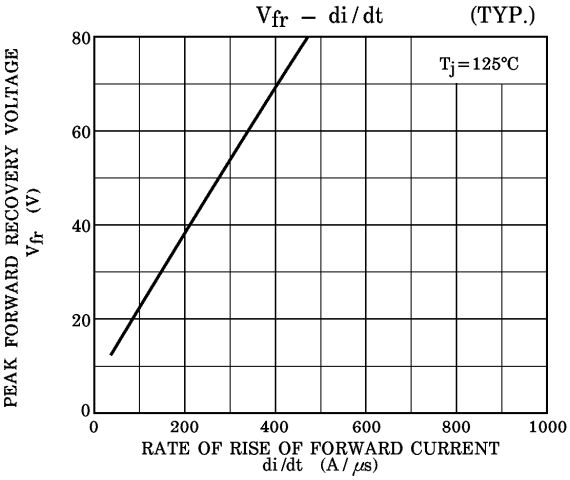
$i_F$ – $v_F$ (MAX.)




rth (j-c) – t (MAX.)




$V_{fr}$ – di/dt (TYP.)




$t_{rr}$, $I_{rr}$, $Q_{rr}$ – $di_F/dt$ (TYP.)