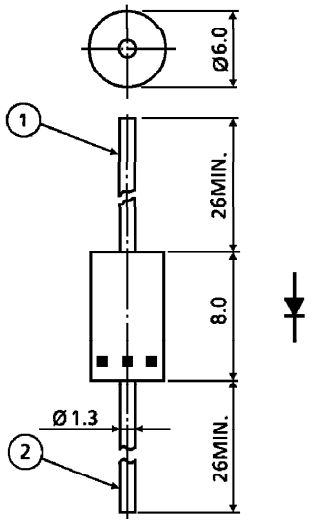
TOSHIBA SCHOTTKY BARRIER RECTIFIER SCHOTTKY BARRIER TYPE

# 3GWJ42

HIGH SPEED RECTIFIER APPLICATIONS

Unit in mm

- Average Forward Current : $I_{F(AV)}$ = 3.0A
- Low Forward Voltage : $V_{FM}$ = 0.55V (Max.)




1. ANODE
2. CATHOD

| | |
|---|---|
| JEDEC | DO-201AD |
| EIAJ | — |
| TOSHIBA | 3-6E1A |

Weight : 1.18g

MAXIMUM RATINGS (Ta = 25°C)

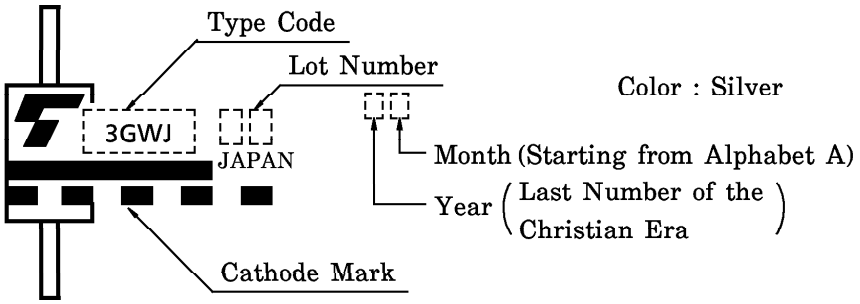
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 40 | V |
| Average Forward Current | $I_{F(AV)}$ | 3.0 | A |
| Peak One Cycle Surge Forward Current (Non-Repetitive) | $I_{FSM}$ | 120 (50Hz) | A |
| | | 132 (60Hz) | |
| Junction Temperature | $T_j$ | −40~125 | °C |
| Storage Temperature Range | $T_{stg}$ | −40~125 | °C |

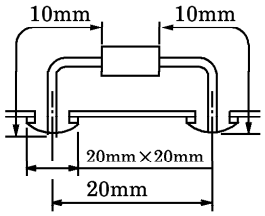
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Peak Forward Voltage | $V_{FM}$ | $I_{FM}$ = 3.0A | — | — | 0.55 | V |
| Repetitive Peak Reverse Current | $I_{RRM}$ | $V_{RRM}$ = 40V | — | — | 3.0 | mA |
| Reverse Recovery Time | $t_{rr}$ | $I_F$ = 1.0A, di / dt = −30A / μs | — | — | 35 | ns |
| Junction Capacitance | $C_j$ | $V_R$ = 10V, f = 1MHz | — | 132 | — | pF |
| Thermal Resistance (Note 1) | $R_{th(j-a)}$ | Junction to Ambient | — | — | 57 | °C / W |
| Thermal Resistance (Note 1) | $R_{th(j-\ell)}$ | Junction to Lead | — | — | 14 | °C / W |

Note 1 : THERMAL RESISTANCE

MARKING

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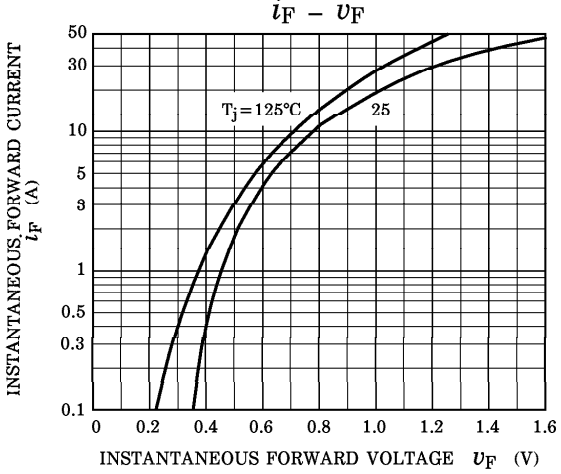
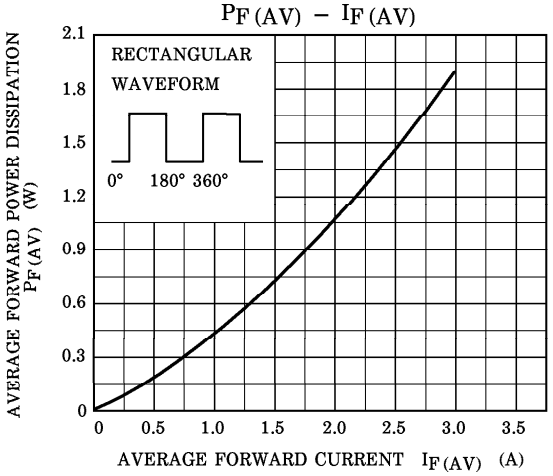
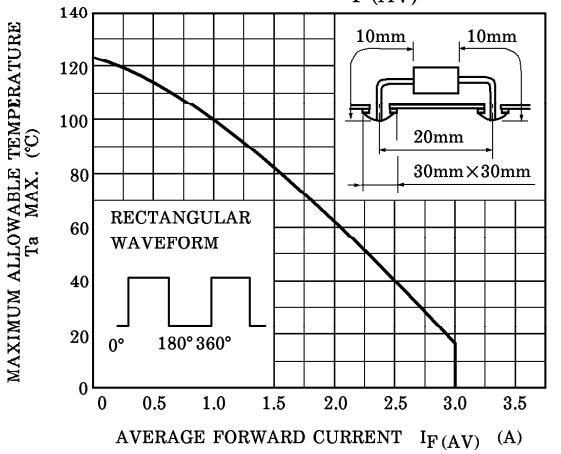
$i_F - v_F$



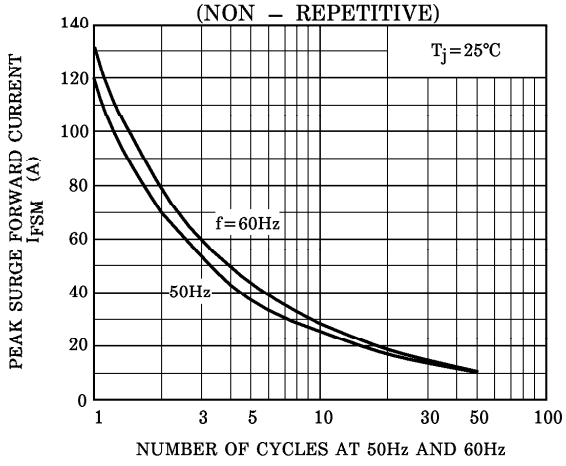

$P_{F(AV)} - I_{F(AV)}$



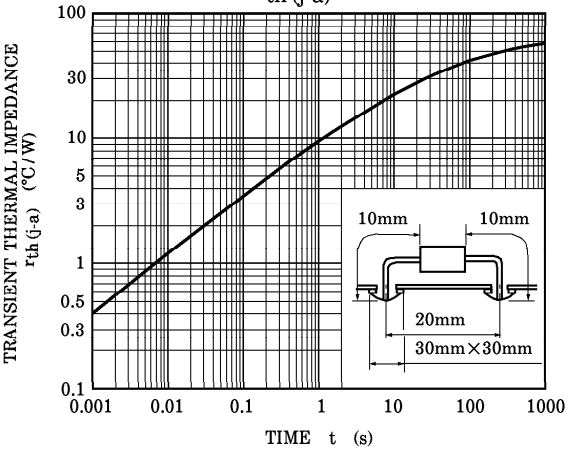

Ta MAX – $I_{F(AV)}$



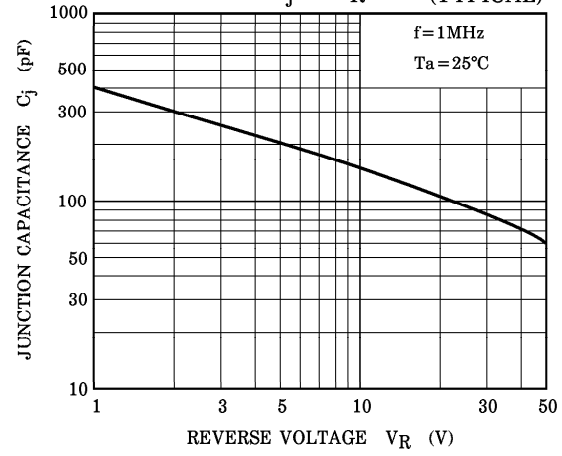

SURGE FORWARD CURRENT (NON – REPETITIVE)




$r_{th(j-a)} - t$




$C_j - V_R$ (TYPICAL)

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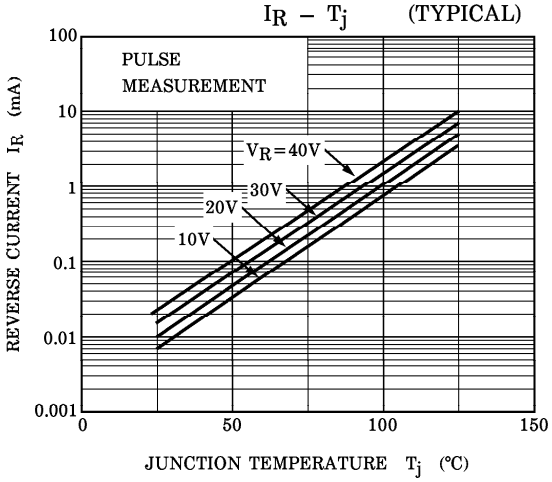
$I_R - T_j$ (TYPICAL)




$P_{R(AV)} - V_R$ (TYPICAL)