

TOSHIBA DUPER FAST RECOVERY RECTIFIER SILICON DIFFUSED TYPE

# 1R5DU41

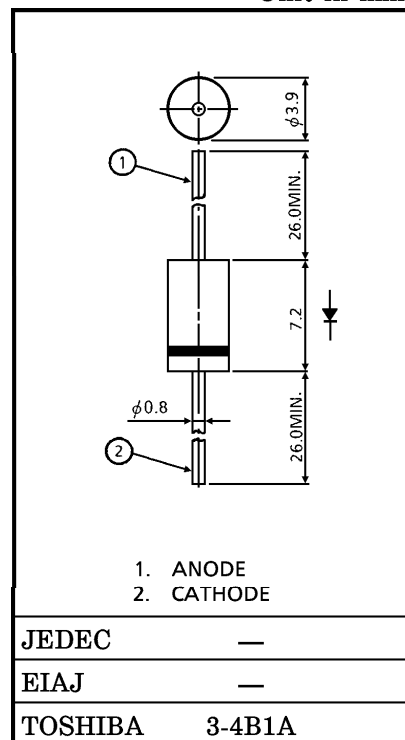
SWITCHING TYPE POWER SUPPLY APPLICATIONS

Unit in mm

- Repetitive Peak Reverse Voltage :  $V_{RRM}=200V$
- Average Forward Current :  $I_F(AV)=1.5A$  ( $T_a=25^\circ C$ )
- Very Fast Reverse-Recovery Time :  $t_{rr}=100ns$  (MAX.)

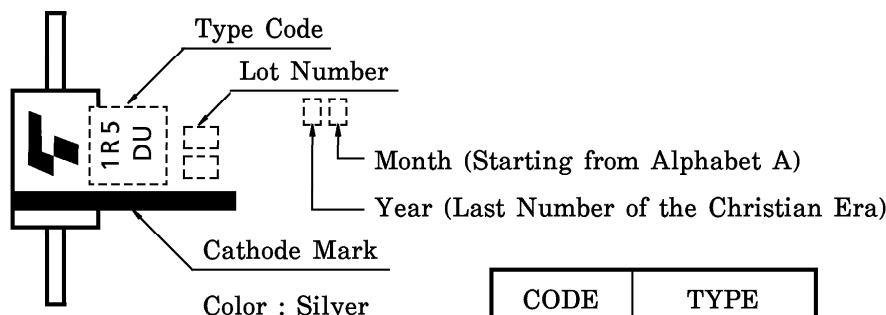
MAXIMUM RATINGS ( $T_a=25^\circ C$ )

| CHARACTERISTIC  | SYMBOL    | RATING    | UNIT       |
|---|-----------|-----------|------------|
| Repetitive Peak Reverse Voltage                       | $V_{RRM}$ | 200       | V          |
| Average Forward Current                               | $I_F(AV)$ | 1.5       | A          |
| Peak One Cycle Surge Forward Current (Non Repetitive) | $I_{FSM}$ | 60 (50Hz) | A          |
| Junction Temperature                                  | $T_j$     | -40~150   | $^\circ C$ |
| Storage Temperature Range                             | $T_{stg}$ | -40~150   | $^\circ C$ |



Weight : 0.47g

MARKING



| CODE  | TYPE    |
|-------|---------|
| 1R5DU | 1R5DU41 |

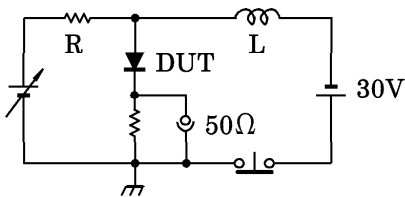
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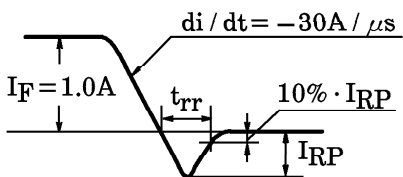
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC                  | SYMBOL        | TEST CONDITION                 | MIN. | TYP. | MAX. | UNIT          |
|---------------------------------|---------------|--------------------------------|------|------|------|---------------|
| Peak Forward Voltage            | $V_{FM}$      | $I_{FM} = 1.5A$                | —    | —    | 1.2  | V             |
| Repetitive Peak Reverse Current | $I_{RRM}$     | $V_{RRM} = 200V$               | —    | —    | 50   | $\mu A$       |
| Reverse Recovery Time (Note 1)  | $t_{rr}$      | $I_F = 1A, di/dt = -30A/\mu s$ | —    | —    | 100  | ns            |
| Forward Recovery Time (Note 2)  | $t_{fr}$      | $I_F = 1.0A$                   | —    | —    | 200  | ns            |
| Thermal Resistance (Note 3)     | $R_{th(j-a)}$ | Junction to Ambient            | —    | —    | 68   | $^{\circ}C/W$ |
| Thermal Resistance (Note 3)     | $R_{th(j-l)}$ | Junction to Lead               | —    | —    | 30   | $^{\circ}C/W$ |

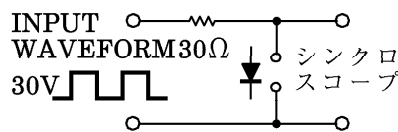
Note 1 :  $t_{rr}$  TEST CIRCUIT



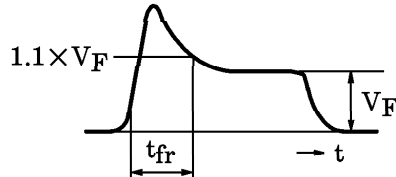
$t_{rr}$  WAVEFORM



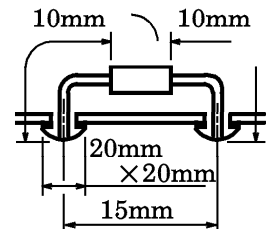
Note 2 :  $t_{fr}$  TEST CIRCUIT

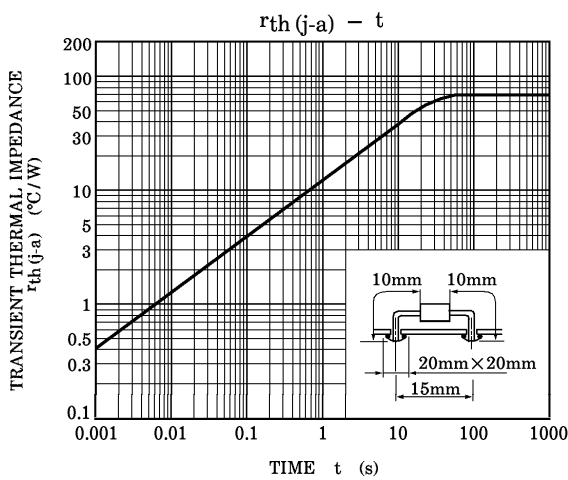
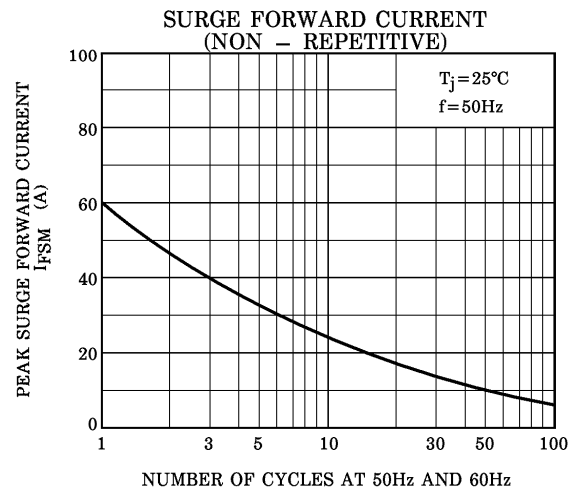
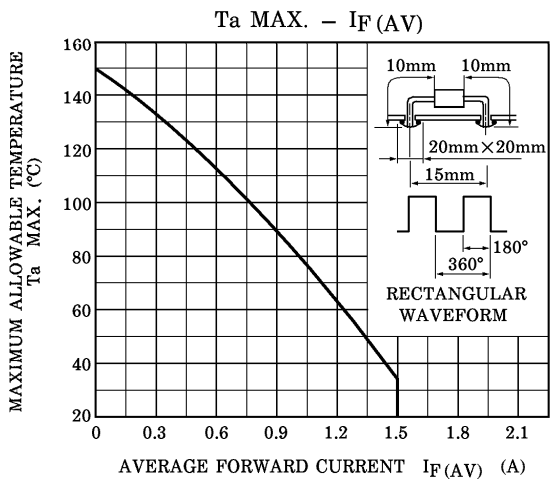
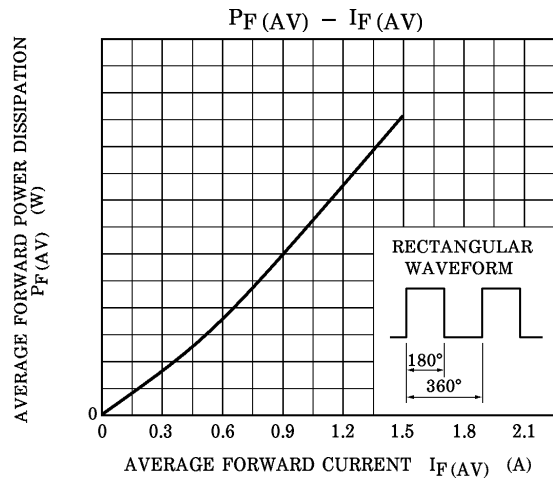
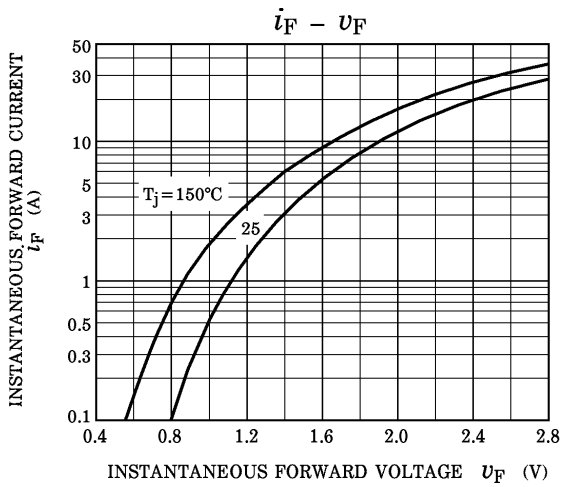


$t_{fr}$  WAVEFORM



Note 3 : THERMAL RESISTANCE





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