TOSHIBA SUPER FAST RECOVERY RECTIFIER SILICON DIFFUSED TYPE

2 N U 4 1

SWITCHING TYPE POWER SUPPLY APPLICATIONS

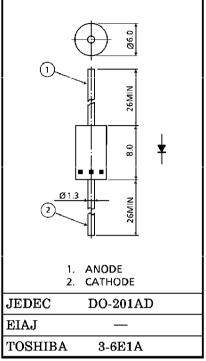
Unit in mm

• Repetitive Peak Reverse Voltage : $V_{RRM} = 1000V$ • Average Forward Current : $I_{F(AV)} = 2.0A$

• Very Fast Reverse-Recovery Time : trr=100ns

MAXIMUM RATINGS

| CHARACTERISTIC | SYMBOL | RATING | UNIT | |
|---------------------------------|---------------------|----------------|----------------------|--|
| Repetitive Peak Reverse Voltage | v_{RRM} | 1000 | V | |
| Average Forward Current | I _{F (AV)} | 2.0 | A | |
| Peak One Cycle Surge Forward | T | 70 (50Hz) | A | |
| Current (Non-Repetitive) | IFSM | 77 (60Hz) | | |
| Junction Temperature | $\mathrm{T_{j}}$ | -40~150 | $^{\circ}\mathrm{C}$ | |
| Storage Temperature Range | $\mathrm{T_{stg}}$ | -40~150 | $^{\circ}\mathrm{C}$ | |



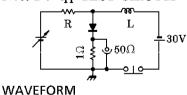
Weight: 1.18g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------------|--------------------------|--------------------------------|------|------|------|---------|
| Peak Forward Voltage | v_{FM} | $I_{\text{FM}} = 3.0 \text{A}$ | | _ | 3.0 | V |
| Repetitive Peak Reverse Current | $I_{ m RRM}$ | $V_{RRM} = 1000V$ | 1 | _ | 100 | μ A |
| Reverse Recovery Time (Note 1) | t _{rr} | $I_F=1A$, $di/dt=-30A/\mu s$ | I | _ | 100 | ns |
| Forward Recovery Time (Note 2) | t _{fr} | $I_{\overline{F}} = 1.0A$ | 1 | 300 | _ | ns |
| Thermal Resistance (Note 3) | R _{th (j-a)} | Junction to Ambient | | _ | 37 | °C/W |
| Thermal Resistance (Note 3) | $R_{	ext{th}\;(j-\ell)}$ | Junction to Lead | _ | _ | 12 | °C/W |

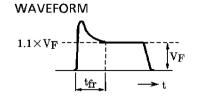
Note 1: trr TEST CIRCUIT

 $I_F = 1.0A$



 $di/dt = -30A/\mu s$

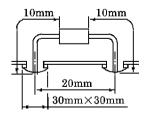
10%- IRP



Note 2: tfr TEST CIRCUIT

OUTPUT

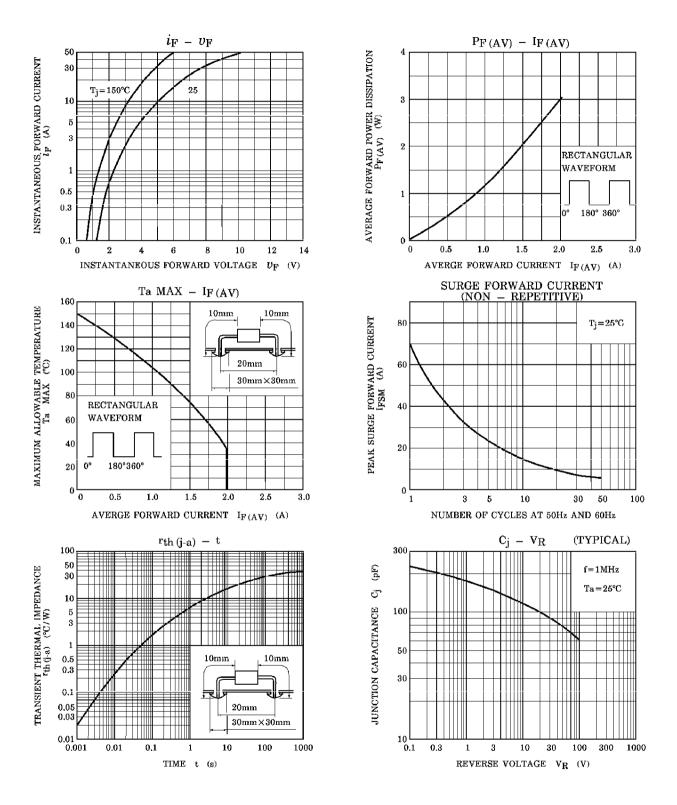
Note 3: THERMAL RESISTANCE



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TOSHIBA 2NU41



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