

TOSHIBA DUPER FAST RECOVERY RECTIFIER SILICON DIFFUSED TYPE

# 3DU41

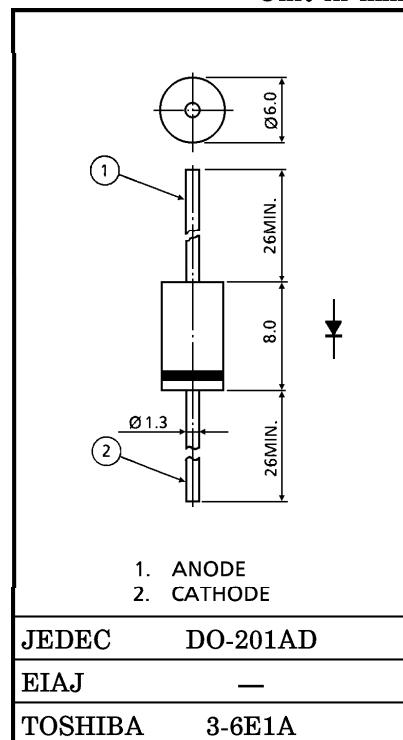
SWITCHING TYPE POWER SUPPLY APPLICATIONS

Unit in mm

- Repetitive Peak Reverse Voltage :  $V_{RRM}=200V$
- Average Forward Current :  $I_F(AV)=3.0A$
- Very Fast Reverse-Recovery Time :  $t_{rr}=100ns(MAX.)$

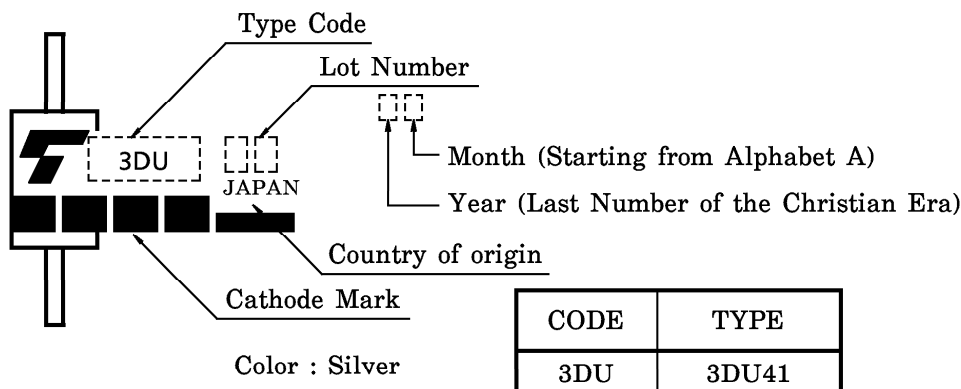
MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	200	V
Average Forward Current	$I_F(AV)$	3.0	A
Peak One Cycle Surge Forward Current (Non Repetitive)	$I_{FSM}$	80 (50Hz)	A
Junction Temperature	$T_j$	-40~150	°C
Storage Temperature Range	$T_{stg}$	-40~150	°C



Weight : 1.18g

MARKING



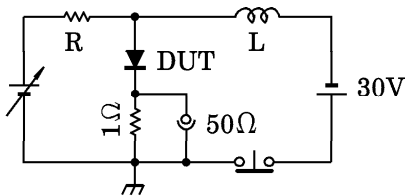
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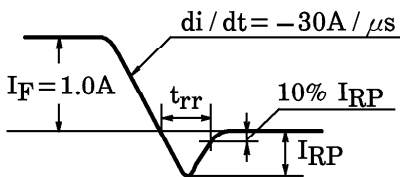
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Forward Voltage	$V_{FM}$	$I_{FM} = 3.0A$	—	—	1.5	V
Repetitive Peak Reverse Current	$I_{RRM}$	$V_{RRM} = 200V$	—	—	300	$\mu A$
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	—	—	37	$^{\circ}C/W$
Thermal Resistance (Note 3)	$R_{th(j-l)}$	Junction to Lead	—	—	12	$^{\circ}C/W$

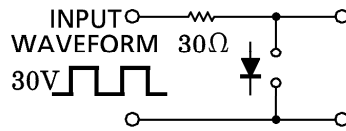
Note 1 :  $t_{rr}$  TEST CIRCUIT



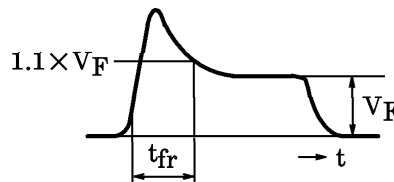
$t_{rr}$  WAVEFORM



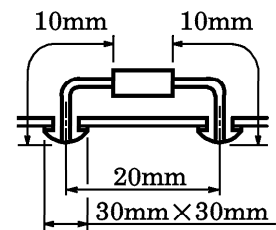
Note 2 :  $t_{fr}$  TEST CIRCUIT

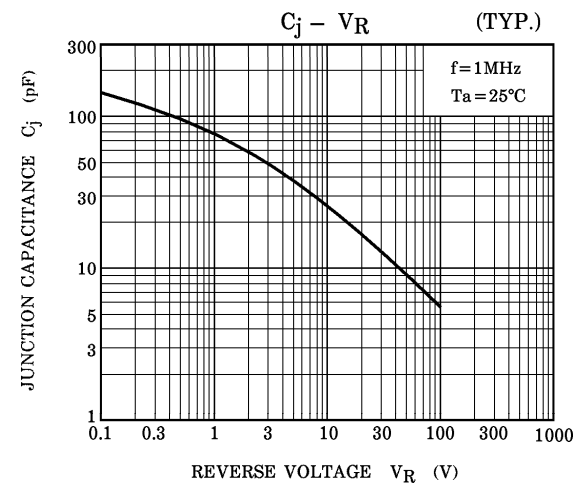
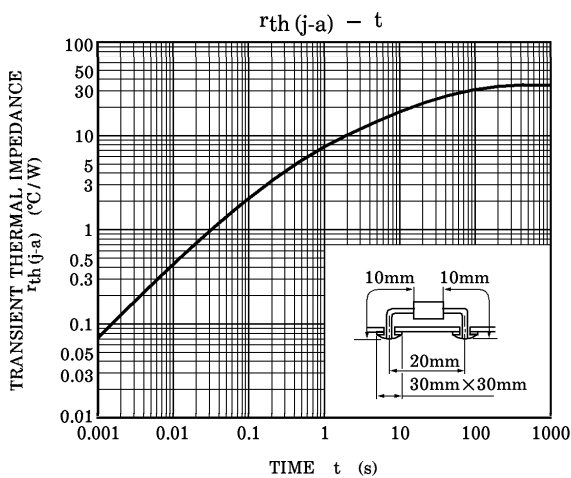
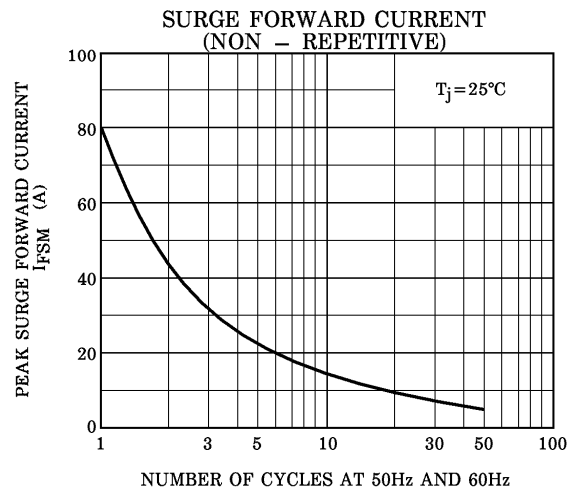
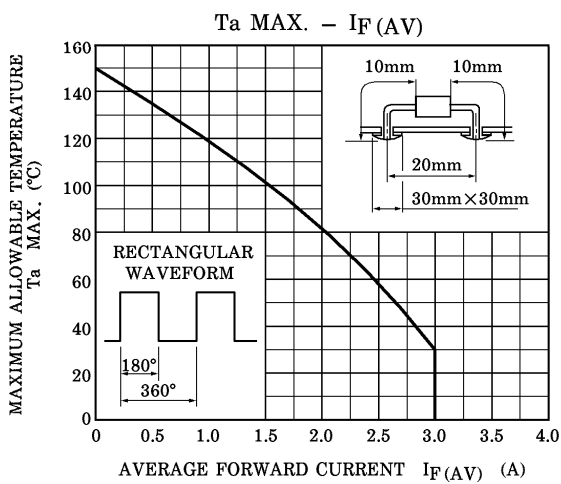
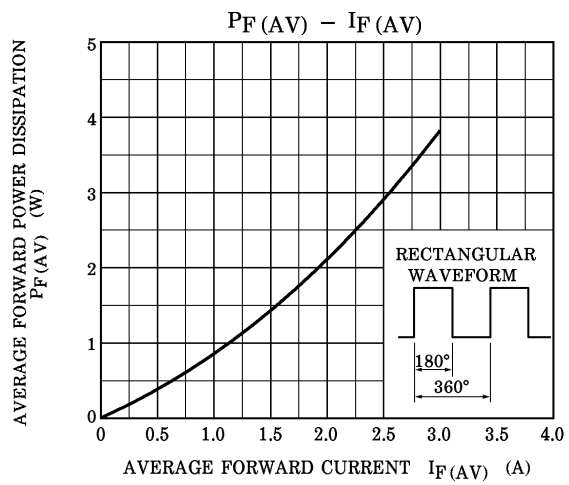
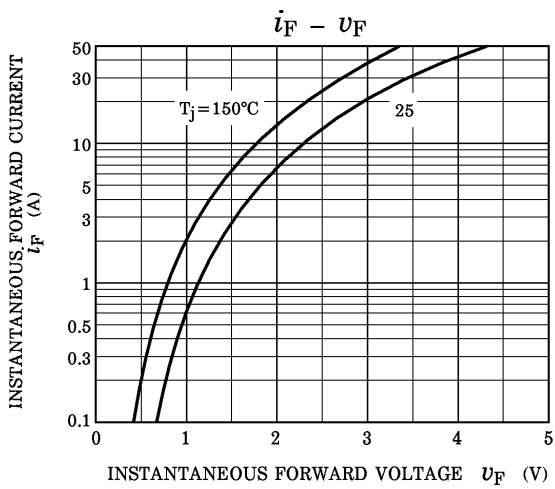


$t_{fr}$  WAVEFORM



Note 3 : THERMAL RESISTANCE





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