

TOSHIBA SUPER FAST RECOVERY RECTIFIER SILICON DIFFUSED TYPE

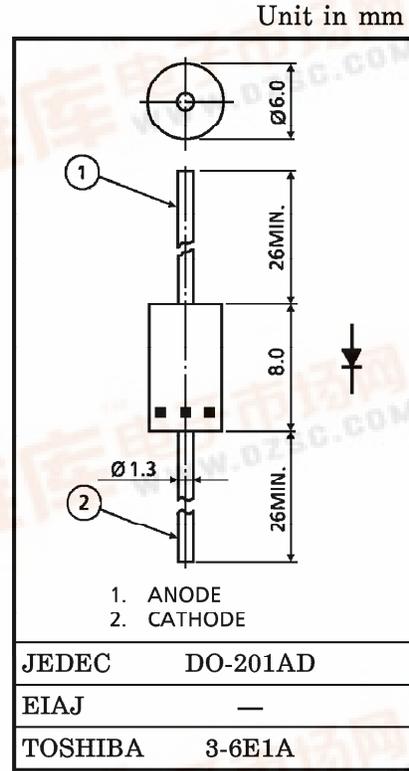
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SWITCHING TYPE POWER SUPPLY APPLICATIONS

- Repetitive Peak Reverse Voltage : $V_{RRM}=100\sim 400V$
- Average Forward Current : $I_F(AV)=3.0A$
- Very Fast Reverse-Recovery Time : $t_{rr}=100ns$

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Average Forward Current	$I_F(AV)$	3.0	A
Peak One Cycle Surge Forward Current (Non-Repetitive)	I_{FSM}	80 (50Hz) 88 (60Hz)	A
Junction Temperature	T_j	-40~150	°C
Storage Temperature Range	T_{stg}	-40~150	°C

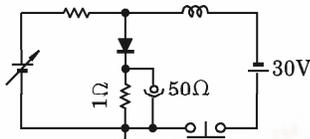


Weight : 1.18g

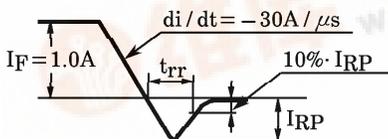
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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}	$V_{RRM}=400V$	—	—	300	μA
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	°C/W
Thermal Resistance (Note 4)	$R_{th(j-l)}$	Junction to Lead	—	—	12	°C/W

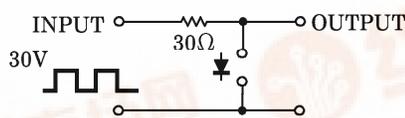
Note 1 : t_{rr} TEST CIRCUIT



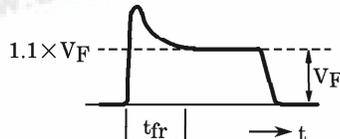
WAVEFORM



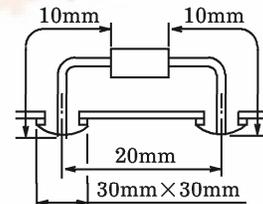
Note 2 : t_{fr} TEST CIRCUIT



WAVEFORM



Note 3 : THERMAL RESISTANCE



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TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

