

TOSHIBA HIGH EFFICIENCY RECTIFIER (HED) SILICON EPITAXIAL JUNCTION TYPE

# U1DL49

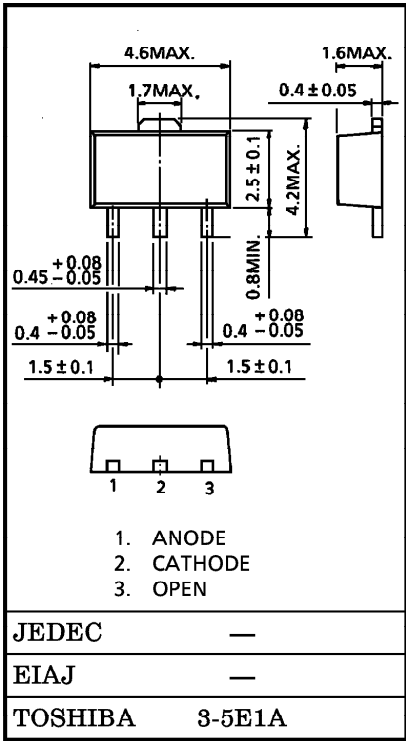
SWITCHING TYPE POWER SUPPLY APPLICATIONS

Unit in mm

- Repetitive Peak Reverse Voltage :  $V_{RRM}=200V$
- Average Forward Current :  $I_F(AV)=1.0A$
- Very Fast Reverse Recovery Time :  $t_{rr}=60ns$  (Max.)
- Low Forward Voltage :  $V_{FM}=0.98V$  (Max.)
- Available to Reduce Switching Losses and Output Noise.

## MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	200	V
Average Forward Current	$I_F(AV)$	1.0	A
Peak One Cycle Surge Forward Current (Non-Repetitive)	$I_{FSM}$	15 (50Hz) 16.5 (60Hz)	A
Junction Temperature	$T_j$	-40~150	°C
Storage Temperature Range	$T_{stg}$	-40~150	°C

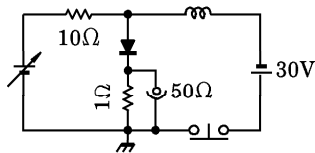


## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

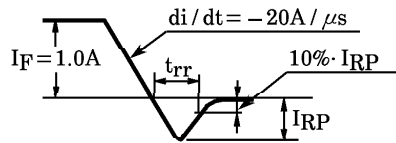
Weight : 0.05g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Forward Voltage	$V_{FM}$	$I_{FM}=1.0A$	—	—	0.98	V
Repetitive Peak Reverse Current	$I_{RRM}$	$V_{RRM}=200V$	—	—	10	μA
Reverse Recovery Time (Note 1)	$t_{rr}$	$I_F=1A, di/dt = -20A/\mu s$	—	—	60	ns
Forward Recovery Time (Note 2)	$t_{fr}$	$I_F=1.0A$	—	—	100	ns
Thermal Resistance	$R_{th(j-a)}$	Junction to Ambient	—	—	125	°C/W

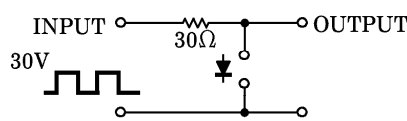
### Note 1 : $t_{rr}$ TEST CIRCUIT



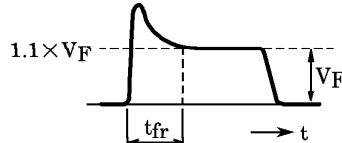
### WAVEFORM



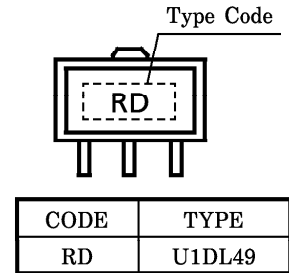
### Note 2 : $t_{fr}$ TEST CIRCUIT



### WAVEFORM

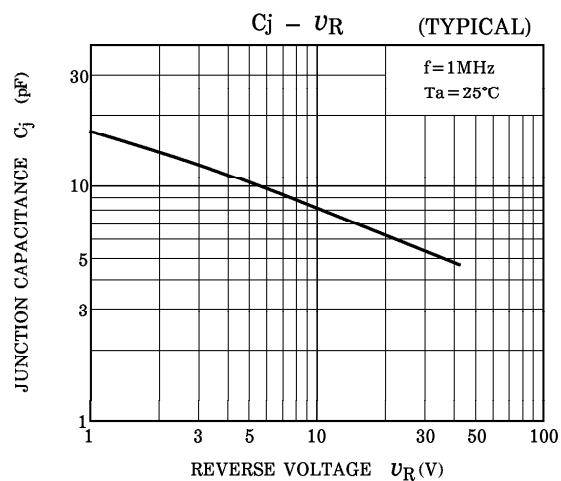
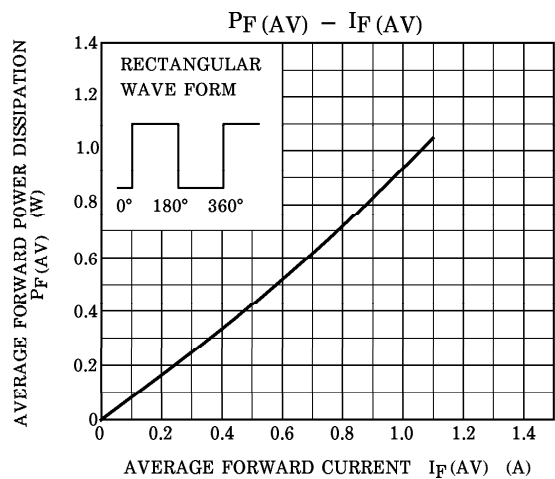
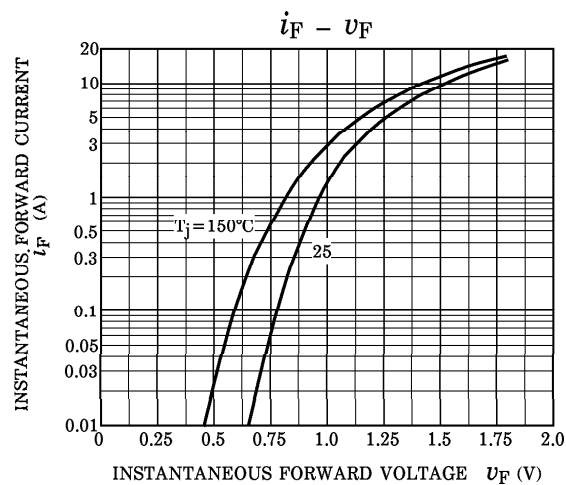


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