# <u>TOSHIBA</u>

#### TOSHIBA HIGH EFFICIENCY RECTIFIER (HED) SILICON EPITAXIAL JUNCTION TYPE

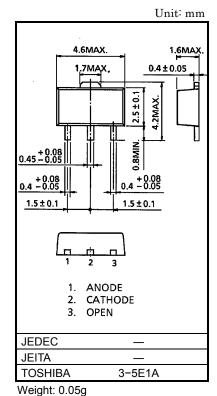
# U1DL49

## SWITCHING MODE POWER SUPPLY APPLICATIONS

- Repetitive Peak Reverse Voltage : VRRM = 200V
- Average Forward Current : IF (AV) = 1.0A
- Very Fast Reverse–Recovery Time: t<sub>rr</sub> = 60ns (Max)
- Low Forward Voltage :  $V_{FM} = 0.98V$  (Max)
- Available to Reduce Switching Losses and Output Noise

#### MAXIMUM RATINGS (Ta = 25°C)

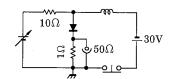
CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Average Forward Current	I <sub>F (AV)</sub>	1.0	А
Peak One Cycle Surge Forward Current (Non-Repetitive)	I <sub>FSM</sub>	15 (50Hz)	A
		16.5 (60Hz)	
Junction Temperature	Тј	-40~150	°C
Storage Temperature Range	T <sub>stg</sub>	-40~150	°C



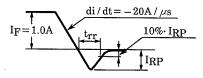
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC SYMBOL TEST CONDITION MIN TYP. MAX UNIT V Peak Forward Voltage VFM I<sub>FM</sub> = 1.0A 0.98 V<sub>RRM</sub> = 200V Repetitive Peak Reverse Current 10 μΑ IRRM \_ \_ I<sub>F</sub> = 1A, di / dt = -20A / μs 60 **Reverse Recovery Time** (Note 1) t<sub>rr</sub> ns \_ Forward Recovery Time (Note 2) t<sub>fr</sub> I<sub>F</sub> = 1.0A 100 ns \_ °C/W Thermal Resistance R<sub>th (j-a)</sub> Junction to Ambient 125 \_

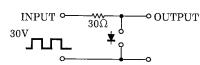
Note 1: trr TEST CIRCUIT

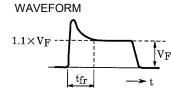


WAVEFORM

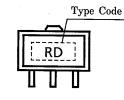


#### Note 2: tfr TEST CIRCUIT





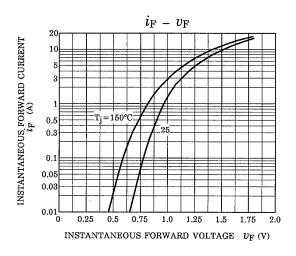
## MARKING

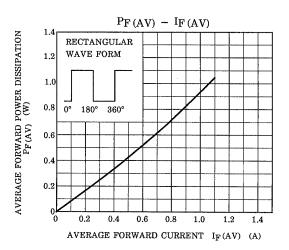


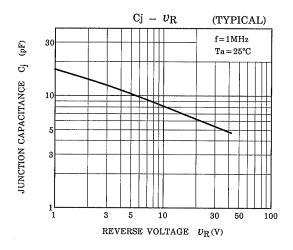
CODE	TYPE
RD	U1DL49

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