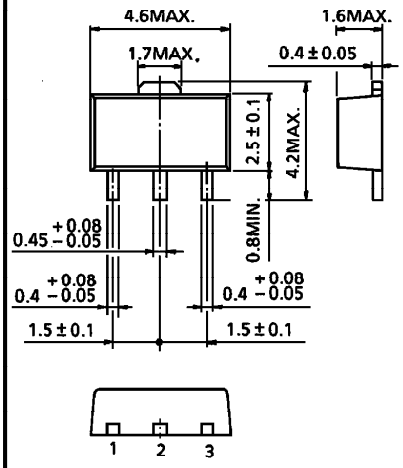
TOSHIBA HIGH EFFICIENCY RECTIFIER (HED) SILICON EPITAXIAL JUNCTION TYPE

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.



JEDEC	—
EIAJ	—
TOSHIBA	3-5E1A

Weight : 0.05g

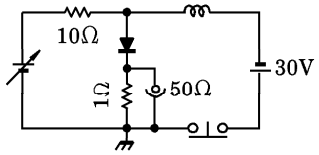
MAXIMUM RATINGS

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)	A
		16.5 (60Hz)	
Junction Temperature	T_j	−40~150	°C
Storage Temperature Range	T_{stg}	−40~150	°C

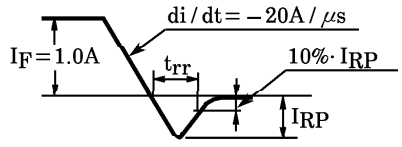
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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 / μs	—	—	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

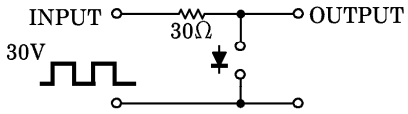
Note 1 : t_{rr} TEST CIRCUIT



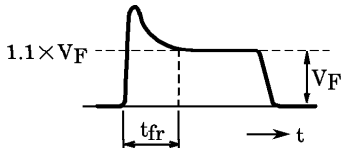
WAVEFORM



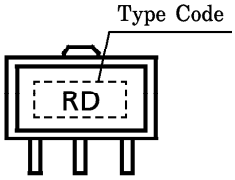
Note 2 : t_{fr} TEST CIRCUIT



WAVEFORM



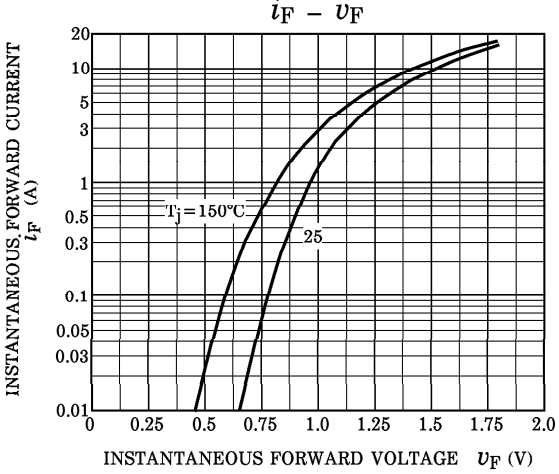
MARKING



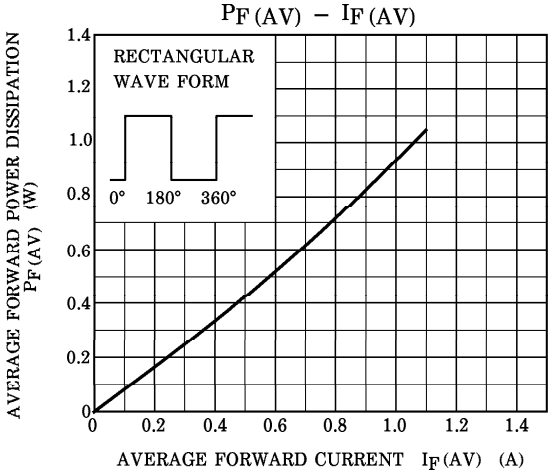
CODE	TYPE
RD	U1DL49

961001EAA2

$i_F - v_F$



$P_{F(AV)} - I_{F(AV)}$



$C_j - v_R$ (TYPICAL)