TAYCHIPST

FAST RECOVERY RECTIFIER DIODES

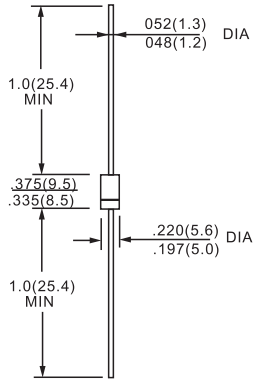
BYT13-600 THRU BYT13-1000

600V-1000V 3.0A

FEATURES

- High efficiency
- Low power losses
- Very low switching losses
- Low reverse current
- High surge capability

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ABSOLUTE MAXIMUM RATINGS (limiting values)

Symbol	Parameter		Value	Unit
I_{FRM}	Repetive Peak Forward Current	$t_p \leq 20\mu s$	50	A
$I_{F(AV)}$	Average Forward Current *	T_a = 55°C δ = 0.5	3	A
I_{FSM}	Surge non Repetitive Forward Current	t_p = 10ms Sinusoidal	100	A
P_{tot}	Power Dissipation *	T_a = 55°C	3.75	W
T_{stg} T_j	Storage and Junction Temperature Range		- 40 to + 150 - 40 to + 150	°C
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230	°C

Symbol	Parameter	BYT 13-			Unit
		600	800	1000	
V_{RRM}	Repetitive Peak Reverse Voltage	600	800	1000	V

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j-a)}$	Junction-ambient*	25	°C/W

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_R	T_j = 25°C	$V_R = V_{RRM}$			20	µA
V_F	T_j = 25°C	I_F = 3A			1.3	V

RATINGS AND CHARACTERISTIC CURVES BYT13-600 THRU BYT13-1000

Figure 1. Maximum average power dissipation versus average forward current.

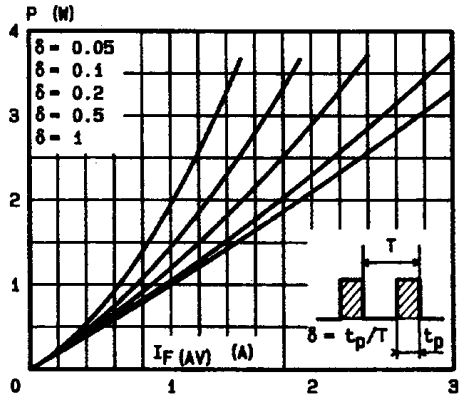


Figure 2. Average forward current versus ambient temperature.

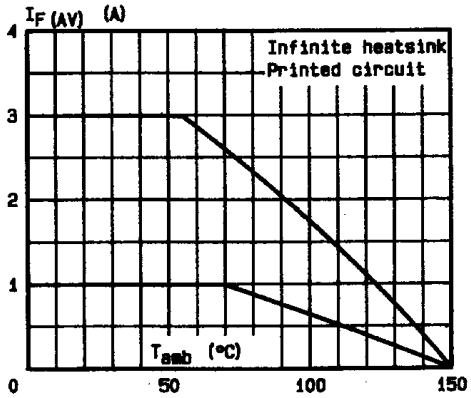


Figure 3. Thermal resistance versus lead length.

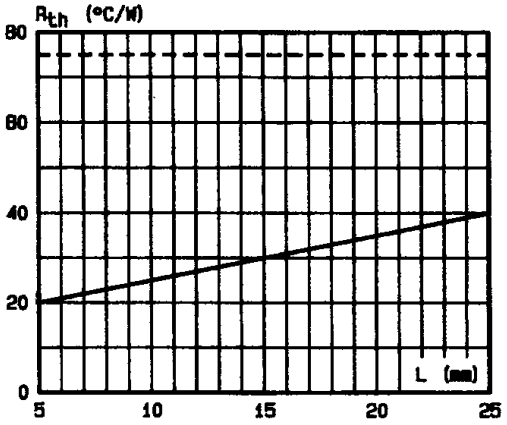


Figure 4. Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

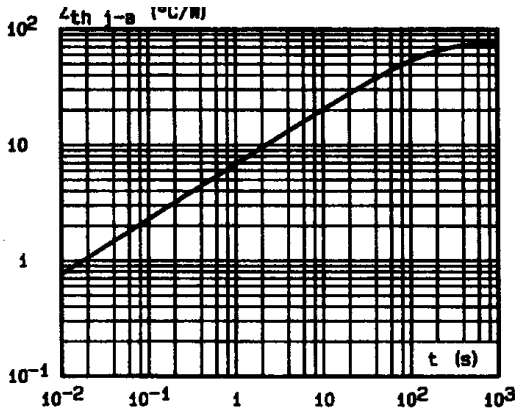


Figure 5. Peak forward current versus peak forward voltage drop (maximum values).