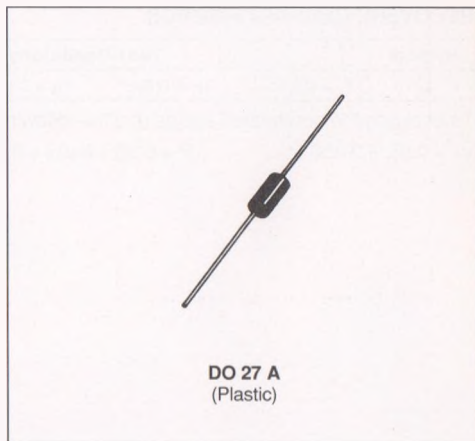


## FAST RECOVERY RECTIFIER DIODES

- SOFT RECOVERY
- VERY HIGH VOLTAGE
- SMALL RECOVERY CHARGE



### APPLICATIONS

- ANTISATURATION DIODES FOR TRANSISTOR BASE DRIVE
- SNUBBER DIODES

### ABSOLUTE RATINGS (limiting values)

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

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	$^\circ C/W$

\* On infinite heatsink with 10mm lead length.

## ELECTRICAL CHARACTERISTICS

## STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
$I_R$	$T_J = 25^\circ\text{C}$	$V_R = V_{RRM}$				20	$\mu\text{A}$
$V_F$	$T_J = 25^\circ\text{C}$	$I_F = 3\text{A}$				1.3	V

## RECOVERY CHARACTERISTICS

Symbol	Test Conditions				Min.	Typ.	Max.	Unit
$t_{rr}$	$T_J = 25^\circ\text{C}$	$I_F = 0.5\text{A}$	$I_R = 1\text{A}$	$I_{rr} = 0.25\text{A}$			150	ns

To evaluate the conduction losses use the following equations :

$$V_F = 0.95 + 0.050 I_F \quad P = 0.95 \times I_{F(AV)} + 0.050 I_F^2_{(RMS)}$$

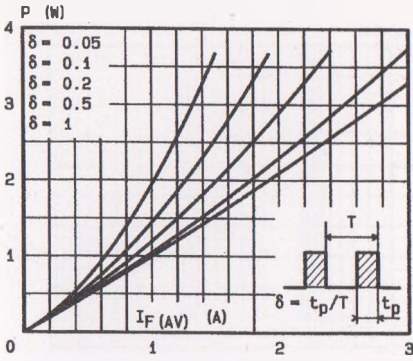


Fig. 1 - Maximum average power dissipation versus average forward current.

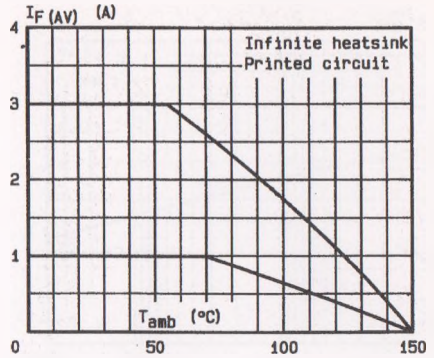


Fig. 2 - Average forward current versus ambient temperature.

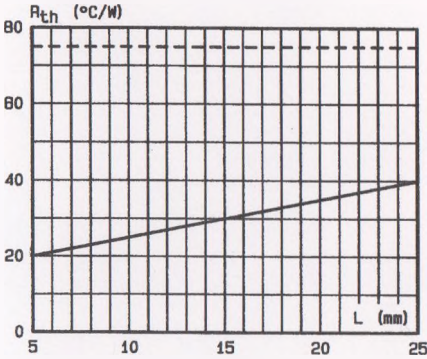


Fig. 3 - Thermal resistance versus lead length.

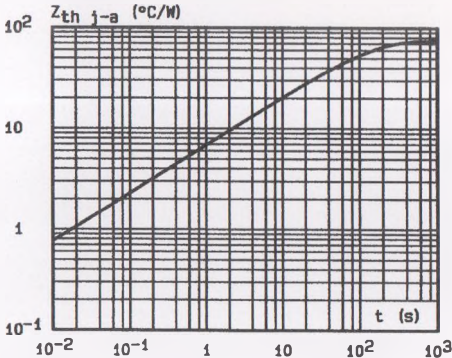


Fig. 4 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

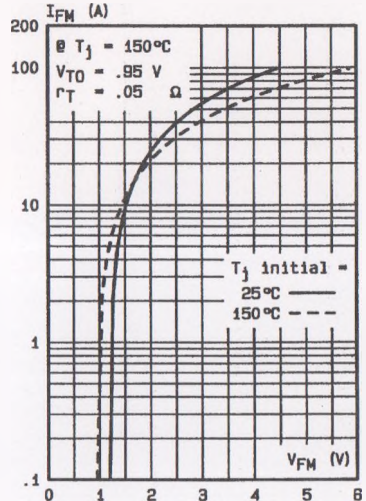
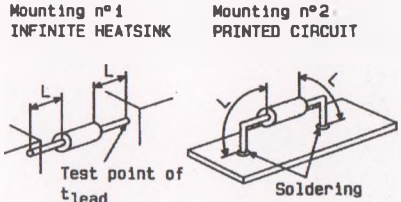


Fig. 5 - Peak forward current versus peak forward voltage drop (maximum values).

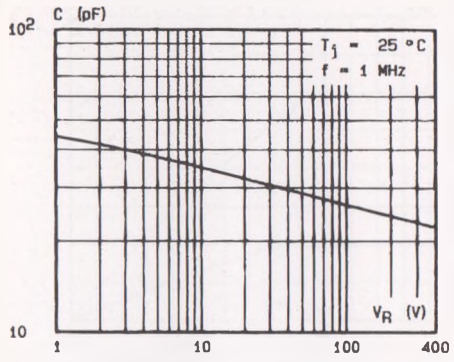


Fig.6 - Capacitance versus reverse applied voltage

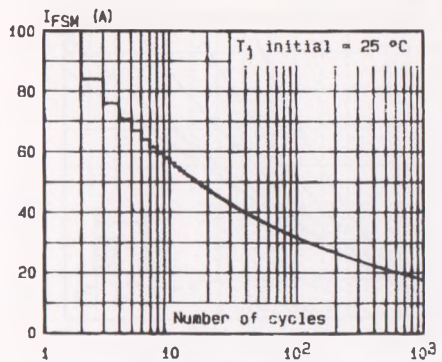


Fig.7 - Non repetitive surge peak current versus number of cycles