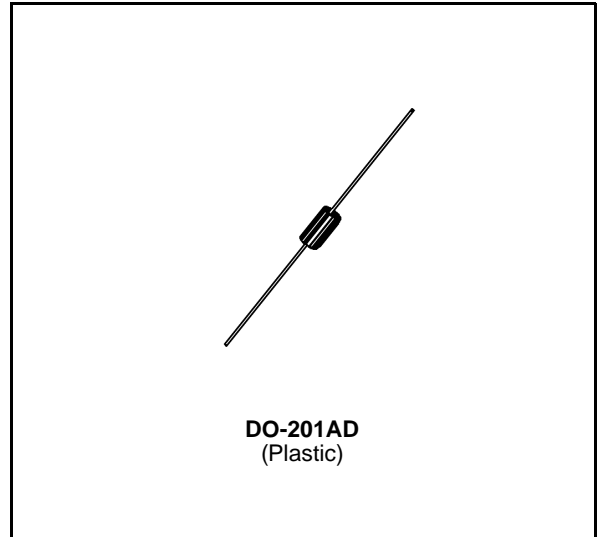




## FAST RECOVERY RECTIFIER DIODES

- SOFT RECOVERY
- VERY HIGH VOLTAGE
- SMALL RECOVERY CHARGE



### APPLICATIONS

- ANTISATURATION DIODES FOR TRANSISTOR BASE DRIVE
- SNUBBER DIODES

### 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 *	$T_a = 55^\circ C$ $\delta = 0.5$	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 - 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

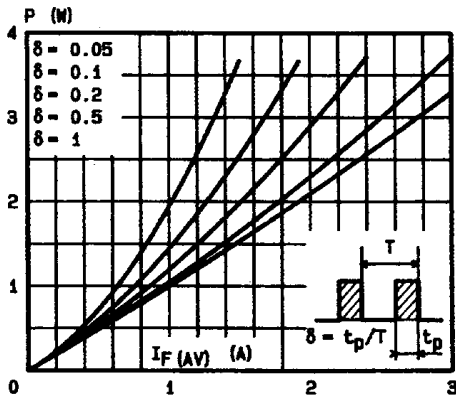
**RECOVERY CHARACTERISTICS**

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

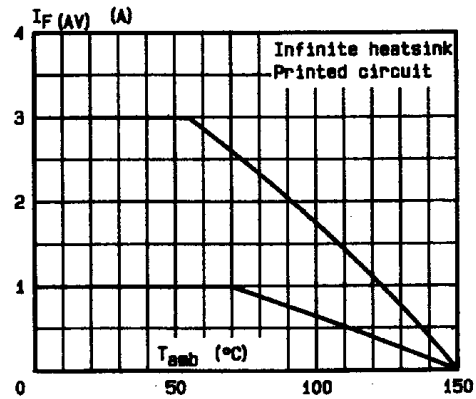
To evaluate the conduction losses use the following equations:

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

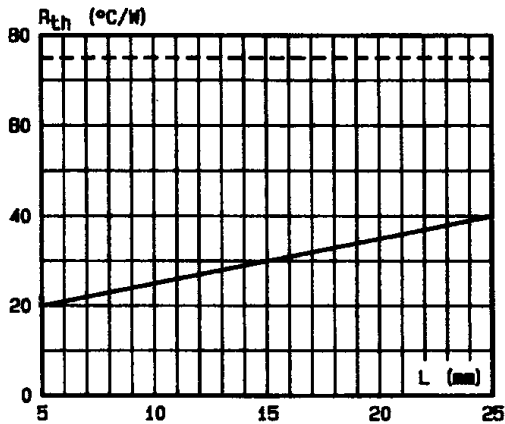
**Figure 1. Maximum average power dissipation versus average forward current.**



**Figure 2. Average forward current versus ambient temperature.**



**Figure 3. Thermal resistance versus lead length.**



**Mounting n°1 INFINITE HEATSINK**

**Mounting n°2 PRINTED CIRCUIT**

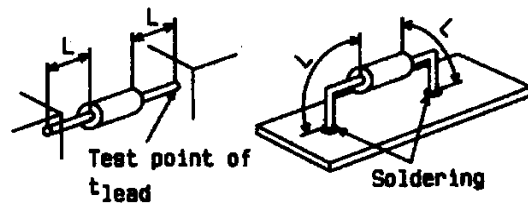


Figure 4. Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

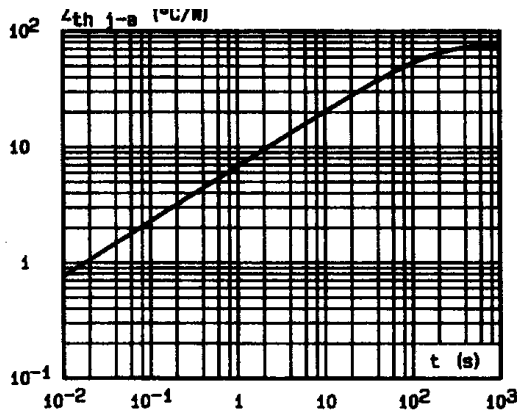


Figure 5. Peak forward current versus peak forward voltage drop (maximum values).

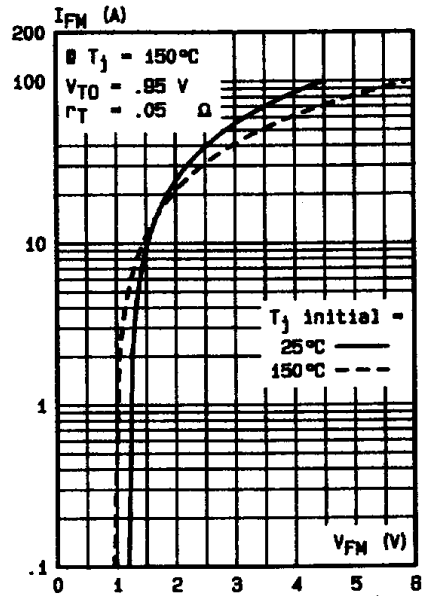


Figure 6. Capacitance versus reverse applied voltage

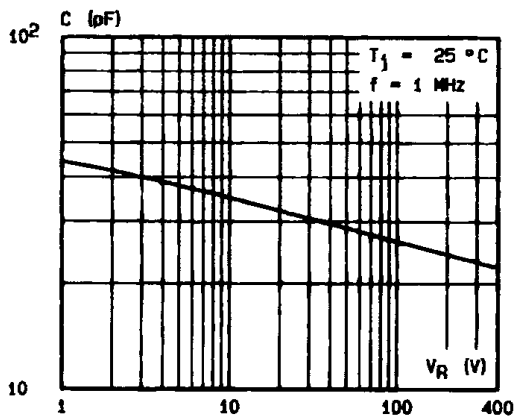
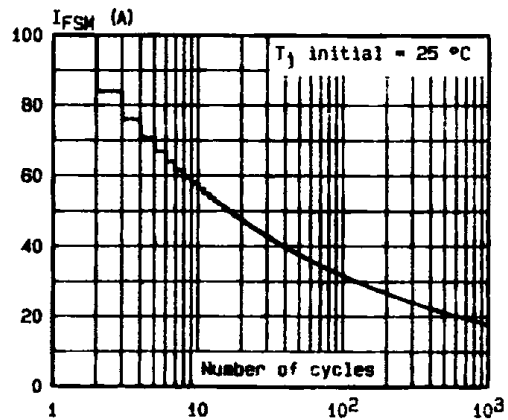
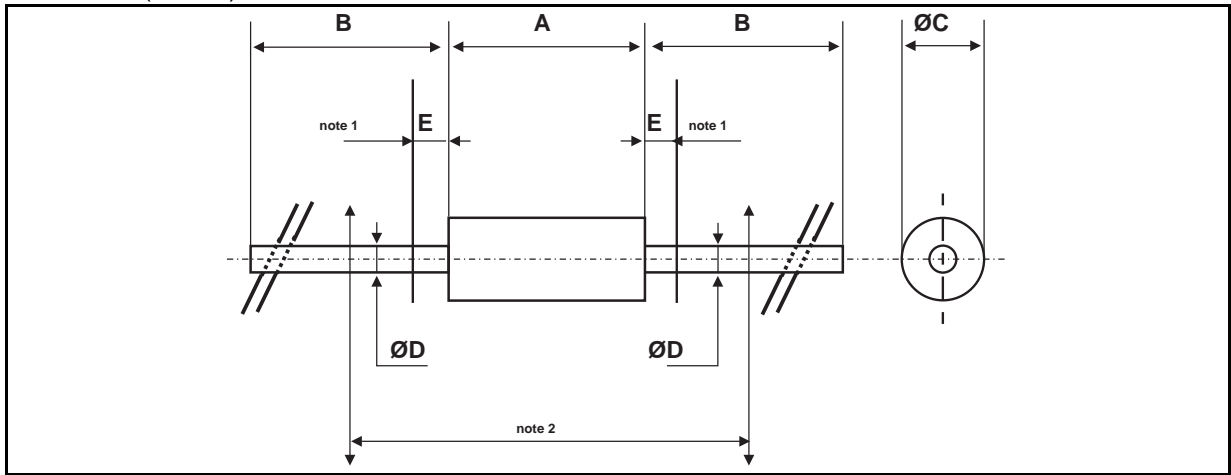


Figure 7. Non repetitive surge peak current versus number of cycles



**PACKAGE MECHANICAL DATA**

DO-201AD (Plastic)



REF.	DIMENSIONS				NOTES
	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
A		9.50		0.374	1 - The lead diameter $\varnothing D$ is not controlled over zone E 2 - The minimum axial length within which the device may be placed with its leads bent at right angles is 0.59"(15 mm)
B	25.40		1.000		
$\varnothing C$		5.30		0.209	
$\varnothing D$		1.30		0.051	
E		1.25		0.049	

- **Marking** : type number, white band indicates cathode
- **Cooling method** : by convection (method A)
- **Weight** : 1.166g

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