

## FAST RECOVERY RECTIFIER DIODES

PRELIMINARY DATASHEET

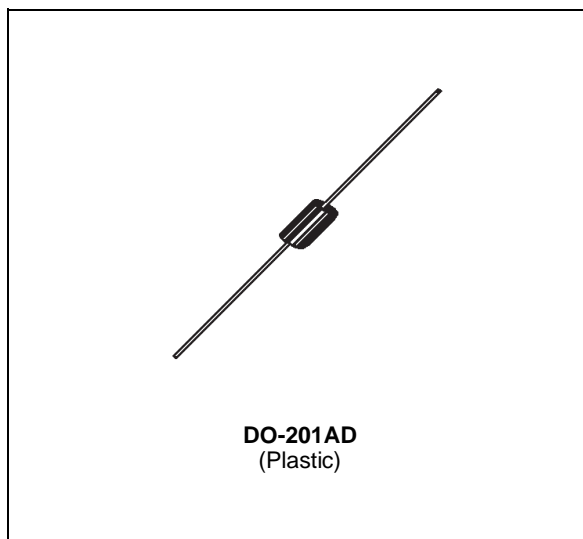
- LOW FORWARD VOLTAGE DROP
- HIGH SURGE CURRENT CAPABILITY

### APPLICATIONS

- AC-DC POWER SUPPLIES AND CONVERTERS
- FREE WHEELING DIODES, etc.

### DESCRIPTION

Their high efficiency and high reliability combined with small size and low cost make these fast recovery rectifier diodes very attractive components for many demanding applications.



### ABSOLUTE MAXIMUM RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{FRM}$	Repetitive Peak Forward Current	$t_p \leq 20\mu s$	100	A
$I_F (AV)$	Average Forward Current*	$T_a = 90^\circ C$ $\delta = 0.5$	3	A
$I_{FSM}$	Surge non Repetitive Forward Current	$t_p = 10ms$ Sinusoidal	100	A
$P_{tot}$	Power Dissipation*	$T_a = 90^\circ C$	3.5	W
$T_{stg}$ $T_j$	Storage and Junction Temperature Range		- 40 to + 175 - 40 to + 175	$^\circ C$
$T_L$	Maximum Lead Temperature for Soldering during 10s at 4mm from case		230	$^\circ C$

Symbol	Parameter	PFR					Unit
		850S	851S	852S	854S	856S	
$V_{RRM}$	Repetitive Peak Reverse Voltage	50	100	200	400	600	V
$V_{RSM}$	Non Repetitive Peak Reverse Voltage	75	150	250	450	650	V

### THERMAL RESISTANCE

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

\* On infinite heatsink with 10mm lead length.

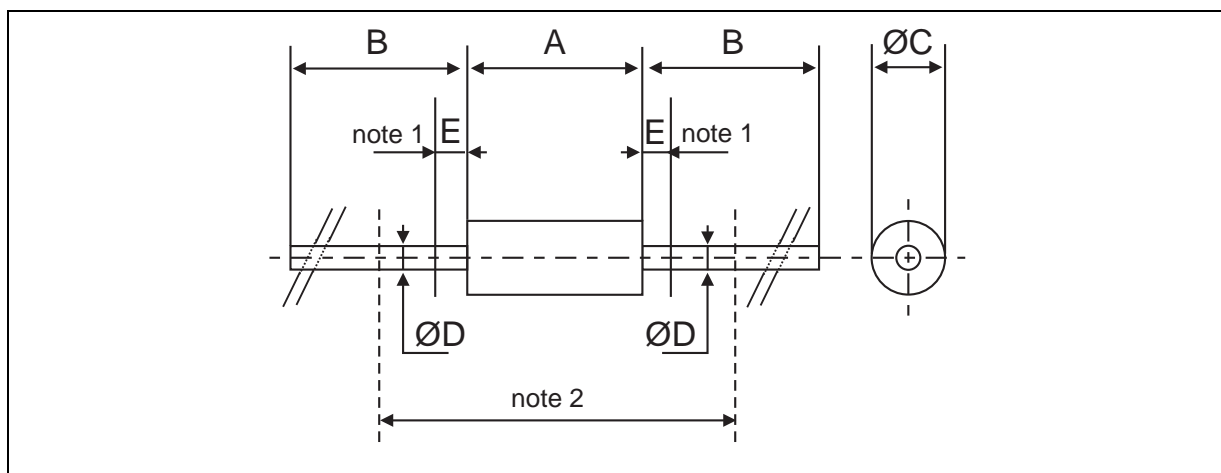
**ELECTRICAL CHARACTERISTICS**

## STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$I_R$	$T_j = 25^\circ\text{C}$	$V_R = V_{RRM}$			10	$\mu\text{A}$
	$T_j = 100^\circ\text{C}$				250	
$V_F$	$T_j = 25^\circ\text{C}$	$I_F = 3\text{A}$			1.25	V

## RECOVERY CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$t_{rr}$	$T_j = 25^\circ\text{C}$	$I_F = 1\text{A}$			150	ns
	$V_R = 30\text{V}$	$di_F/dt = -25\text{A}/\mu\text{s}$			200	
$I_{RM}$	$T_j = 25^\circ\text{C}$	$I_F = 1\text{A}$			2	A
	$V_R = 30\text{V}$	$di_F/dt = -25\text{A}/\mu\text{s}$				

**PACKAGE MECHANICAL DATA**  
**DO-201AD**


REF.	DIMENSIONS				NOTES
	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
A		9.50		0.374	1 - The lead diameter Ø 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		
Ø C		5.30		0.209	
Ø D		1.30		0.051	
E		1.25		0.049	

Weight : 1 g

Marking : Type number

White band indicates cathode

cooling method : by convection (method A)

Date code

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