



## FAST RECOVERY RECTIFIER DIODE

PRELIMINARY DATASHEET

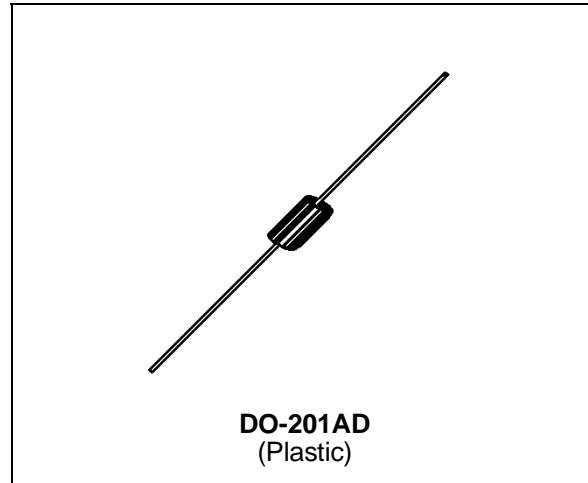
- LOW FORWARD VOLTAGE DROP
- HIGH SURGE CURRENT CAPABILITY

### 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 diode very attractive components for many demanding applications.



### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
I <sub>FRM</sub>	Repetitive peak forward current	t <sub>p</sub> < 20μs	100	A
I <sub>F(AV)</sub>	Average forward current*	T <sub>a</sub> = 90°C δ = 0.5	3	A
I <sub>FSM</sub>	Surge non repetitive forward current	t <sub>p</sub> = 10ms Sinusoidal	100	A
P <sub>tot</sub>	Power dissipation *	T <sub>a</sub> = 90°C	3.5	W
T <sub>stg</sub> T <sub>j</sub>	Storage and junction temperature range		- 40 to + 175 - 40 to + 175	°C
T <sub>L</sub>	Maximum lead temperature for soldering during 10s at 4mn from case		230	°C

Symbol	Parameter	PFR					Unit
		850	851	852	854	856	
V <sub>RRM</sub>	Repetitive peak reverse voltage	50	100	200	400	600	V
V <sub>RSM</sub>	Non repetitive peak reverse voltage	75	150	250	450	650	V

**THERMAL RESISTANCE**

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

\* On infinite heatsink with 10mm lead length.

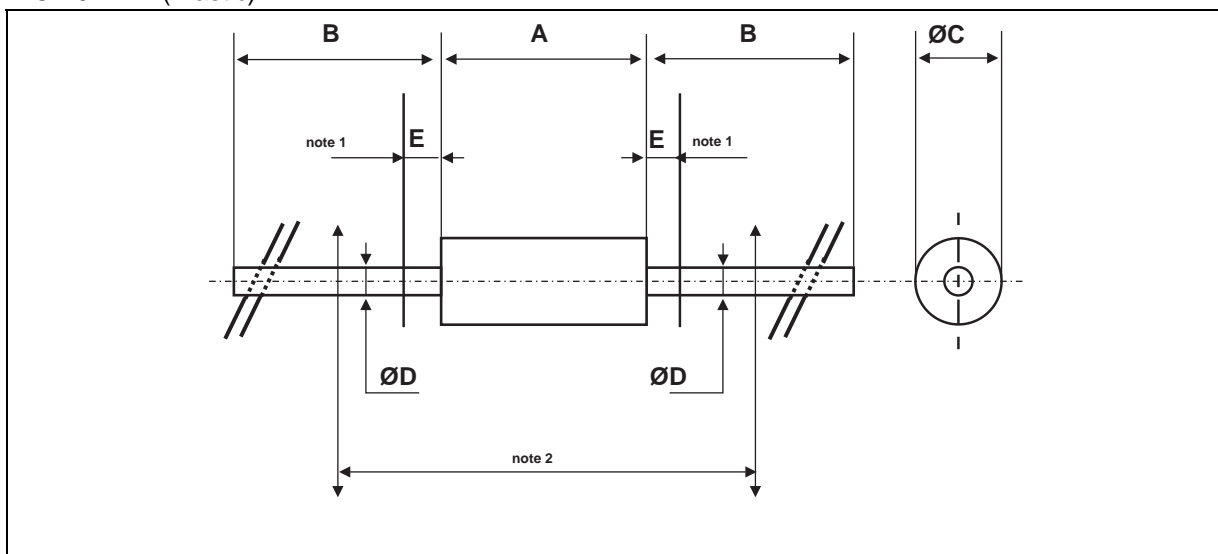
**STATIC ELECTRICAL CHARACTERISTICS**

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
$t_{rr}$	$T_j = 25^\circ\text{C}$ $V_R = 30\text{V}$	$I_F = 1\text{A}$ PRF 850→854			150	ns
		$dI_F/dt = -25\text{A}/\mu\text{s}$ PRF 856			200	
$I_{RM}$	$T_j = 25^\circ\text{C}$ $V_R = 30\text{V}$	$I_F = 1\text{A}$			2	A
		$dI_F/dt = -25\text{A}/\mu\text{s}$				

**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 indicate cathode
- Cooling method: by convection (method A)
- Weight: 1g
- Date code

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