

# BY396 THRU BY399

## 3.0A FAST RECOVERY RECTIFIERS

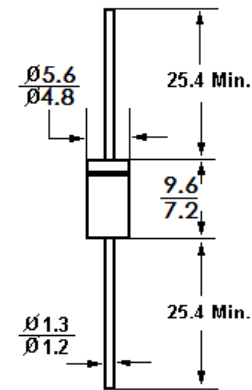
DO-201AD

### Features

- Low forward voltage
- High current capability
- High reliability
- High surge current capability

### Mechanical Data

- **Cases:** Molded plastic
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** Axial leads, solderable per MIL-STS-202, Method 208 guaranteed.
- **Polarity:** Color band denotes cathode end.



Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

	Symbol	Value	Unit	
Recurrent Peak Reverse Voltage	BY396	$V_{RRM}$	100	V
	BY397	$V_{RRM}$	200	V
	BY398	$V_{RRM}$	400	V
	BY399	$V_{RRM}$	800	V
RMS Voltage	BY396	$V_{RMS}$	70	V
	BY397	$V_{RMS}$	140	V
	BY398	$V_{RMS}$	280	V
	BY399	$V_{RMS}$	560	V
DC Blocking Voltage	BY396	$V_{DC}$	100	V
	BY397	$V_{DC}$	200	V
	BY398	$V_{DC}$	400	V
	BY399	$V_{DC}$	800	V
Average Forward Rectified Current at $T_A=55^\circ\text{C}$	$I_{FAV}$	3	A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150	A	
Instantaneous Forward Voltage @ 3 A	$V_F$	1.3	V	
DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	10	$\mu\text{A}$	
		150	$\mu\text{A}$	
Reverse Recovery Time (Note 1)	$t_{rr}$	250	ns	
Typical Junction Capacitance (Note 2)	$C_j$	60	pF	
Operating Temperature Range	$T_J$	-65 to +150	$^\circ\text{C}$	
Storage Temperature Range	$T_{Stg}$	-65 to +150	$^\circ\text{C}$	

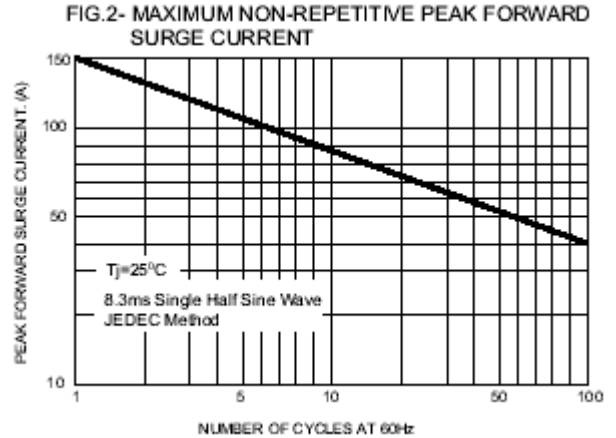
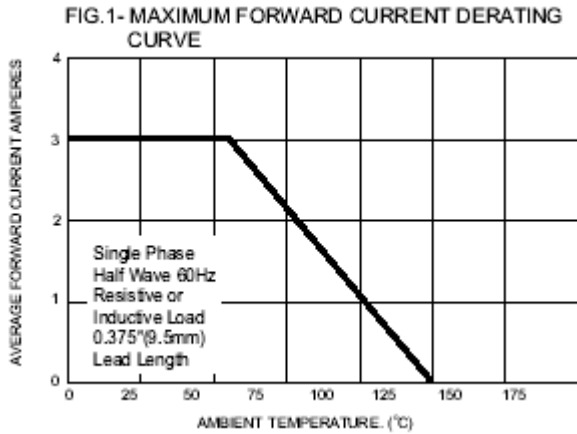
1) Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

2) Measured at 1MHz and Applied Reverse Voltage of 4.0V DC.

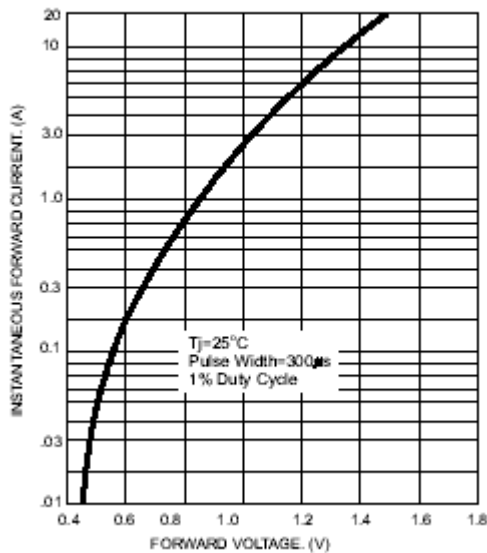
**TOP DYNAMIC**

Dated : 31/10/2016 TL Rev: 01

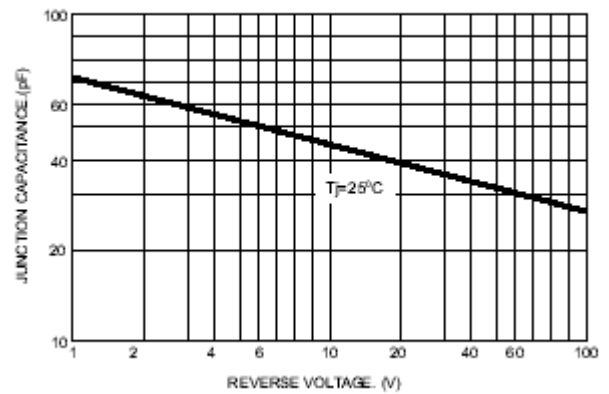
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**FIG. 3- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



**FIG. 5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**

