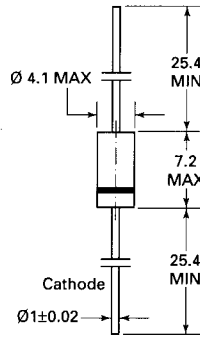


# BY296...BY299

## FAST SILICON RECTIFIERS

### FEATURES

- \* Low forward voltage
- \* High current capability
- \* Low leakage current
- \* High surge capability
- \* Low cost



### VOLTAGE RANGE

100 to 800 Volts

### CURRENT

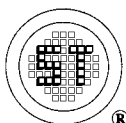
2.0 Amperes

Dimensions in mm

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

	Symbol	Value	Unit	
Repetitive Peak Reverse Voltage	<b>BY296</b>	$V_{RRM}$	100	V
	<b>BY297</b>	$V_{RRM}$	200	V
	<b>BY298</b>	$V_{RRM}$	400	V
	<b>BY299</b>	$V_{RRM}$	800	V
Nominal Current at Half Wave Rectification with Resistive Load at $T_{amb} = 50\text{ }^\circ\text{C}$	$I_{FAV}$	2 <sup>1)</sup>	A	
Surge Forward Current, Half Cycle 50Hz, starting from $T_j = 25\text{ }^\circ\text{C}$	$I_{FSM}$	70	A	
Repetitive Peak Forward Current, $\Theta < 40\text{ }^\circ$ , $f > 15\text{Hz}$ , $T_{amb} = 25\text{ }^\circ\text{C}$	$I_{FRM}$	10 <sup>1)</sup>	A	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Ambient Operating Temperature Range	$T_{amb}$	-40 + 150	$^\circ\text{C}$	
Storage Temperature Range	$T_s$	-40 + 150	$^\circ\text{C}$	

<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



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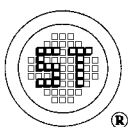


# BY296...BY299

## FAST SILICON RECTIFIERS

### Characteristics

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 3 \text{ A}$ , $T_J = 25 \text{ }^\circ\text{C}$	$V_F$	-	-	1.3	V
Leakage Current at $V_{RRM}^1$ , $T_J = 25 \text{ }^\circ\text{C}$	$I_R$	-	-	10	$\mu\text{A}$
Forward Recovery Time at $I_F = 100 \text{ mA}$	$t_{fr}$	-	-	1	$\mu\text{s}$
Reverse Recovery Time from $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$	$t_{rr}$	-	-	0.5	$\mu\text{s}$
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	-	35	K/W
<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.					



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