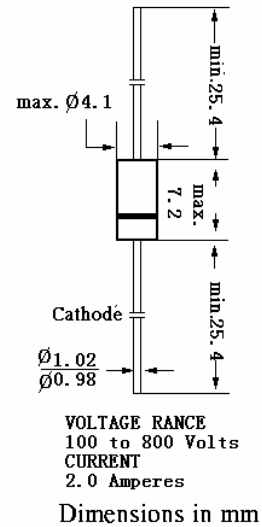


# BY296 THRU BY299

## FAST SILICON RECTIFIERS

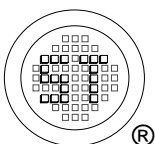
### Features

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



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

	Symbol	Value	Unit	
Repetitive Peak Reverse Voltage	BY296	$V_{RRM}$	100	V
	BY297	$V_{RRM}$	200	V
	BY298	$V_{RRM}$	400	V
	BY299	$V_{RRM}$	800	V
Nominal Current at Half Wave Rectification with Resistive Load at $T_{amb}=50^\circ\text{C}$	$I_{FAV}$	2 <sup>1)</sup>	A	
Repetitive Peak Forward Current, $\Theta < 40^\circ$ , $f > 15\text{Hz}$ , $T_{amb}=25^\circ\text{C}$	$I_{FRM}$	10 <sup>1)</sup>	A	
Surge Forward Current, Half Cycle 50Hz, starting from $T_j=25^\circ\text{C}$	$I_{FSM}$	70	A	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Ambient Operating Temperature Range	$T_{amb}$	-40 to +150	$^\circ\text{C}$	
Storage Temperature Range	$T_s$	-40 to +150	$^\circ\text{C}$	
1) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.				



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098

Dated : 20/06/2003

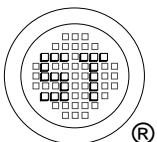
# BY296 THRU BY299

## FAST SILICON RECTIFIERS

### Characteristics at $T_j = 25^\circ\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F=3\text{A}, T_j=25^\circ\text{C}$	$V_F$	-	-	1.3	V
Leakage Current at $V_{RRM}, T_j=25^\circ\text{C}$	$I_R$	-	-	10	$\mu\text{A}$
Forward Recovery Time at $I_F=100\text{mA}$	$t_{rr}$	-	-	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 <sup>1)</sup>	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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ISO 9001:2000  
Certificate No. 0506098

Dated : 20/06/2003