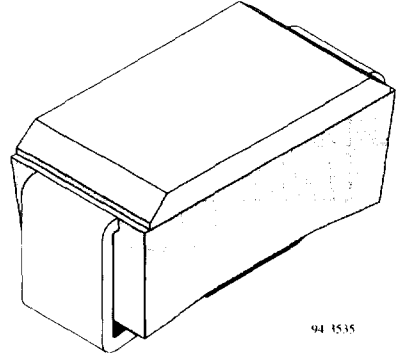


Schottky Barrier Rectifier

Features

- High efficiency
- Low power losses
- Very low switching losses
- Low reverse current
- High surge capability



94 4535

Applications

Polarity protection
Low voltage, high frequency rectifiers

Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage		BYS10-25	V_{RRM}	25	V
		BYS10-35	V_{RRM}	35	V
		BYS10-45	V_{RRM}	45	V
Reverse voltage		BYS10-25	V_R	25	V
		BYS10-35	V_R	35	V
		BYS10-45	V_R	45	V
Peak forward surge current	$t_p=10\text{ms}$, half sinewave		I_{FSM}	30	A
Average forward current			I_{FAV}	1.5	A
Junction temperature			T_j	150	$^\circ\text{C}$
Storage temperature range			T_{sig}	-55...+150	$^\circ\text{C}$

Maximum Thermal Resistance

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	$T_L=\text{constant}$	R_{thJL}	25	K/W
Junction ambient	mounted on epoxy-glass hard issue, Fig. 1a	R_{thJA}	150	K/W
	mounted on epoxy-glass hard issue, Fig. 1b	R_{thJA}	125	K/W
	mounted on Al-oxid-ceramic (Al_2O_3), Fig. 1b	R_{thJA}	100	K/W

Characteristics

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 1\text{A}$		V_F			500	mV
Reverse current	$V_R = V_{RRM}$		I_R			500	μA
	$V_R = V_{RRM}, T_j = 100^\circ\text{C}$		I_R			10	mA

Typical Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

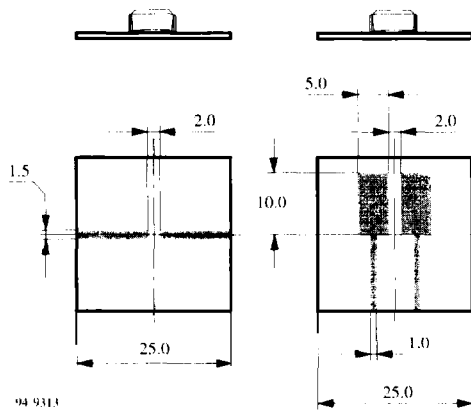


Figure 1 : Boards for R_{thJA} definition (copper overlay 35μ)

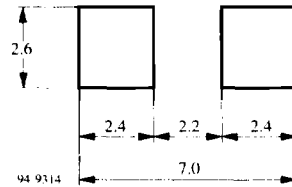


Figure 2 : Recommended foot pads

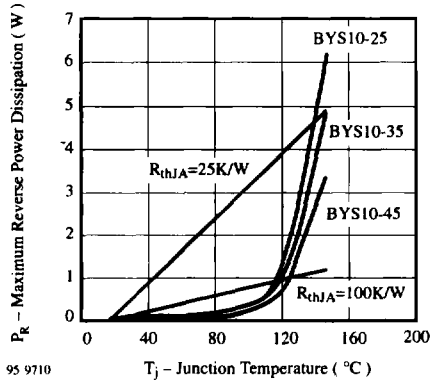


Figure 3 : Maximum Reverse Power Dissipation vs. Junction Temperature

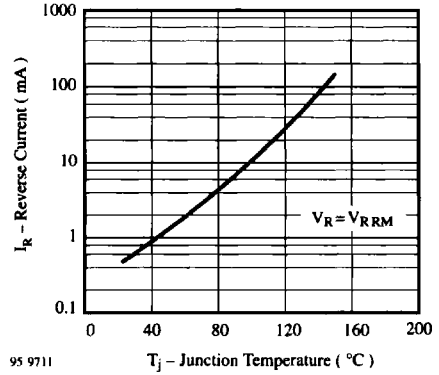


Figure 4 : Reverse Current vs. Junction Temperature

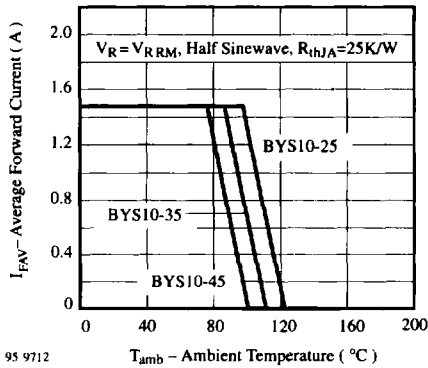


Figure 5 : Average Forward Current vs. Ambient Temperature

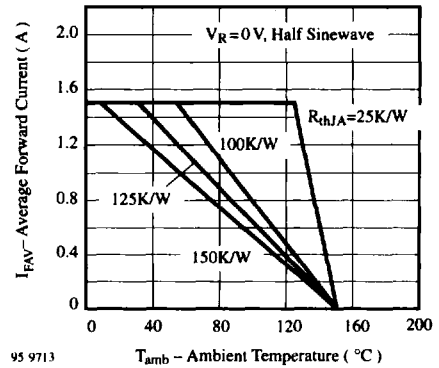


Figure 6 : Average Forward Current vs. Ambient Temperature

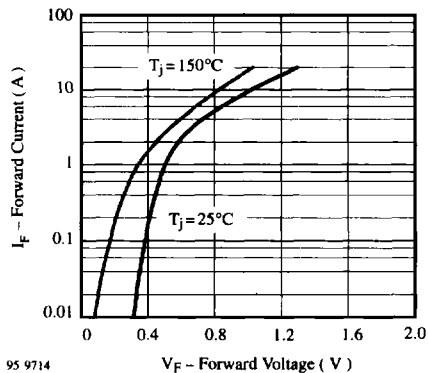


Figure 7 : Forward Current vs. Forward Voltage

Dimensions in mm

