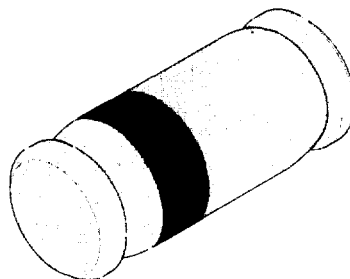


Silicon Epitaxial Planar Diodes

Applications

General purposes



94 9371

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Peak reverse voltage		BAV100	V_{RRM}	60	V
		BAV101	V_{RRM}	120	V
		BAV102	V_{RRM}	200	V
		BAV103	V_{RRM}	250	V
Reverse voltage		BAV100	V_R	50	V
		BAV101	V_R	100	V
		BAV102	V_R	150	V
		BAV103	V_R	200	V
Peak forward surge current	$t_p=1\text{s}$		I_{FSM}	1	A
Repetitive peak forward current			I_{FRM}	625	mA
Forward current			I_F	250	mA
Power dissipation			P_V	500	mW
Junction temperature			T_j	175	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65...+175	$^\circ\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead		R_{thJL}	350	K/W
Junction ambient	on PC board 50mmx50mmx1.6mm	R_{thJA}	500	K/W

Characteristics

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=100\text{mA}$		V_F			1	V
Reverse current	$V_R=50\text{V}$	BAV100	I_R			100	nA
	$V_R=100\text{V}$	BAV101	I_R			100	nA
	$V_R=150\text{V}$	BAV102	I_R			100	nA
	$V_R=200\text{V}$	BAV103	I_R			100	nA
Reverse current	$T_j=100^\circ\text{C}, V_R=50\text{V}$	BAV100	I_R			15	μA
	$T_j=100^\circ\text{C}, V_R=100\text{V}$	BAV101	I_R			15	μA
	$T_j=100^\circ\text{C}, V_R=150\text{V}$	BAV102	I_R			15	μA
	$T_j=100^\circ\text{C}, V_R=200\text{V}$	BAV103	I_R			15	μA
Breakdown voltage	$I_R=100\mu\text{A}, t_p/T=0.01, t_p=0.3\text{ms}$	BAV100	$V_{(BR)}$	60			V
		BAV101	$V_{(BR)}$	120			V
		BAV102	$V_{(BR)}$	200			V
		BAV103	$V_{(BR)}$	250			V
Diode capacitance	$V_R=0, f=1\text{MHz}$		C_D		1.5		pF
Differential forward resistance	$I_F=10\text{mA}$		r_f		5		Ω
Reverse recovery time	$I_F=I_R=30\text{mA}, i_R=3\text{mA}, R_L=100\Omega$		t_{rr}			50	ns

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

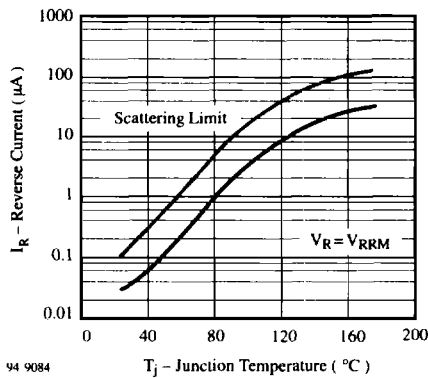


Figure 1 : Reverse Current vs. Junction Temperature

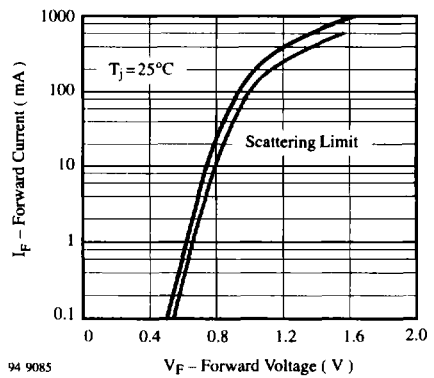


Figure 2 : Forward Current vs. Forward Voltage

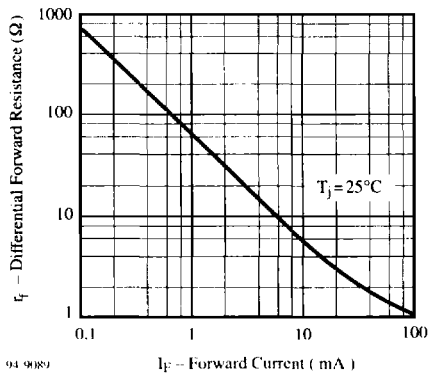


Figure 3: Differential Forward Resistance vs. Forward Current

Dimensions in mm

