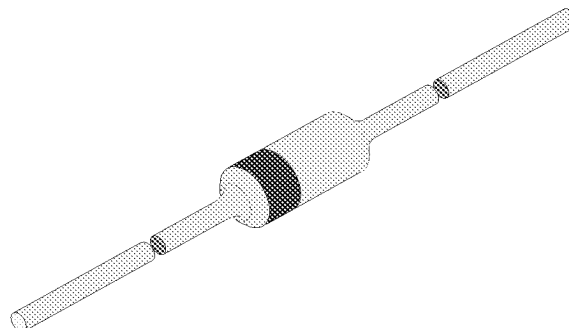




Silicon Epitaxial Planar Diodes

Applications

General purposes



94 9367

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Peak reverse voltage		BAV17	V_{RRM}	25	V
		BAV18	V_{RRM}	60	V
		BAV19	V_{RRM}	120	V
		BAV20	V_{RRM}	200	V
		BAV21	V_{RRM}	250	V
Reverse voltage		BAV17	V_R	20	V
		BAV18	V_R	50	V
		BAV19	V_R	100	V
		BAV20	V_R	150	V
		BAV21	V_R	200	V
Forward current			I_F	250	mA
Peak forward surge current	$t_p=1\text{s}, T_j=25^\circ\text{C}$		I_{FSM}	1	A
Forward peak current	$f=50\text{Hz}$		I_{FM}	625	mA
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 ambient	$l=4\text{mm}, T_L=\text{constant}$	R_{thJA}	350	K/W

Electrical 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	$V_R = 20\text{V}$	BAV17	I_R			100	nA
	$V_R = 50\text{V}$	BAV18	I_R			100	nA
	$V_R = 100\text{V}$	BAV19	I_R			100	nA
	$V_R = 150\text{V}$	BAV20	I_R			100	nA
	$V_R = 200\text{V}$	BAV21	I_R			100	nA
	$T_j = 100^\circ\text{C}$, $V_R = 20\text{V}$	BAV17	I_R			15	μA
	$T_j = 100^\circ\text{C}$, $V_R = 50\text{V}$	BAV18	I_R			15	μA
	$T_j = 100^\circ\text{C}$, $V_R = 100\text{V}$	BAV19	I_R			15	μA
	$T_j = 100^\circ\text{C}$, $V_R = 150\text{V}$	BAV20	I_R			15	μA
	$T_j = 100^\circ\text{C}$, $V_R = 200\text{V}$	BAV21	I_R			15	μA
Breakdown voltage	$I_R = 100\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ms}$	BAV17	$V_{(BR)}$	25			V
		BAV18	$V_{(BR)}$	60			V
		BAV19	$V_{(BR)}$	120			V
		BAV20	$V_{(BR)}$	200			V
		BAV21	$V_{(BR)}$	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

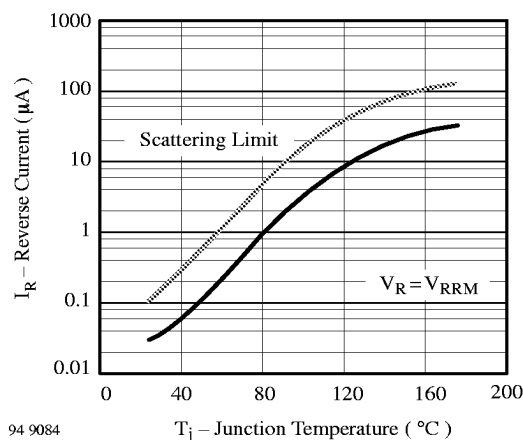
Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Figure 1. Reverse Current vs. Junction Temperature

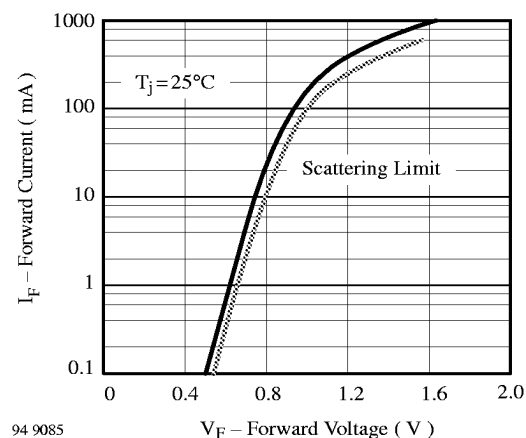


Figure 2. Forward Current vs. Forward Voltage

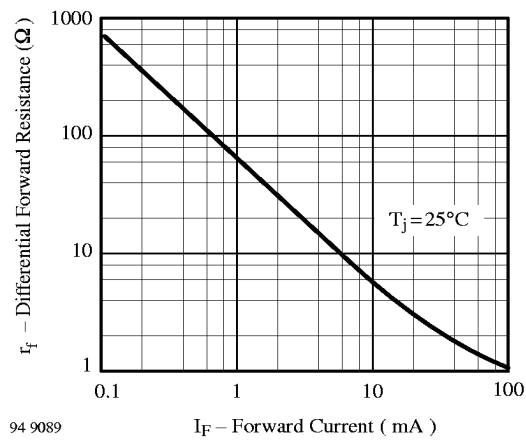


Figure 3. Differential Forward Resistance vs. Forward Current

Dimensions in mm

technical drawings
according to DIN
specifications

94 9366

Standard Glass Case
54 A 2 DIN 41880
JEDEC DO 35
Weight max. 0.3 g

