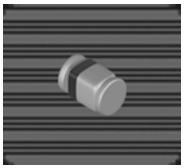
BAV300 / 301 / 302 / 303

Switching Diode

GOOD-ARK

Features

- Silicon Epitaxial Planar Diodes
- Saving space
- Hermetic sealed parts
- Fits onto SOD 323 / SOT 23 footprints
- Electrical data identical with the devices BAV100...BAV103 / BAV200...BAV203



Applications

- General purposes

Mechanical Data

- Case: MicroMELF Glass Case
- Weight: approx. 12 mg
- Cathode Band Color: Black

■Absolute Maximum Ratings

(T_{amb}=25°C unless otherwise specified)

Parameter	Test Condition	Part	Symbol	Value	Unit
Peak reverse voltage		BAV300	V_{RRM}	60	V
		BAV301	V_{RRM}	120	V
		BAV302	V_{RRM}	200	V
		BAV303	V_{RRM}	250	V
Reverse voltage		BAV300	V_R	50	V
		BAV301	V_R	100	V
		BAV302	V_R	150	V
		BAV303	V_R	200	V
Forward current			I_F	250	mA
Peak forward surge current	t_p= 1 s, T_j=25°C		I_{FSM}	1	A
Forward peak current	f=50Hz		I_{FM}	625	mA

■Thermal Characteristics

(T_{amb}=25°C unless otherwise specified)

Parameter	Test Condition	Symbol	Value	Unit
Junction ambient	mounted on epoxy-glass hard tissue, Fig 4. 35 um copper clad, 0.9m² copper area per electrode	R_{thJA}	500	K/W
Junction temperature		T_j	175	°C
Stroage temperature range		T_{stg}	-65 to +175	°C

■Electrical Characteristics

(T_{amb}=25°C unless otherwise specified)

Parameter	Test Condition	Part	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F=100mA		V_F			1	V
Reverse current	V_R=50V	BAV300	I_R			100	nA
	V_R=100V	BAV301	I_R			100	nA
	V_R=150V	BAV302	I_R			100	nA
	V_R=200V	BAV303	I_R			100	nA
	T_j=100°C, V_R=50V	BAV300	I_R			15	uA
	T_j=100°C, V_R=100V	BAV301	I_R			15	uA
	T_j=100°C, V_R=150V	BAV302	I_R			15	uA
	T_j=100°C, V_R=200V	BAV303	I_R			15	uA
Breakdown voltage	I_R=100uA, t_p/T=0.01, t_p=0.3ms	BAV300	$V_{(BR)}$	60			V
	I_R=100uA, t_p/T=0.01, t_p=0.3ms	BAV301	$V_{(BR)}$	120			V
	I_R=100uA, t_p/T=0.01, t_p=0.3ms	BAV302	$V_{(BR)}$	200			V
	I_R=100uA, t_p/T=0.01, t_p=0.3ms	BAV303	$V_{(BR)}$	250			V
Diode capacitance	V_R=0, f=1MHz		C_D		1.5		pF
Differential forward resistance	I_F=10mA		r_f		5		Ω
Reverse recovery time	I_F=I_R=30mA, i_R=3mA, R_L=100Ω		t_{rr}			50	ns

■Typical characteristics

(T_{amb}=25°C unless otherwise specified)

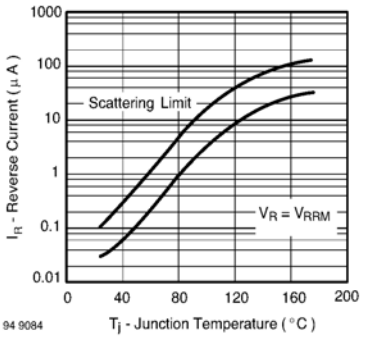


Fig. 1 Reverse Current vs. Junction Temperature

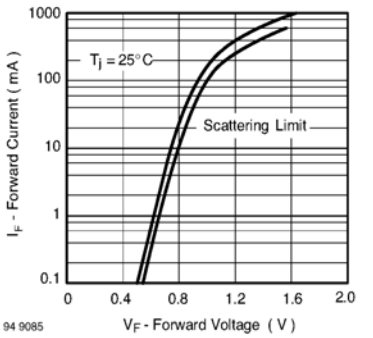


Fig. 2 Forward Current vs. Forward Voltage

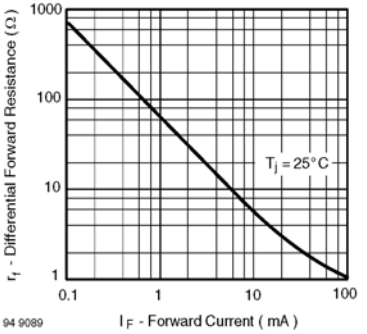


Fig. 3 Differential Forward Resistance vs. Forward Current

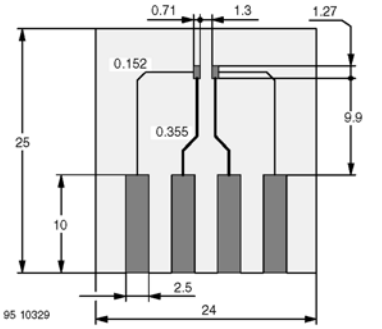


Fig. 4 Board for R_{thJA} definition (in mm)

Package Dimensions in mm (inches)