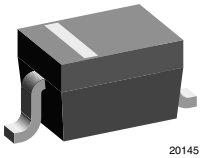
Small Signal Switching Diodes, High Voltage

Features

- Silicon Epitaxial Planar Diodes
- For general purpose
- These diodes are also available in other case styles including: the DO35 case with the type designation BAV19 - BAV21, the MiniMELF case with the type designation BAV100 - BAV103, the SOT23 case with the type designation BAS19 - BAS21 and the SOD123 case with the type designation BAV19W-V - BAV21W-V
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Mechanical Data

Case: SOD323 Plastic case

Weight: approx. 5.0 mg

Packaging Codes/Options:

GS18/10 k per 13" reel (8 mm tape), 10 k/box

GS08/3 k per 7" reel (8 mm tape), 15 k/box

Parts Table

Part	Type differentiation	Ordering code	Type Marking	Remarks
BAV19WS-V	V_R = 100 V	BAV19WS-V-GS18 or BAV19WS-V-GS08	A8	Tape and Reel
BAV20WS-V	V_R = 150 V	BAV20WS-V-GS18 or BAV20WS-V-GS08	A9	Tape and Reel
BAV21WS-V	V_R = 200 V	BAV21WS-V-GS18 or BAV21WS-V-GS08	AA	Tape and Reel

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Continuous reverse voltage		BAV19WS-V	V_R	100	V
		BAV20WS-V	V_R	150	V
		BAV21WS-V	V_R	200	V
Repetitive peak reverse voltage		BAV19WS-V	V_{RRM}	120	V
		BAV20WS-V	V_{RRM}	200	V
		BAV21WS-V	V_{RRM}	250	V
Forward continuous current	T_{amb} = 25 °C		I_F	250[1)]	mA
Rectified current (average) half wave rectification with resist. load	T_{amb} = 25 °C		$I_{F(AV)}$	200[1)]	mA
Repetitive peak forward current	f ≥ 50 Hz, θ = 180 °, T_{amb} = 25 °C		I_{FRM}	625[1)]	mA
Surge forward current	t < 1 s, T_j = 25 °C		I_{FSM}	1	A
Power dissipation	T_{amb} = 25 °C		P_{tot}	200[1)]	mW

1) Valid provided that leads are kept at ambient temperature

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	650[1)]	K/W
Junction temperature		T_j	150[1)]	°C
Storage temperature range		T_{stg}	- 65 to + 150[1)]	°C

1) Valid provided that leads are kept at ambient temperature

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 100 mA		V_F			1.00	V
	I_F = 200 mA		V_F			1.25	V
Leakage current	V_R = 100 V	BAV19WS-V	I_R			100	nA
	V_R = 100 V, T_j = 100 °C	BAV19WS-V	I_R			15	µA
	V_R = 150 V	BAV20WS-V	I_R			100	nA
	V_R = 150 V, T_j = 100 °C	BAV20WS-V	I_R			15	µA
	V_R = 200 V	BAV21WS-V	I_R			100	nA
	V_R = 200 V, T_j = 100 °C	BAV21WS-V	I_R			15	µA
Dynamic forward resistance	I_F = 10 mA		r_f		5		Ω
Diode capacitance	V_R = 0, f = 1 MHz		C_D			1.5	pF
Reverse recovery time	I_F = 30 mA, I_R = 30 mA, I_{rr} = 3 mA, R_L = 100 Ω		t_{rr}			50	ns

Package Dimensions in mm (Inches): SOD323