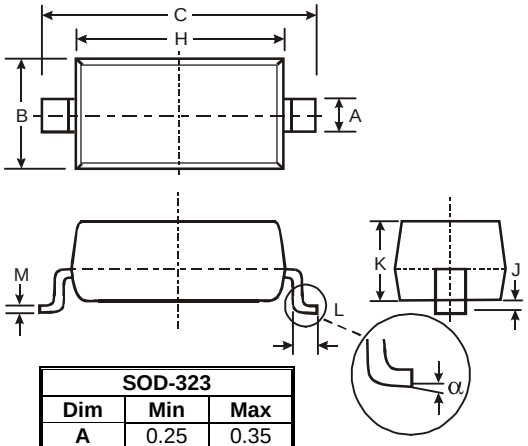
BAV19WS-V—BAV21WS-V

200mA Surface Mount Small Signal Fast Switching Diode

Features

- Silicon Epitaxial Planar Diode
- 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



SOD-323		
Dim	**Min**	**Max**
A	0.25	0.35
B	1.20	1.40
C	2.30	2.70
H	1.60	1.80
J	0.00	0.10
K	1.0	1.1
L	0.20	0.40
M	0.10	0.15
α	0°	8°
All Dimensions in mm		

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

Maximum Ratings and Electrical Characteristics

@ T_A = 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

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

1) Valid provided that leads are kept at ambient temperature

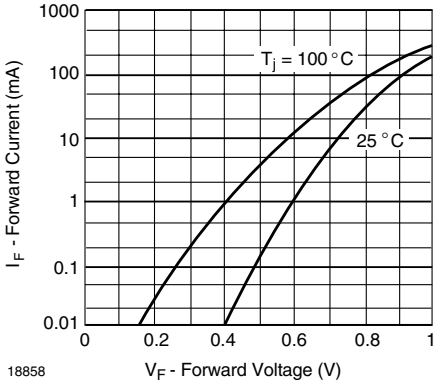


Figure 1. Forward Current vs. Forward Voltage

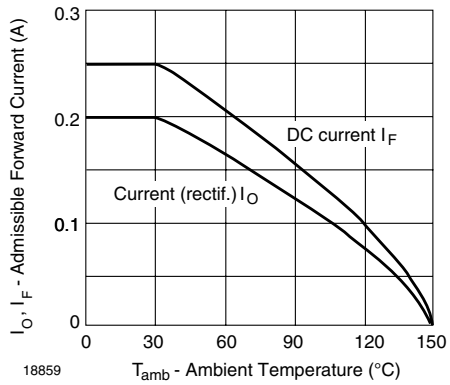


Figure 2. Admissible Forward Current vs. Ambient Temperature

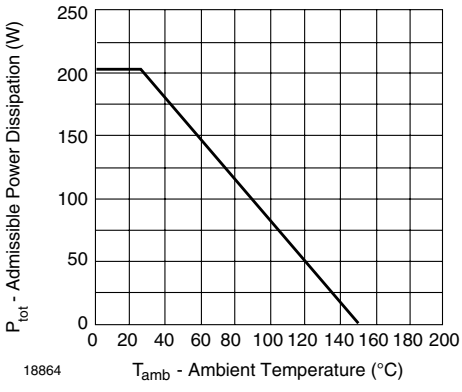


Figure 3. Admissible Power Dissipation vs. Ambient Temperature

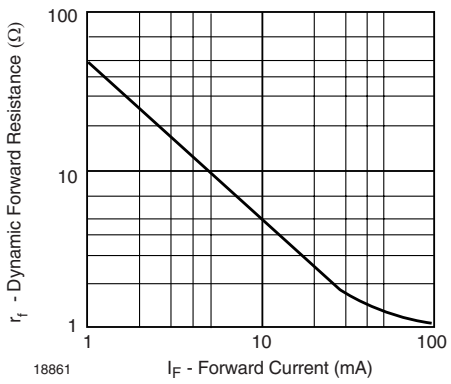


Figure 4. Dynamic Forward Resistance vs. Forward Current

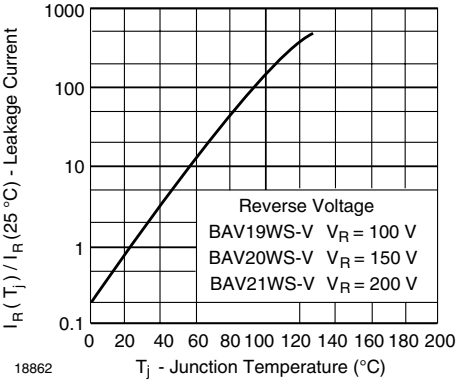


Figure 5. Leakage Current vs. Junction Temperature

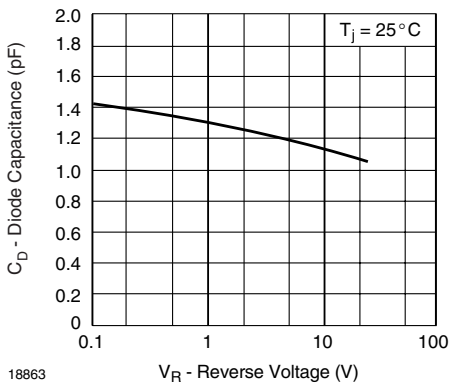


Figure 6. Capacitance vs. Reverse Voltage