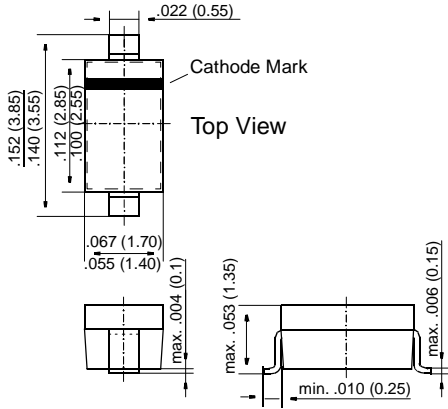


BAV19W THRU BAV21W

Small Signal Diodes

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- ◆ Silicon Epitaxial Planar Diodes
- ◆ For general purpose
- ◆ These diodes are also available in other case styles including: the DO-35 case with the type designations BAV19 to BAV21, the MiniMELF case with the type designations BAV100 to BAV103 and the SOT-23 case with the type designation BAS19 - BAS21.



MECHANICAL DATA

Case: SOD-123 Plastic Case

Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage	BAV19W BAV20W BAV21W	V_R 120 V_R 200 V_R 250	V V V V
Forward DC Current at $T_{amb} = 25\text{ °C}$	I_F	250 ¹⁾	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ °C}$ and $f \geq 50\text{ Hz}$	I_0	200 ¹⁾	mA
Repetitive Peak Forward Current at $f \geq 50\text{ Hz}$, $\Theta = 180\text{ °}$, $T_{amb} = 25\text{ °C}$	I_{FRM}	625 ¹⁾	mA
Surge Forward Current at $t < 1\text{ s}$, $T_j = 25\text{ °C}$	I_{FSM}	1	A
Power Dissipation at $T_{amb} = 25\text{ °C}$	P_{tot}	410 ¹⁾	mW
Junction Temperature	T_j	150 ¹⁾	°C
Storage Temperature Range	T_S	-65 to +150 ¹⁾	°C

¹⁾ Valid provided that electrodes are kept at ambient temperature (SOD-123)

BAV19W THRU BAV21W

ELECTRICAL CHARACTERISTICS

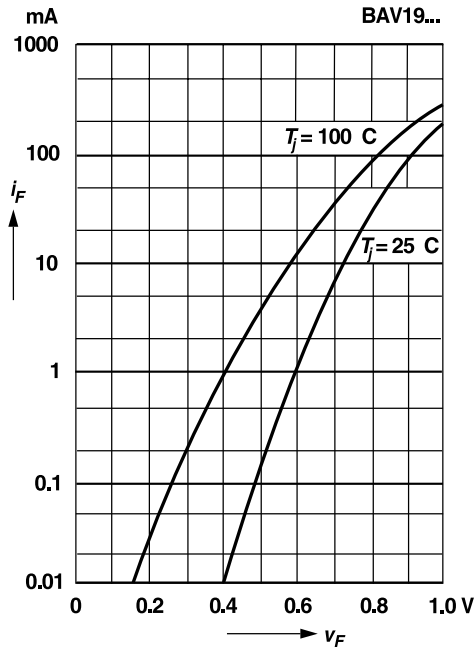
Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Forward voltage at $I_F = 100 \text{ mA}$	V_F	–	–	1	V
Leakage Current at $V_R = 100 \text{ V}$	BAV19W I_R	–	–	100	nA
at $V_R = 100 \text{ V}, T_j = 100 \text{ °C}$	BAV19W I_R	–	–	15	μA
at $V_R = 150 \text{ V}$	BAV20W I_R	–	–	100	nA
at $V_R = 150 \text{ V}, T_j = 100 \text{ °C}$	BAV20W I_R	–	–	15	μA
at $V_R = 200 \text{ V}$	BAV21W I_R	–	–	100	nA
at $V_R = 200 \text{ V}, T_j = 100 \text{ °C}$	BAV21W I_R	–	–	15	μA
Dynamic Forward Resistance at $I_F = 10 \text{ mA}$	r_f	–	5	–	Ω
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	C_{tot}	–	1.5	–	pF
Reverse Recovery Time from $I_F = 30 \text{ mA}$ through $I_R = 30 \text{ mA}$ to $I_R = 3 \text{ mA}; R_L = 100 \Omega$	t_{rr}	–	–	50	ns
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	375 ¹⁾	K/W

¹⁾ Valid provided that electrodes are kept at ambient temperature

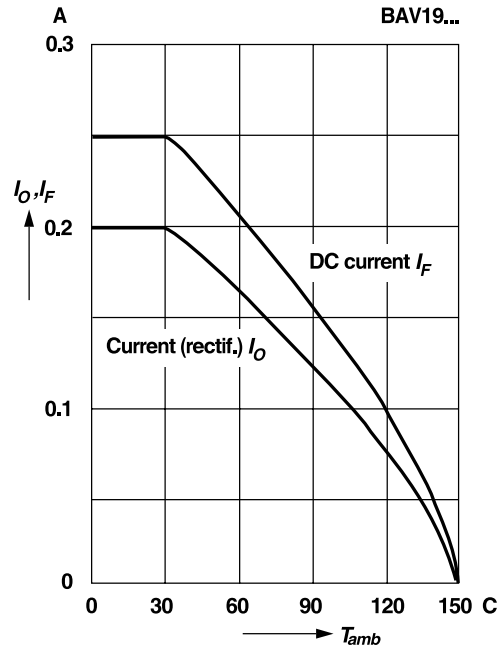
RATINGS AND CHARACTERISTIC CURVES BAV19W THRU BAV21W

Forward characteristics



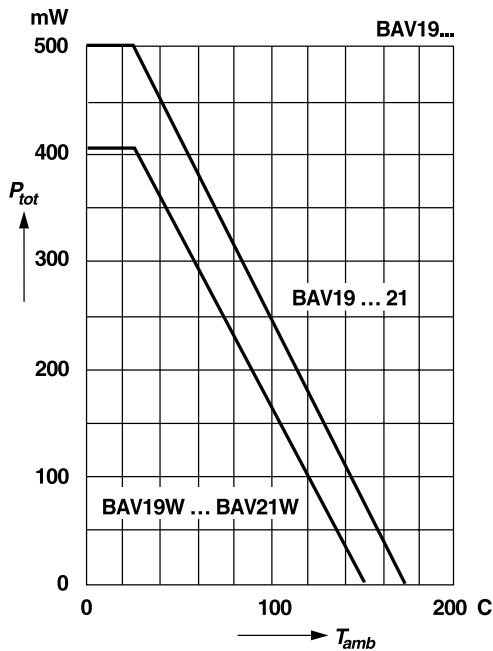
Admissible forward current versus ambient temperature

For conditions, see footnote in table "Absolute Maximum Ratings"

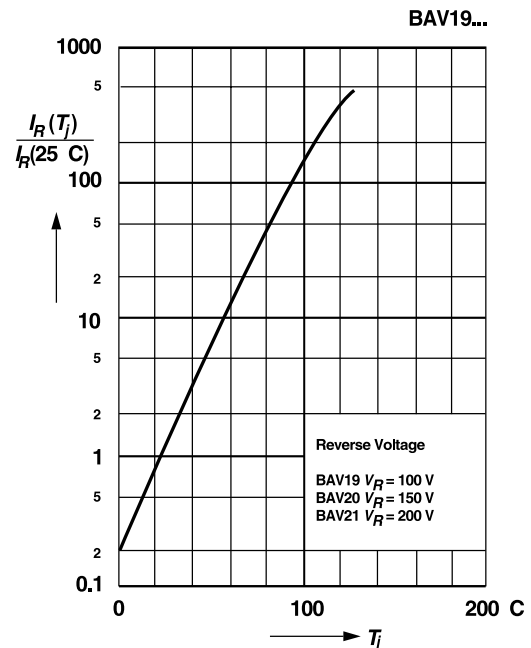


Admissible power dissipation versus ambient temperature

For conditions, see footnote in table "Absolute Maximum Ratings"

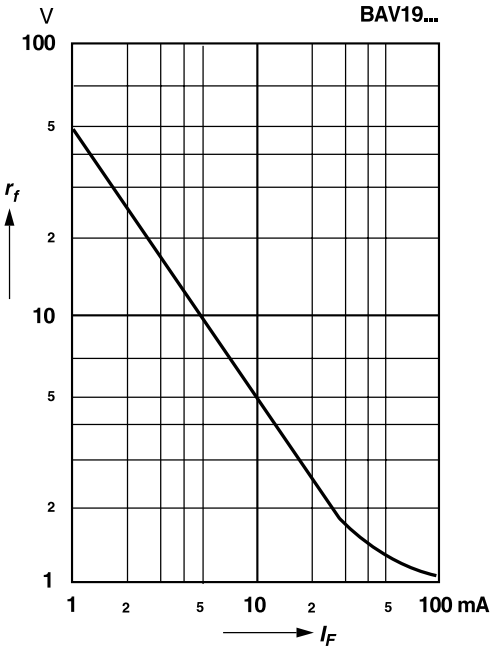


Leakage current versus junction temperature



RATINGS AND CHARACTERISTIC CURVES BAV19W THRU BAV21W

Dynamic forward resistance
versus forward current



Capacitance
versus reverse voltage

