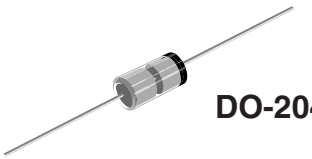
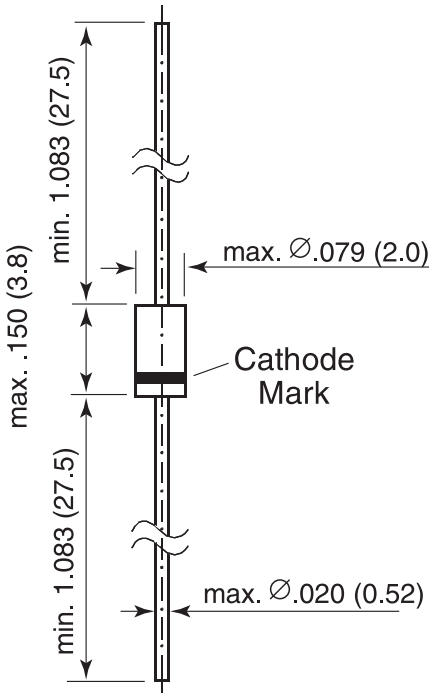
GENERAL SEMICONDUCTOR®

BAV19 thru BAV21

Small-Signal Diodes



DO-204AH (DO-35 Glass)



Dimensions in inches and (millimeters)

Features

- Silicon Epitaxial Planar Diodes
- For general purpose
- This diode is also available in other case styles including: the SOD-123 case with the type designation BAV19W to BAV21W, the MiniMELF case with the type designation BAV101 to BAV103, the SOT-23 case with the type designation BAS19 to BAS21, and the SOD-323 case with type designation BAV19WS to BAV21WS.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

Packaging Codes/Options:

F2/10K per Ammo tape (52mm tape), 50K/box

F3/10K per 13" reel (52mm tape), 50K/box

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter		Symbol	Value	Unit
Continuous Reverse Voltage	BAV19 BAV20 BAV21	V_R	100 150 200	V
Repetitive Peak Reverse Voltage	BAV19 BAV20 BAV21	V_{RRM}	120 200 250	V
Forward DC Current at T_{amb} = 25°C[1]		I_F	250	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at T_{amb} = 25°C[1]		$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current at f ≥ 50Hz, Θ = 180°, T_{amb} = 25°C[1]		I_{FRM}	625	mA
Surge Forward Current at t < 1s, T_j = 25°C		I_{FSM}	1	A
Power Dissipation at T_{amb} = 25°C[1]		P_{tot}	500	mW
Thermal Resistance Junction to Ambient Air[1]		$R_{\theta JA}$	430	°C/W
Junction Temperature[1]		T_j	175	°C
Storage Temperature Range[1]		T_S	–65 to +175	°C

Note:

(1) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case.

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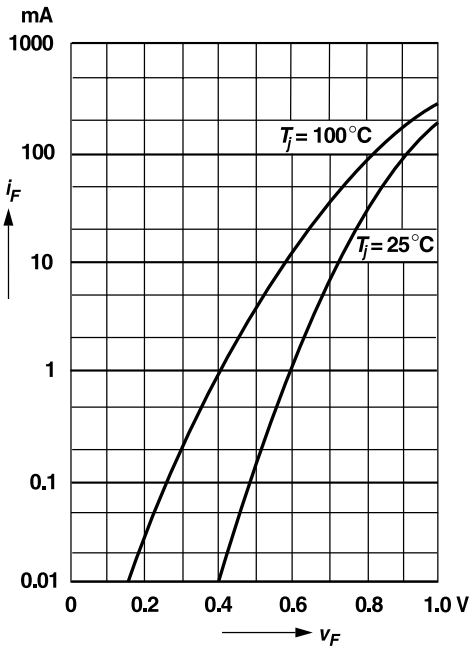
Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter		Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage		V_F	I_F = 100mA I_F = 200mA	— —	— —	1.00 1.25	V
Leakage Current	BAV19	I_R	V_R = 100V	—	—	100	nA
	BAV19		V_R = 100V, T_j = 100°C	—	—	15	µA
	BAV20		V_R = 150V	—	—	100	nA
	BAV20		V_R = 150V, T_j = 100°C	—	—	15	µA
	BAV21		V_R = 200V	—	—	100	nA
	BAV21		V_R = 200V, T_j = 100°C	—	—	15	µA
Dynamic Forward Resistance		r_f	I_F = 10mA	—	5	—	Ω
Capacitance		C_{tot}	V_R = 0, f = 1MHz	—	1.5	—	pF
Reverse Recovery Time		t_{rr}	I_F = 30mA, I_R = 30mA I_{rr} = 3mA, R_L = 100Ω	—	—	50	ns

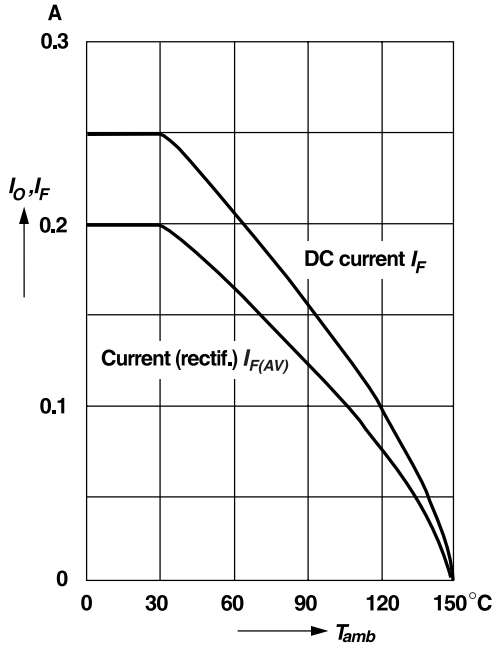
Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Forward characteristics



Admissible forward current versus ambient temperature

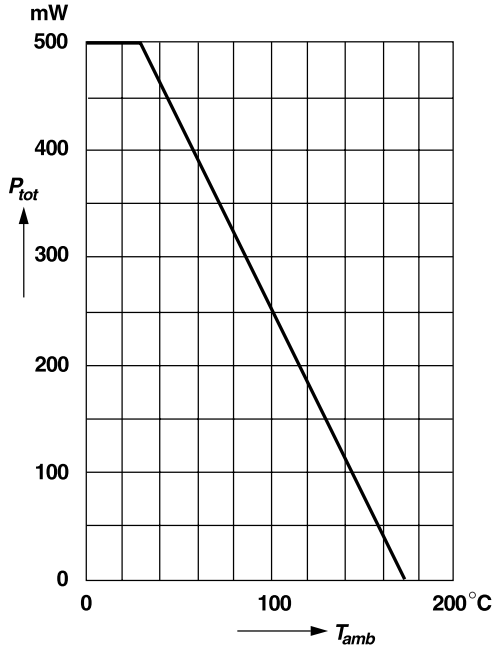
Valid provided that electrodes are kept at ambient temperature



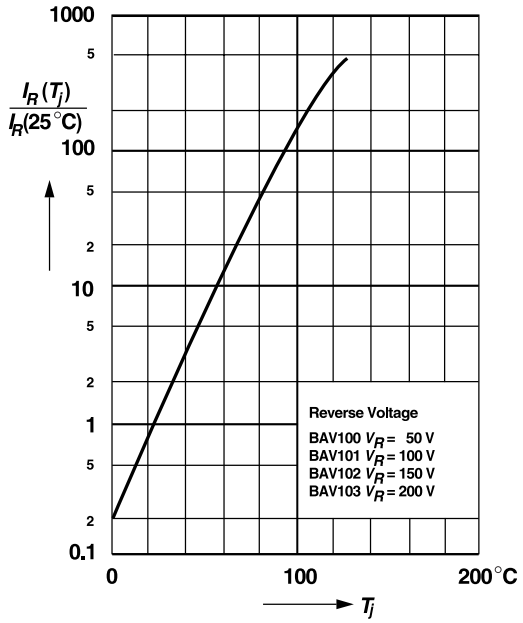
Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Admissible power dissipation versus ambient temperature

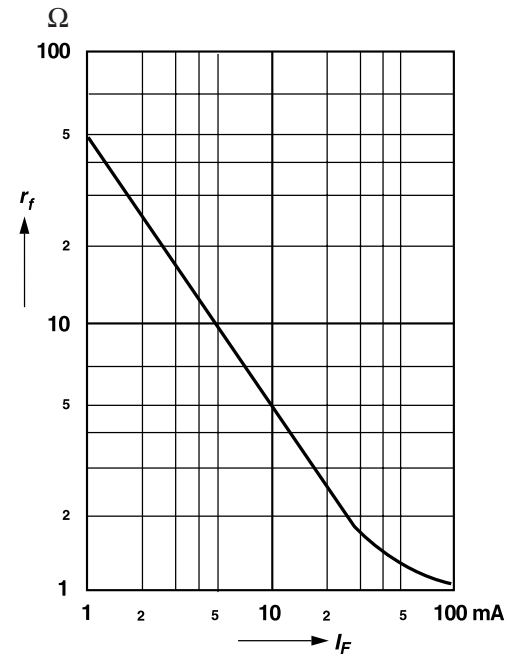
Valid provided that electrodes are kept at ambient temperature



Leakage current versus junction temperature



Dynamic forward resistance versus forward current



Capacitance versus reverse voltage