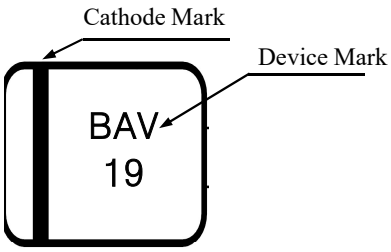
500mW Small Signal Switching Diode
Reverse Voltage 120 to 250 Volts Forward Current 0.25 Amperes

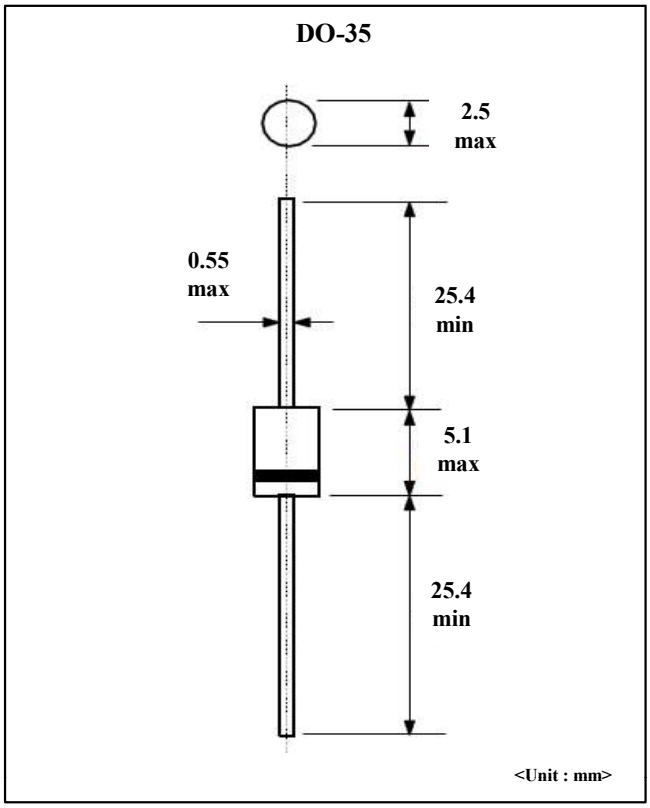
Features
- Silicon epitaxial planar diode
- High switching speed
- For general purpose switching applications
- Low leakage current
- 500mW power dissipation

Typical Applications
- High-speed switching.

Mechanical Data
- Case : DO-35, Glass case
- Polarity : Color band denotes cathode
- Weight : 0.13grams

Marking





Maximum Ratings & Electrical Characteristics (Ta=25℃ unless otherwise noted)

Parameter	Device	BAV19	BAV20	BAV21	Unit	Remark
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	120	200	250	V	
Reverse Voltage	V_{RM}	100	150	200	V	
Forward DC Current	I_F	250			mA	
Rectified Current(Average) Half Wave Rectification with Resist. Load	$I_{F(AV)}$	200			mA	
Repetitive Peak Forward Current	I_{FRM}	625			mA	f>50Hz, Ta=25℃
Peak Forward Surge Current at t< 1S	I_{FSM}	1.0			A	T_J=25℃
Power Dissipation	P_{tot}	500			mW	
Thermal Resistance Junction to Ambient Air	Rth(j-a)	430			K/W	Note 1
Maximum Instantaneous Forward Voltage	V_F	1.0			V	I_F=100mA
		1.25			V	I_F=200mA
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	100			nA	V_R=V_{RM}, T_J=25℃
		15			uA	V_R=V_{RM}, T_J=100℃
Total Capacitance	C_{tot}	1.5			pF	Note 2
Typical Dynamic Forward Resistance	r_f	5.0			Ω	I_F=10mA
Maximum Reverse Recovery Time	trr	50			ns	Note 3
Operation Junction Temperature Range	T_J	-55 to +175			℃	
Storage Temperature Range	T_{STG}	-65 to +200			℃	

Note 1. Valid provided that leads are kept at ambient temperature at a distance of 8mm from case
Note 2. Measured at 1.0MHz and applied reverse voltage of Zero volts
Note 3. Measured at I_F=30mA, I_R=30mA, Irr=3mA, R_L=100Ω

Ratings and Characteristics Curves (Ta=25℃ unless otherwise noted)

Fig.1 Typical instantaneous forward characteristics

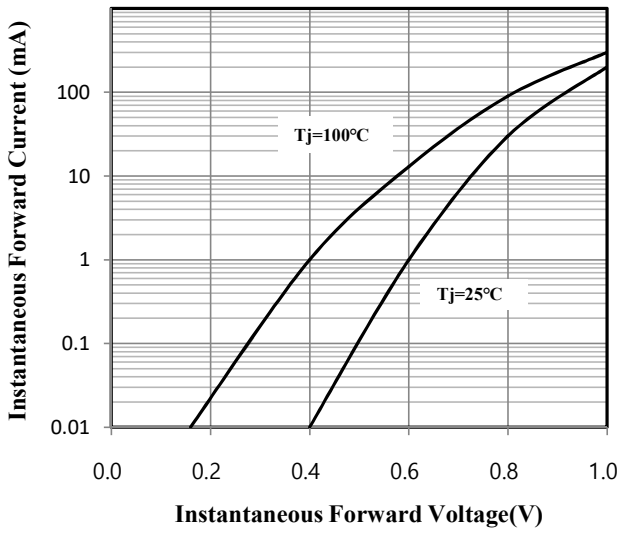


Fig.2 Dynamic forward resistance versus forward current

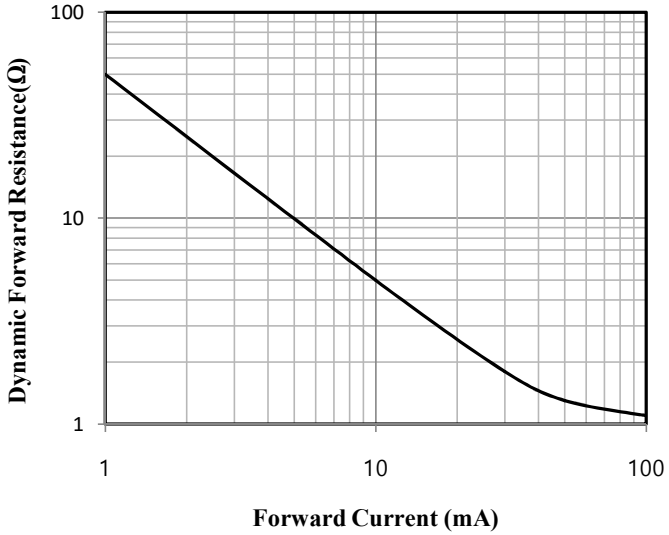


Fig. 3 Admissible power dissipation versus ambient temperature

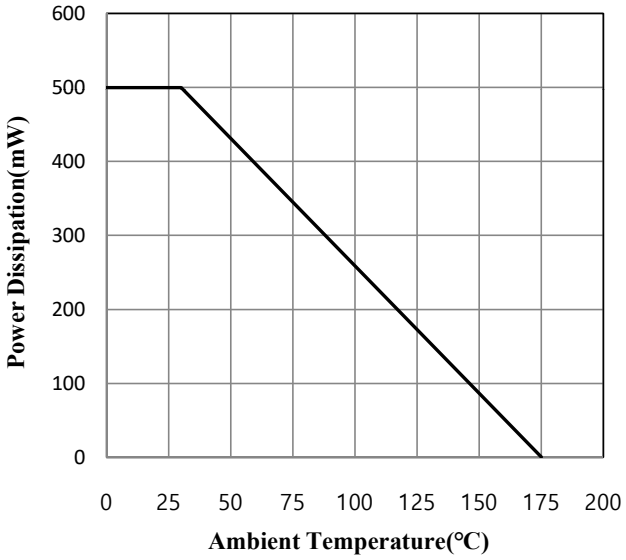


Fig.4 Capacitance versus reverse voltage

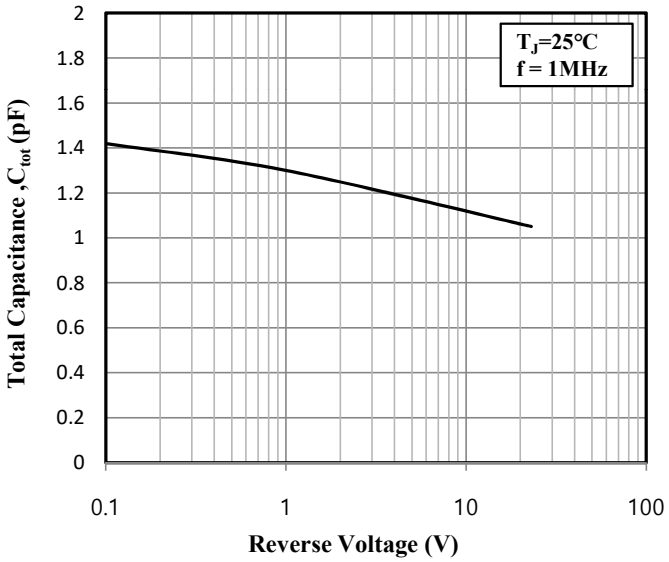


Fig.5 Leakage current versus junction temperature

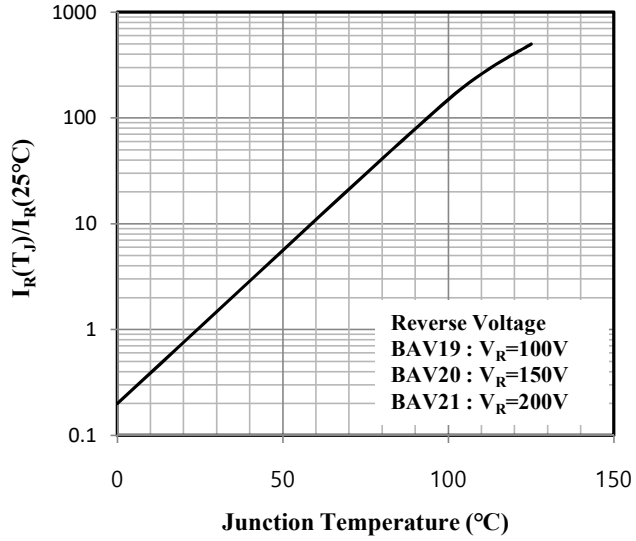


Fig.6 Admissible repetitive peak forward current versus pulse duration