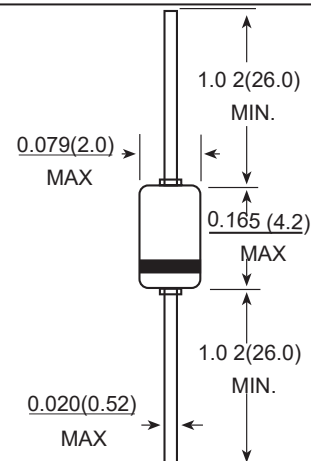# BAV17~BAV21

DO-35 Small Signal Switching Diodes

FEATURES

- Silicon epitaxial planar diode
- High speed switching diode
- 500 mW power dissipation

MECHANICAL DATA

- Case: DO-35, glass case
- Polarity: Color band denotes cathode

0.079(2.0) MAX

1.0 2(26.0) MIN.

0.165 (4.2) MAX

1.0 2(26.0) MIN.

0.020(0.52) MAX

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

		BAV17	BAV18	BAV19	BAV20	BAV21	UNITS
Reverse voltage	V_R	20	50	100	150	200	V
Peak reverse voltage	V_{RM}	25	60	120	200	250	V
Average forward rectified current Half wave rectification with resist.load @T_A=25℃ and f≥50Hz	$I_{(AV)}$	250[1]					mA
Forward surge current @ t<1s and T_J=25℃	I_{FSM}	1.0					A
Power dissipation @ T_A=25℃	P_{tot}	500[1]					mW
Thermal resistance junction to ambient	$R_{\theta JA}$	350					K/W
Junction temperature	T_J	175					℃
Storage temperature range	T_{STG}	-55 --- +175					℃

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

Electrical Specification (T$_A$=25°C unless otherwise specified)

		MIN	TYP	MAX	UNITS
Forward voltage @ I_F=100mA	V_F	-	-	1.0	V
Leakage current @T_j=25 ℃	I_R	-	-	100	nA
at reverse voltage @T_j=100 ℃		-	-	15	μA
Capacitance @ V_F=V_R=0V f=1MH$_Z$	C_J	-	1.5	-	pF
Reverse recovery time from I_F=30mA to I_R=30mA from I_{RR}=3mA, R_L=100Ω.	t_{rr}	-	-	50	ns

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics
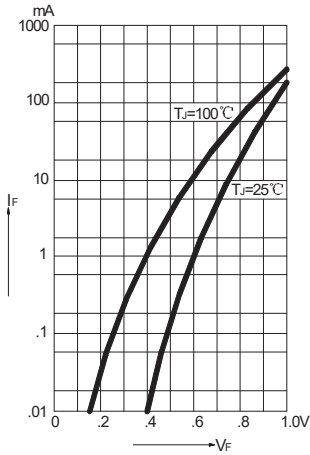
FIG.1 – FORWARD CHARACTERISTICS

FIG.2 – ADMISSIBLE FORWARD CURRENT VERSUS AMBIENT TEMPERATURE
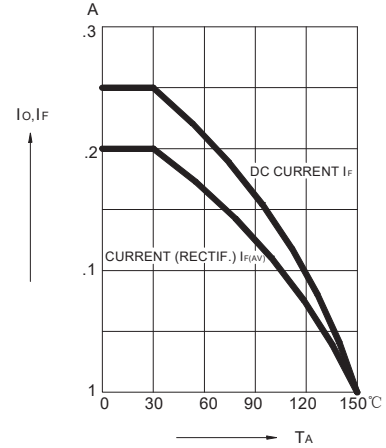
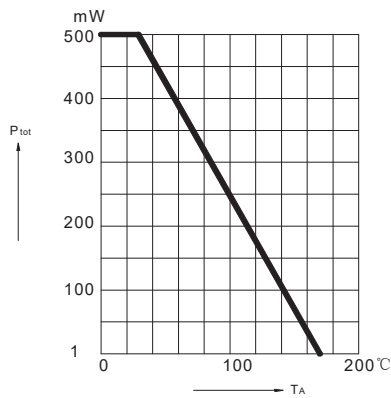### FIG.3 – ADMISSIBLE POWER DISSLPATION VERSUS AMBIENT TEMPERATURE

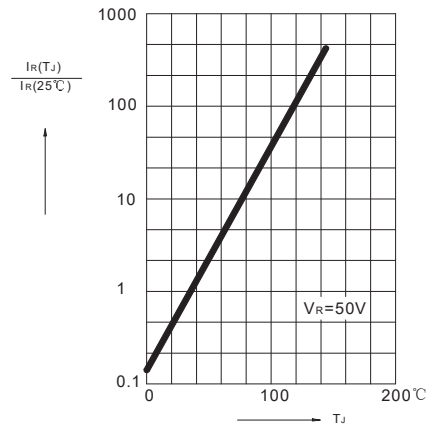### FIG.4 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE
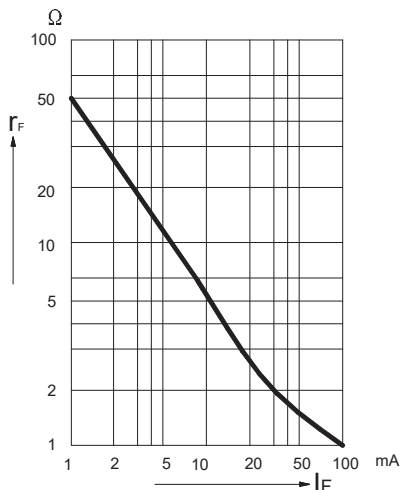
FIG.5 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

FIG.6 – CAPACITANCE VERSUS REVERSE VOLTAGE