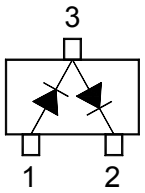
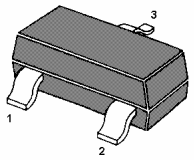
SM Technology Co., Limited

BAV99

HIGH-SPEED DOUBLE DIODE

fast switching in thick and thin-film circuits diode





SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Continuous Forward Current (Double Diode Loaded)	I_F	125	mA
Continuous Forward Current (Single Diode Loaded)	I_F	215	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-repetitive Peak Forward Current T_j = 25 °C at t = 1 µS at t = 1 mS at t = 1 S	I_{FSM}	4 1 0.5	A
Power Dissipation	P_{tot}	250	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	- 65 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Forward Voltage at I_F = 1 mA at I_F = 10 mA at I_F = 50 mA at I_F = 150 mA	V_F	 0.715 0.855 1 1.25	V
Reverse Current at V_R = 25 V at V_R = 75 V at V_R = 25 V, T_j = 150 °C at V_R = 75 V, T_j = 150 °C	I_R	 30 1 30 50	 nA µA µA µA
Diode Capacitance at f = 1 MHz	C_d	1.5	pF
Reverse Recovery Time at I_F = I_R = 10 mA, I_R = 1 mA, R_L = 100 Ω	t_{rr}	4	ns
Forward Recovery Voltage at I_F = 10 mA, t_r = 20 ns	V_{fr}	1.75	V
Thermal Resistance from Junction to ambient [1]	R_{thja}	500	K/W

[1] Device mounted on an FR4 printed-circuit board.

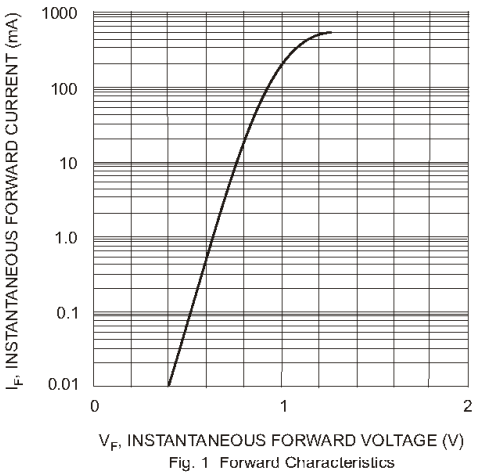


Fig. 1 Forward Characteristics

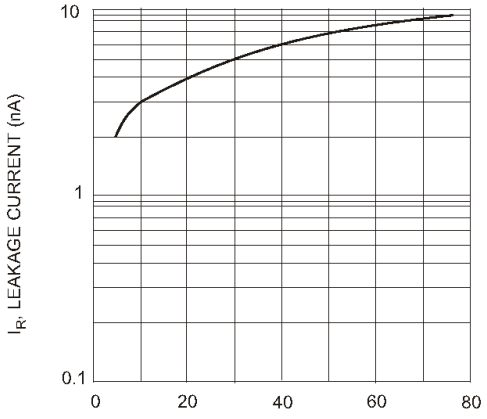


Fig. 2 Typical Leakage Current vs Reverse Voltage

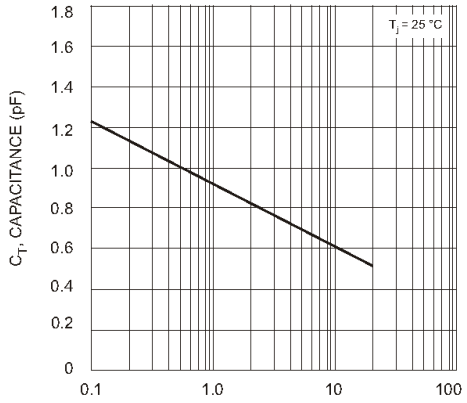


Fig. 3 Typical Total Capacitance vs Reverse Voltage