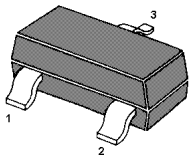
BAT46 / A / C / S

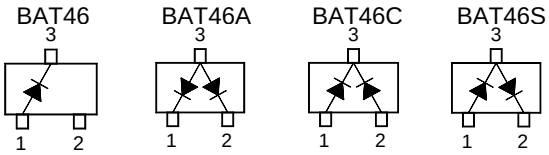
Surface Mount Schottky Barrier Diode

Features

- High breakdown voltage
- Low forward voltage
- Surface mount device



SOT-23 Plastic Package
BAT46 Marking Code: **S46**
BAT46A Marking Code: **A46**
BAT46C Marking Code: **C46**
BAT46S Marking Code: **B46**



Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Forward Current	$I_{F(AV)}$	150	mA
Repetitive Peak Forward Current (at tp < 1 s)	I_{FRM}	350	mA
Surge Forward Current (at tp < 10 ms)	I_{FSM}	750	mA
Operating Temperature Range	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 µA	$V_{(BR)R}$	100	-	-	V
Forward Voltage at I_F = 0.1 mA at I_F = 10 mA at I_F = 250 mA	V_F	 - - -	 - - -	 0.25 0.45 1	V
Reverse Current at V_R = 1.5 V at V_R = 10 V at V_R = 50 V at V_R = 75 V at V_R = 1.5 V, T_j = 60 °C at V_R = 10 V, T_j = 60 °C at V_R = 50 V, T_j = 60 °C at V_R = 75 V, T_j = 60 °C	I_R	 - - - - - - - -	 - - - - - - - -	 0.5 0.8 2 5 5 7.5 15 20	µA
Total Capacitance at V_R = 0 V, f = 1 MHz at V_R = 1 V, f = 1 MHz	C_{tot}	 - -	 20 12	 - -	pF

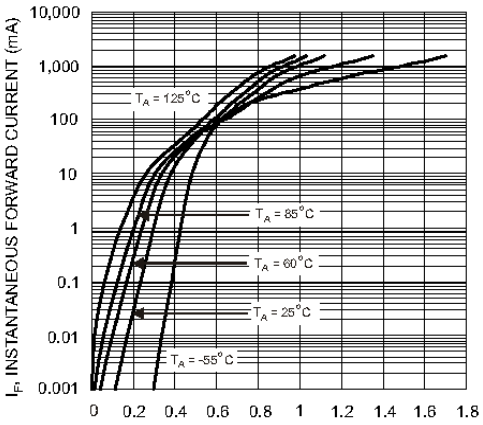


Fig. 1 Typical Forward Characteristics

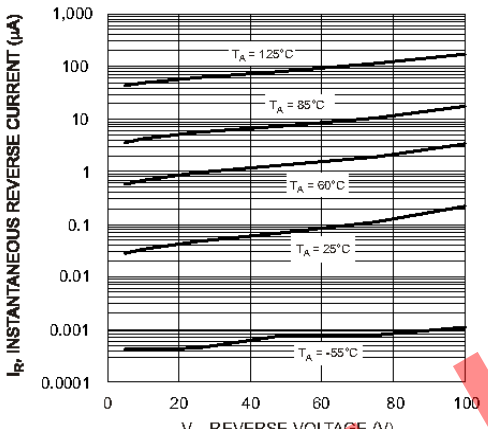


Fig. 2 Typical Reverse Characteristics

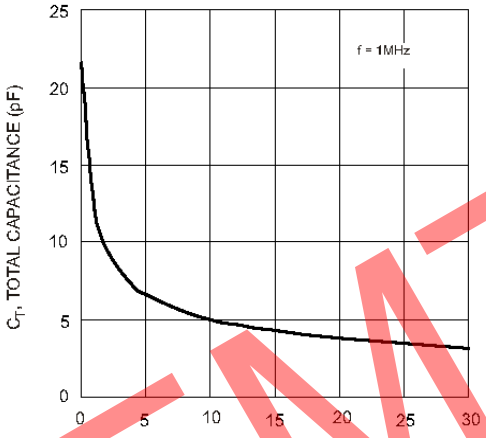


Fig. 3 Typical Total Capacitance

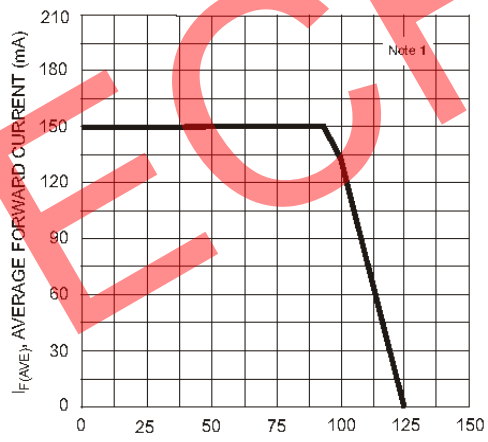


Fig. 4 Forward Current Derating

Note 1: Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

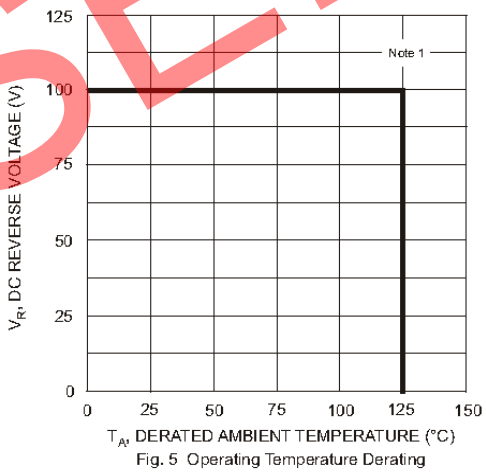


Fig. 5 Operating Temperature Derating