

SMALL SIGNAL SCHOTTKY DIODE

VOLTAGE RANGE: 100 V
CURRENT: 0.15 A

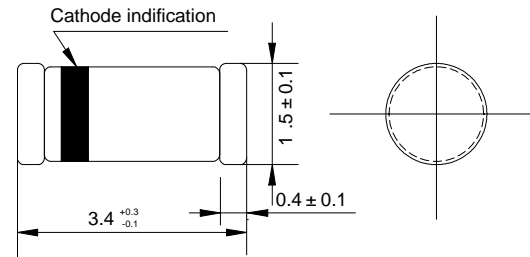
FEATURES

- ◇ For general purpose applications
- ◇ These diodes features very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- ◇ These diodes is Iso available in the SOD - 123 case with type designation BAT46W and in the DO-35 case wyht type designations BAT46

MECHANICAL DATA

- ◇ Case: JEDEC MINI-MELF, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: Approx. 0.031 grams

MINI-MELF



Dimensions in millimeters

ABSOLUTE RATINGS

Parameter	Symbol	Value	UNITS
Repetitive peak reverse voltage	V_R	100.0	V
Forw ard continuius current @ $t_{amb}=25^{\circ}C$	I_F	150 ¹⁾	mA
Repetitive peak forw ard current @ $t_p < 1s, \delta \leq 0.5, T_A = 25^{\circ}C$	I_{FRM}	350 ¹⁾	mA
Surge forw ard current @ $t_p < 10ms, T_A = 25^{\circ}C$	I_{FSM}	750 ¹⁾	mA
Pow er dissipation ¹⁾ @ $T_A = 65^{\circ}C$	P_{tot}	150 ¹⁾	mW
Thermal resistance juncton to ambient air	$R_{\theta JA}$	300 ¹⁾	$^{\circ}C/W$
Junction temperature	T_J	125	$^{\circ}C$
Ambient operating temperature range	T_A	-65 --- + 125	$^{\circ}C$
Storage temperature range	T_{STG}	-65 --- + 150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	UNITS
Reverse breakdow n voltage	V_R	$I_R = 100 \mu A$ (pulsed)	100.0			V
Leakage current pulse test $t_p < 300 \mu s, \delta < 2\%$	I_R	$V_R = 1.5V$ $V_R = 1.5V, T_j = 60^{\circ}C$ $V_R = 10V$ $V_R = 10V, T_j = 60^{\circ}C$ $V_R = 50V$ $V_R = 50V, T_j = 60^{\circ}C$ $V_R = 75V$ $V_R = 75V, T_j = 60^{\circ}C$			0.5 5.0 0.8 7.5 2.0 15.0 5.0 20.0	μA
Forw ard voltage pulse test $t_p < 300 \mu s, \delta < 2\%$	V_F	$I_F = 0.1mA$ $I_F = 10mA$ $I_F = 250mA$			0.25 0.45 1.0	V
Junction capacitance	C_J	$V_R = 0V, f = 1MHz$ $V_R = 1V, f = 1MHz$		10 6		pF

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

**FIG.1 – FORWARD CURRENT VERSUS FORWARD VOLTAGE
AT DIFFERENT TEMPERATURES (TYPICAL VALUES)**

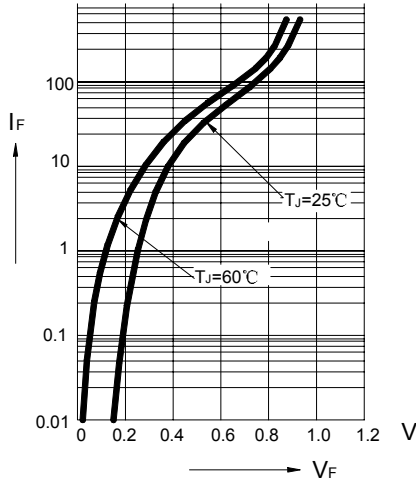


FIG.2 – FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

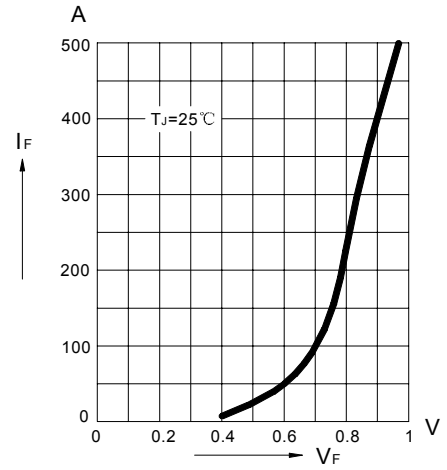


FIG.3 – REVERSE CURRENT VERSUS JUNCTION TEMPERATURE (TYPICAL VALUES)

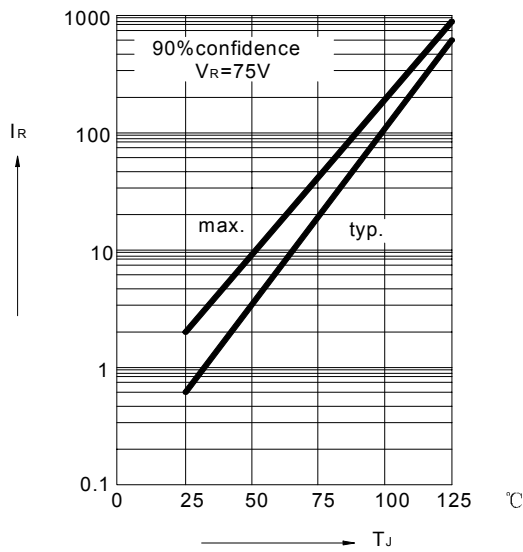


FIG.4 – REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

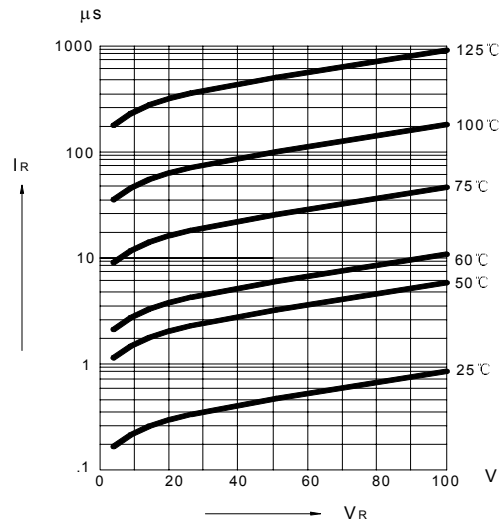


FIG.5 – CAPACITANCE C VERSUS REVERSE APPLIED VOLTAGE V_R (TYPICAL VALUES)

