



SEMICONDUCTOR

BAT46W

SMALL SIGNAL SCHOTTKY DIODES

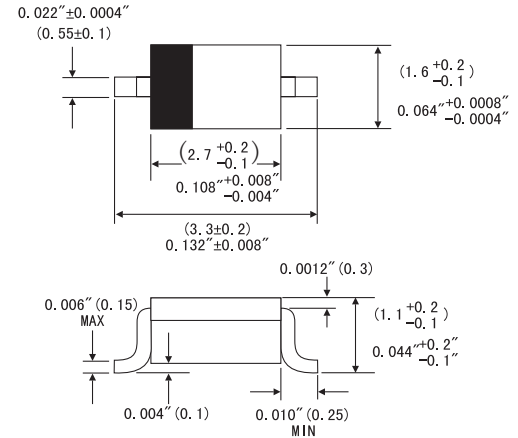
SMALL SIGNAL
SCHOTTKY DIODES

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.
- This diode is also available in the Mini-MELF case with the type designation LL46 and in the DO-35 case with the type designation BAT46, in the Micro-MELF case with type designation MCL46



SOD-123



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: SOD-123 plastic case
- Weight: Approx. 0.01 gram

ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Forward Continuous Current at $T_A=25^{\circ}C$	I_F	150 ¹⁾	mA
Repetitive Peak Forward Current at $t_p < 1s, \delta < 0.5, T_A=25^{\circ}C$	I_{FRM}	350 ¹⁾	mA
Surge forward current at $t_p < 10ms, T_A=25^{\circ}C$	I_{FSM}	750 ¹⁾	mA
Power Dissipation ¹⁾ at $T_A=65^{\circ}C$	P_{Tot}	150 ¹⁾	mW
Junction temperature	T_J	125	$^{\circ}C$
Ambient Operating temperature Range	T_A	-65 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}C$

1) Valid provided that electrodes are kept at ambient temperature



S E M I C O N D U C T O R

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ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	Units
Reverse breakdown voltage Tested with 100 μ A Pulses	V(BR)R	100			V
Forward voltage Pulse Test $t_p < 300\mu s$, at $V_R = 10V$, $T_J = 60^\circ C$, $\delta < 2\%$					
at $I_F = 0.1mA$,	V _F			0.25	V
at $I_F = 10mA$,	V _F			0.45	V
at $I_F = 250mA$	V _F			1	V
Leakage current pulse test $t_p < 300\mu s$, $\delta < 2\%$					
at $V_R = 1.5V$,	I _R			0.5	μA
at $V_R = 1.5V$, $T_J = 60^\circ C$	I _R			5	μA
at $V_R = 10V$	I _R			0.8	μA
at $V_R = 10V$, $T_J = 60^\circ C$	I _R			7.5	μA
at $V_R = 50V$	I _R			2	μA
at $V_R = 50V$, $T_J = 60^\circ C$	I _R			15	μA
at $V_R = 75V$	I _R			5	μA
at $V_R = 75V$, $T_J = 60^\circ C$	I _R			20	μA
Junction Capacitance at $V_R = 0V$, $f = 1MHz$	C _J		10		pF
at $V_R = 1V$, $f = 1MHz$	C _J		6		pF
Thermal resistance junction to ambient Air	R θ JA			300 ¹⁾	K/W

1) Valid provided that electrodes are kept at ambient temperature