LITE-ON SEMICONDUCTOR

BAT46W

SURFACE MOUNT
SCHOTTKY BARRIEY RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 0.15 Amperes

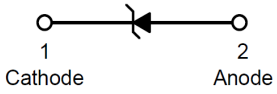
FEATURES

- Very small conduction losses
- Negligible switching losses
- Low forward voltage drop
- Surface mount device

MECHANICAL DATA

- Case: SOD-123 plastic
- Polarity : Cathode band
- Weight : 11.7mg (Approximately)

SOD-123



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage	V_{RRM}	100	V
Continuous forward current	I_F	150	mA
Surge non repetitive forward current @ tp = 10ms Sinusoidal	I_{FSM}	1	A
Storage temperature range	T_{STG}	-55 to +150	°C
Maximum operating temperature range (Note 1)	T_J	150	°C
Maximum soldering temperature (Note 1)	T_L	260	°C

ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	VALUE	UNIT
Maximum reverse leakage current (Note 2)	V_R = 1.5 V	T_J=25°C	I_R	0.5	uA
	V_R = 10 V			0.8	
	V_R = 50 V			2	
	V_R = 75 V			5	
	V_R = 1.5 V	T_J=60°C		5	
	V_R = 10 V			7.5	
	V_R = 50 V			15	
	V_R = 75 V			20	
Maximum forward voltage drop (Note 1)	I_F = 0.1 mA	T_J=25°C	V_F	0.25	V
	I_F = 10 mA			0.45	
	I_F = 250 mA			1	
Typical diode capacitance	V_R= 0 V, F = 1 MHz		C	10	pF
	V_R= 1 V, F = 1 MHz			6	

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Thermal resistance – junction to ambient (Note 3)	$Rthj_a$	500	°C/W

Note:

1. Pulse test: t_p = 380 μs, δ< 2 %
2. Pulse test: t_p = 5 ms, δ< 2 %
3. On epoxy printed circuit board with recommended pad layout

REV-0, APR.-2015 KSHR81

ORDERING INFORMATION

DEVICE	MARKING	SHIPPING
BAT46W	Z46	3000/ Tape & Reel

RATING AND CHARACTERISTIC CURVES
BAT46W

FIG.1 - Average forward power dissipation versus average forward current

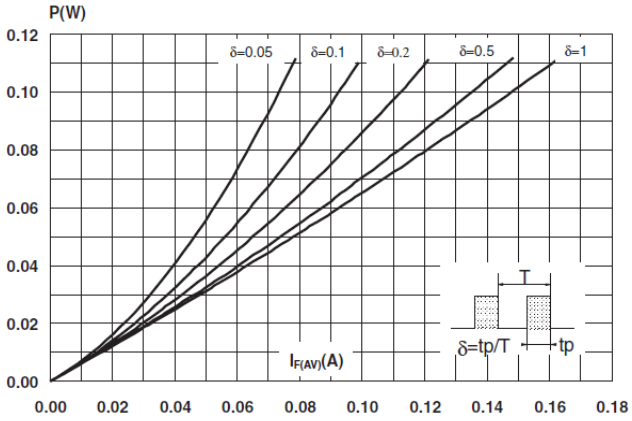


FIG. 2 - Average forward current versus ambient temperature (δ= 1)

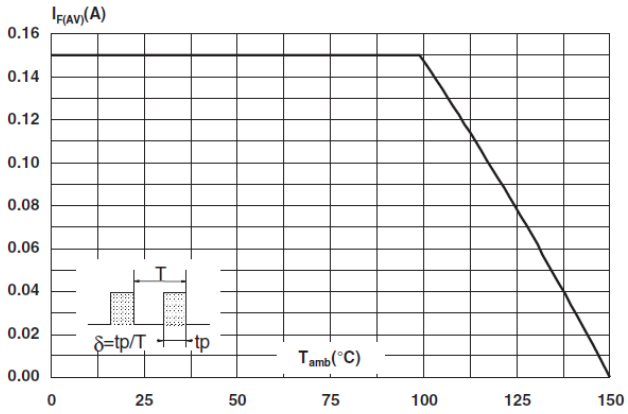


FIG.3 - Reverser leakage current versus reverse applied voltage (typical values)

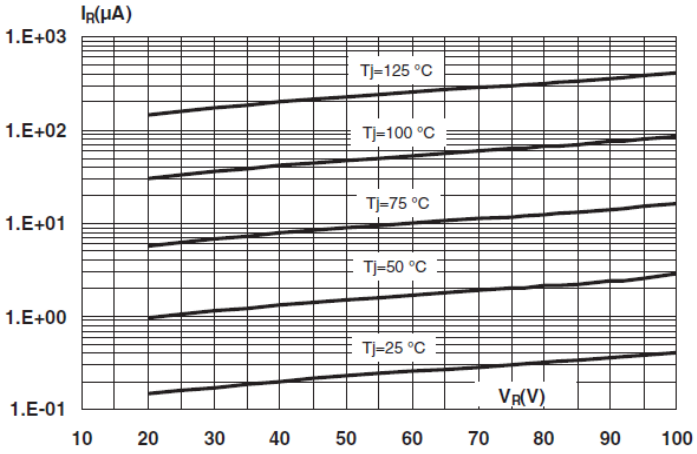


FIG.4 - Reverse leakage current versus junction temperature

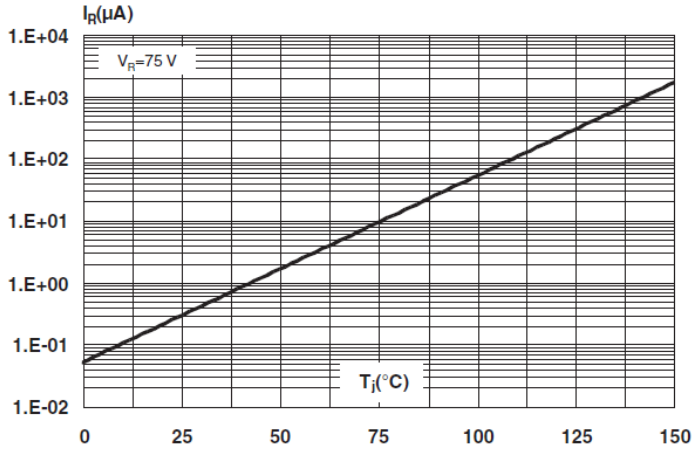


FIG.5 - Junction capacitance versus reverse applied voltage (typical values)

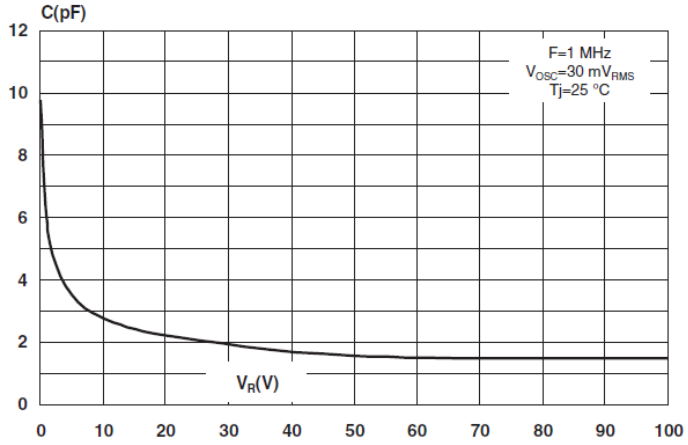
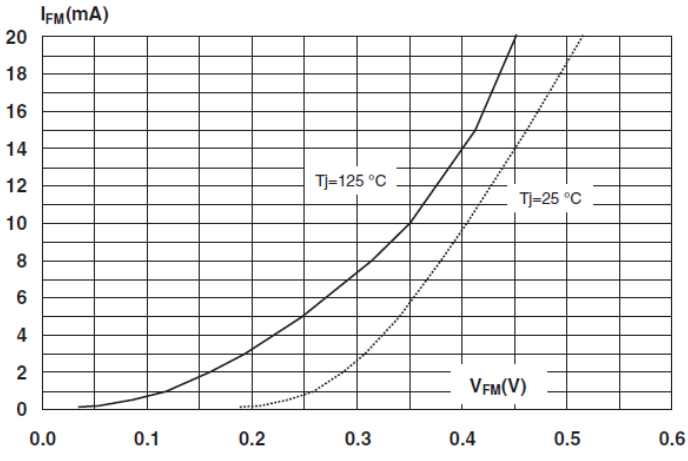


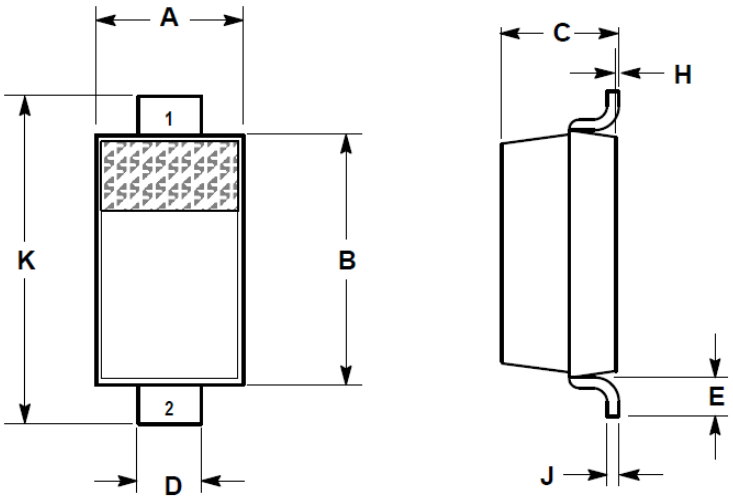
FIG.6 - Forward voltage drop versus forward current (typical values)



MECHANICAL INFORMATION
BAT46W

Package Dimensions :

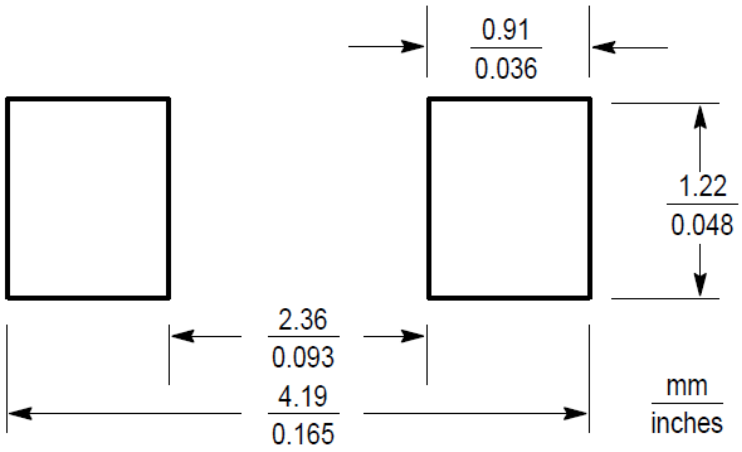
SOD-123



Dim.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	0.055	0.071	1.40	1.80
B	0.100	0.112	2.55	2.85
C	0.037	0.053	0.95	1.35
D	0.020	0.028	0.50	0.70
G	0.004	--	0.25	--
H	0.000	0.004	0.00	0.10
J	--	0.006	--	0.15
K	0.140	0.152	3.55	3.85

Note:
PIN 1 : CATHODE
PIN 2 : ANODE

Recommended Footprint :



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