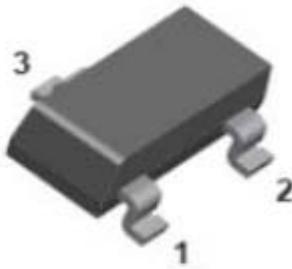
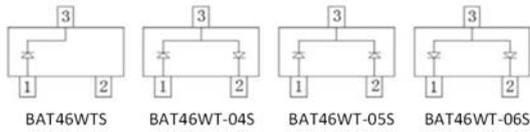


## Schottky Barrier Diode



### Features

- Moisture sensitivity level 1
- Reverse voltage: 100V
- Average forward current : 150mA

### Application

- High frequency and low voltage rectifier

### Mechanical data

- **Package:** SOT-323S
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			BAT46WTS	S91
			BAT46WT-04S	S92
			BAT46WT-05S	S93
			BAT46WT-06S	S94
Repetitive peak reverse voltage	$V_{RRM}$	V	100	
Forward current	$I_F$	mA	150	
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	$I_{FSM}$	A	0.75	
Non-repetitive surge peak forward current @ t=1ms square wave			8	
Power dissipation	$P_D$	mW	200	
Junction temperature	$T_J$	$^\circ\text{C}$	-55 to +125	
Storage temperature	$T_{STG}$	$^\circ\text{C}$	-55 to +125	



## BAT46WTS THRU BAT46WT-06S

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse voltage	V <sub>R</sub>	V	I <sub>R</sub> =0.1mA	100		
Forward voltage	V <sub>F1</sub>	V	I <sub>FM</sub> =0.1mA			0.25
	V <sub>F2</sub>	V	I <sub>FM</sub> =10mA			0.45
	V <sub>F3</sub>	V	I <sub>FM</sub> =250mA			1
Reverse leakage current	I <sub>R1</sub>	uA	V <sub>R</sub> =1.5V			0.3
	I <sub>R2</sub>	uA	V <sub>R</sub> =10V			0.5
	I <sub>R3</sub>	uA	V <sub>R</sub> =50V			1
	I <sub>R4</sub>	uA	V <sub>R</sub> =75V			2
Junction capacitance	C <sub>j1</sub>	pF	V <sub>R</sub> =1.0V, f=1MHz			12
	C <sub>j2</sub>	pF	V <sub>R</sub> =0V, f=1MHz			20

### ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> ( <sup>1</sup> )	°C/W	500
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> ( <sup>1</sup> )	°C/W	400

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint



# BAT46WTS THRU BAT46WT-06S

## ■ Characteristics

Fig 1:  $P_D$ - $T_a$  Curve

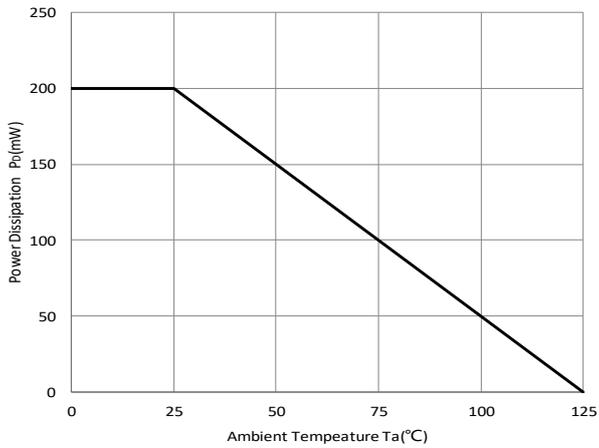


Fig 2: Capacitance Capability

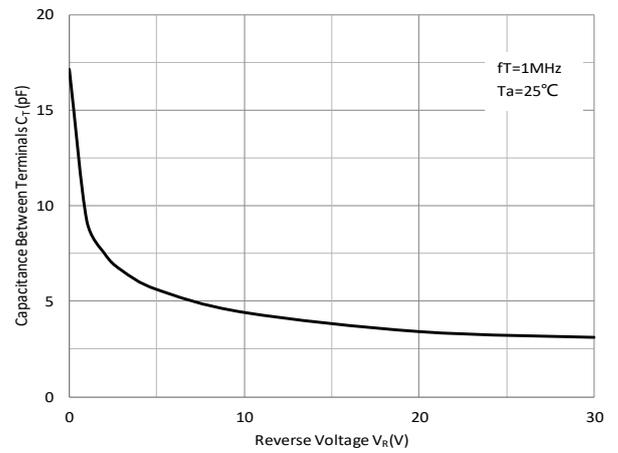


Fig 3: Typical Forward Characteristics

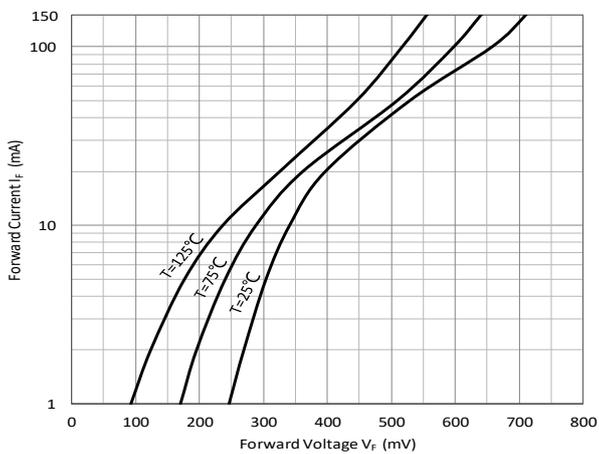
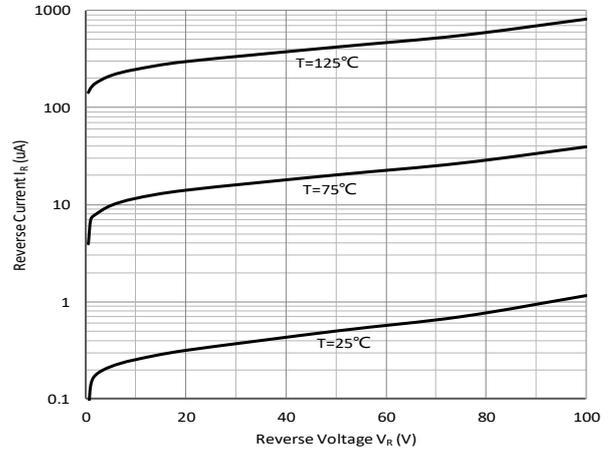


Fig 4: Typical Reverse Characteristics



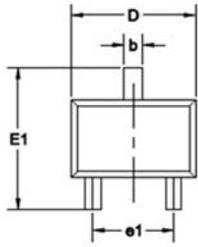


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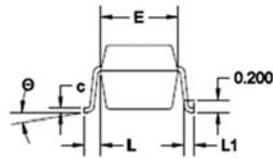
## Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
BAT46WTS THRU BAT46WT-06S	F2	Approximate 0.005	3000	30000	120000	7" reel

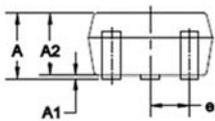
## Outline Dimensions



TOP VIEW



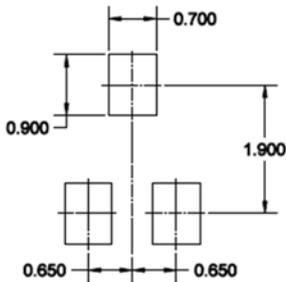
SIDE VIEW



SIDE VIEW

SYMBOY	DIMENSIONS			
	INCHES		MILLIMETER	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.080	0.096	2.000	2.200
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

## Suggested Pad Layout



### Note:

- All dimensions are in millimeters (mm) unless otherwise specified.  
[所有尺寸均以毫米为单位, 除非另有说明]
- General tolerances:  $\pm 0.10\text{mm}$  unless otherwise specified.  
[通用公差为 $\pm 0.10\text{mm}$ , 除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.  
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.  
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.  
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
- Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.  
[D和E是塑封体的外部极限尺寸, 不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺, 但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.  
[成型的管脚应为同一平面, 共面性最大为0.1mm]



## BAT46WTS THRU BAT46WT-06S

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