



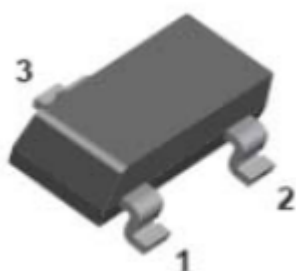
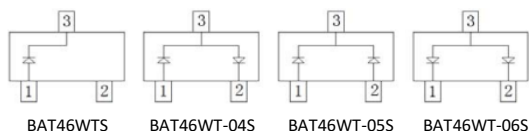
Schottky Barrier Diode

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 @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A	0.75	
Non-repetitive surge peak forward current @ $t=1\text{ms}$ 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	



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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

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

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	500
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	400

Note:

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



■ Characteristics

Fig 1: P_D - T_a Curve

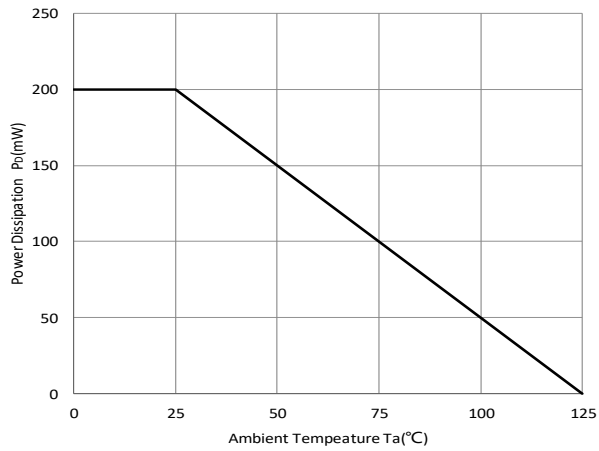


Fig 2: Capacitance Capability

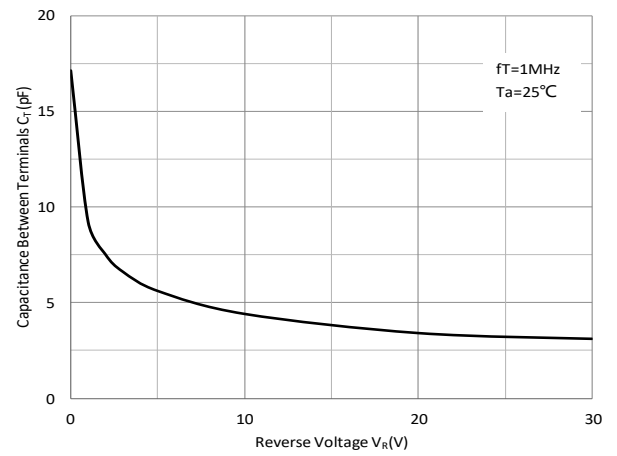


Fig 3: Typical Forward Characteristics

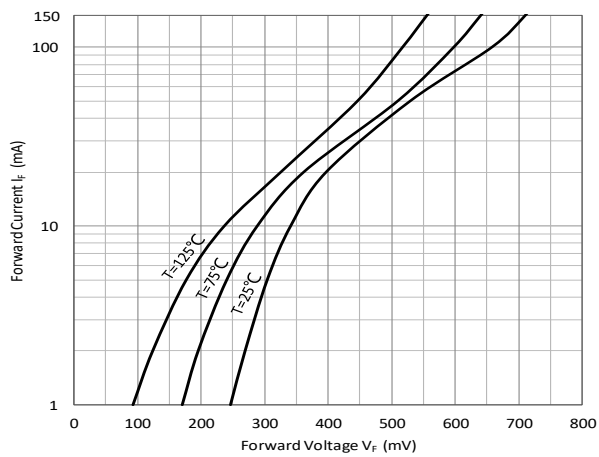
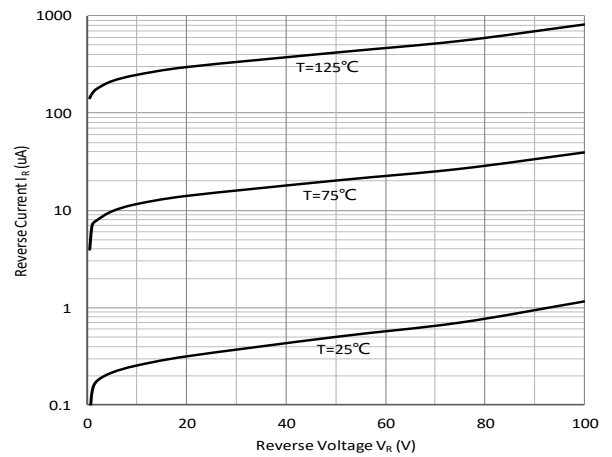


Fig 4: Typical Reverse Characteristics





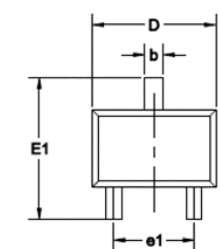
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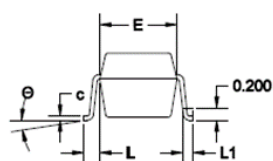
■ Ordering Information

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

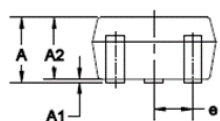
■ Outline Dimensions



TOP VIEW



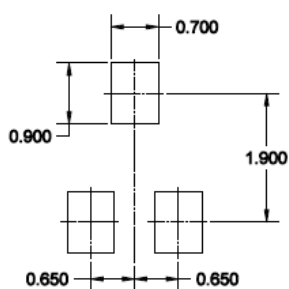
SIDE VIEW



SIDE VIEW

DIMENSIONS				
SYMBOL	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





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