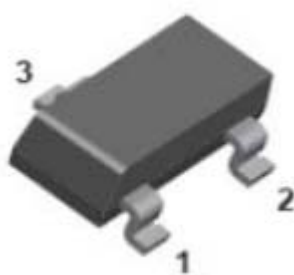
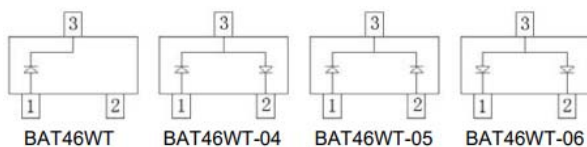




Schottky Barrier Diode



Features

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

Application

- High frequency and low voltage rectifier

Mechanical data

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

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			BAT46WT	S91
			BAT46WT-04	S92
			BAT46WT-05	S93
			BAT46WT-06	S94
Repetitive peak reverse voltage	V _{RRM}	V	100	
Forward current, per leg	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	



Parameter	Symbol	Unit	Value
Junction temperature	T _J	°C	-55 to +125
Storage temperature	T _{STG}	°C	-55 to +125

■ 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

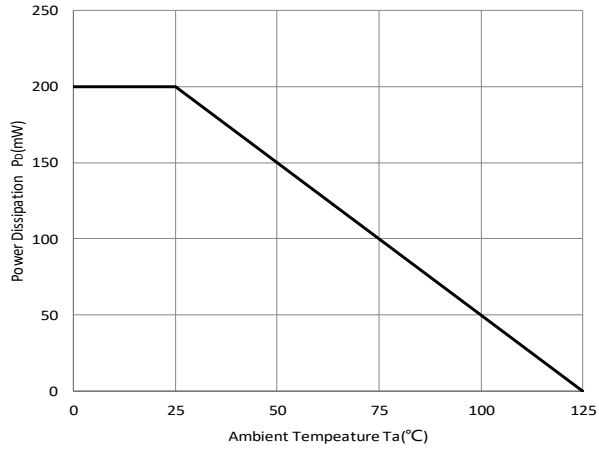


Fig 2: Capacitance Capability

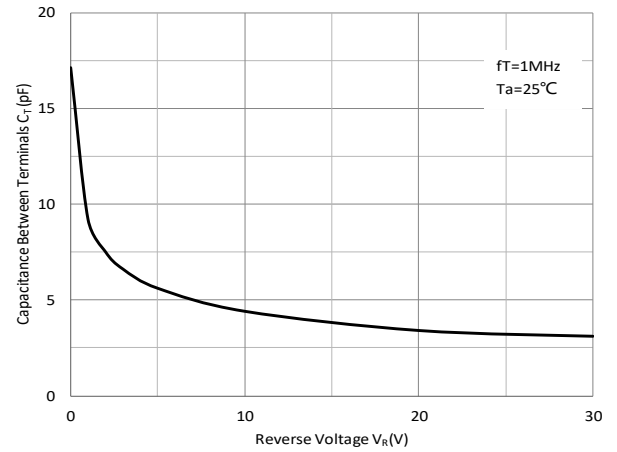


Fig 3: Typical Forward Characteristics

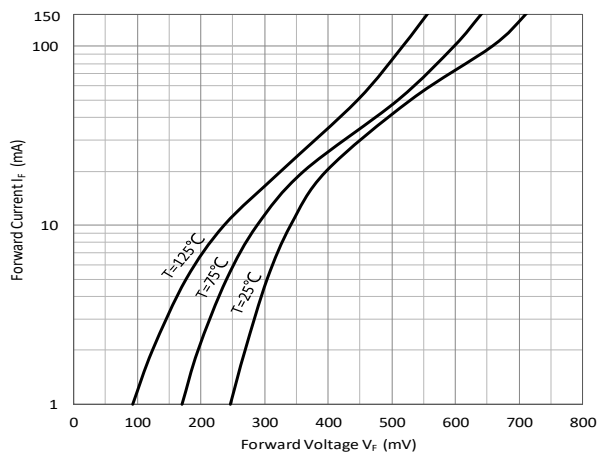
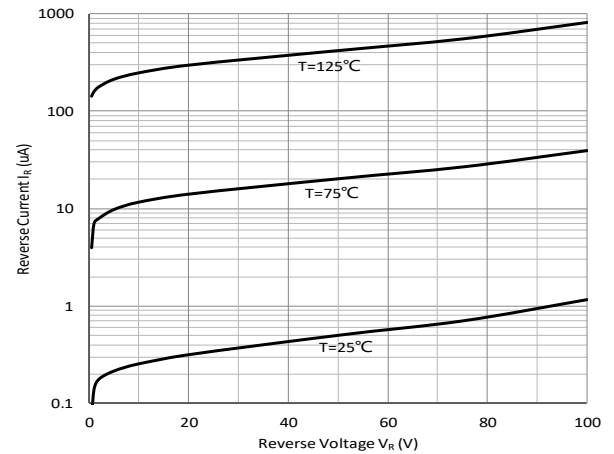


Fig 4: Typical Reverse Characteristics

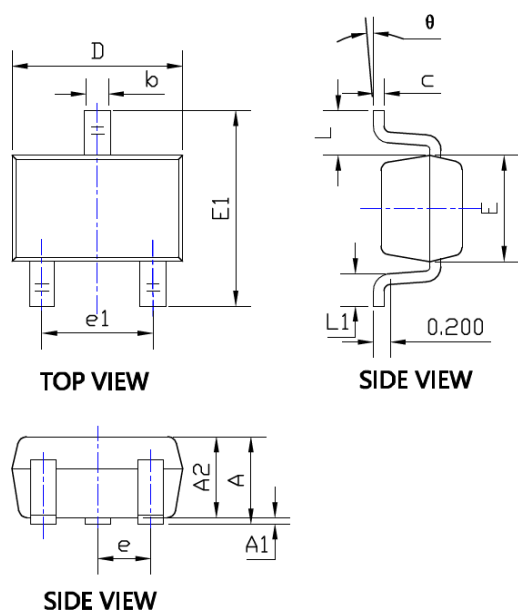




■ Ordering Information

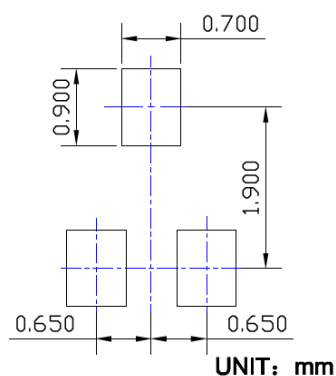
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
BAT46WT THRU BAT46WT-06	F2	Approximate 0.005	3000	30000	120000	7" reel

■ Outline Dimensions



SYMBOL	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	0.085	0.096	2.150	2.450
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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