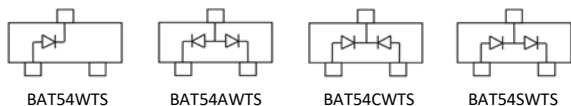




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Schottky Barrier Diode

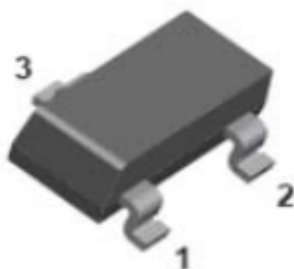


Features

- Moisture sensitivity level 1
- Reverse voltage: 30V
- Average forward current : 200mA

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°C Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			BAT54WTS	KL5
			BAT54AWTS	KL6
			BAT54CWTS	KL7
			BAT54SWTS	KL8
Repetitive peak reverse voltage	V _{RRM}	V	30	
Forward current	I _F	mA	200	
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I _{FSM}	A	0.6	
Non-repetitive surge peak forward current @ t=1ms square wave			0.6	
Power dissipation	P _D	mW	200	
Junction temperature	T _J	°C	-55 to +125	
Storage temperature	T _{STG}	°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	30		
Forward voltage	V _{F1}	V	I _F =0.1mA			0.24
	V _{F2}	V	I _F =1mA			0.32
	V _{F3}	V	I _F =10mA			0.4
	V _{F4}	V	I _F =30mA			0.5
	V _{F5}	V	I _F =100mA			1
Reverse leakage current	I _R	uA	V _R =25V			2
Junction capacitance	C _j	pF	V _R =1.0V, f=1MHz		10	
Reverse recovery time	T _{rr}	ns	I _F =I _R =10mA, I _{rr} =0.1*I _R , R _L =100Ω			5

■ 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



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■ Characteristics

Fig 1: P_D -Ta Curve

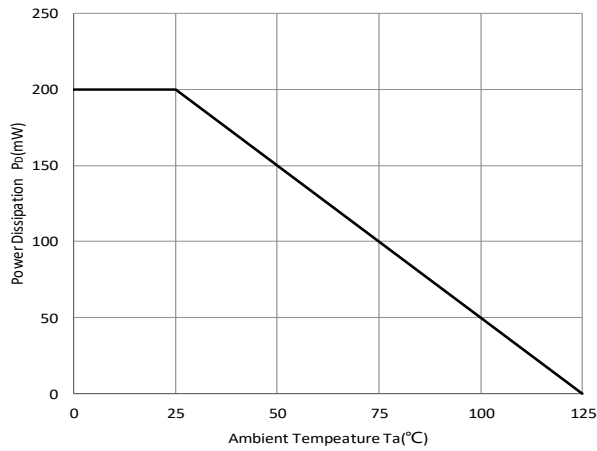


Fig 2: Capacitance Capability

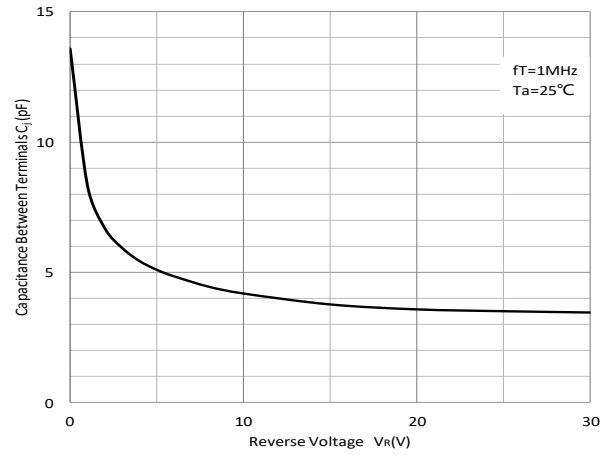


Fig 3: Typical Forward Characteristics

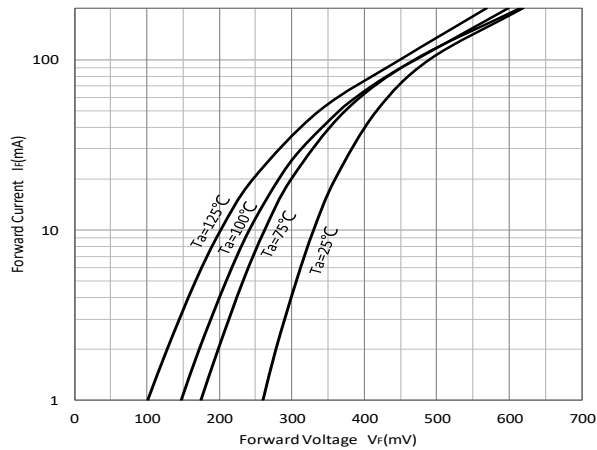
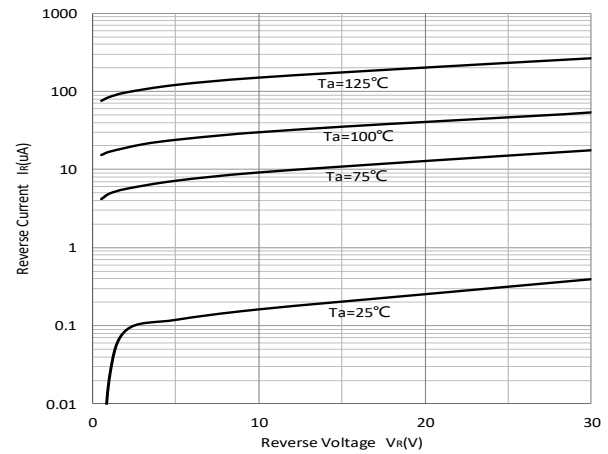


Fig 4: Typical Reverse Characteristics



■ Ordering Information

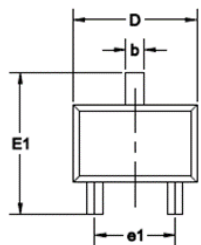
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
BAT54WTS THRU BAT54SWTS	F2	Approximate 0.005	3000	30000	120000	7" reel



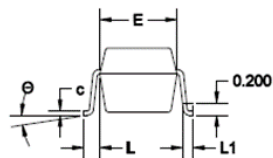
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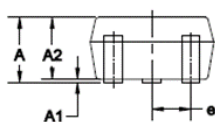
■ Outline Dimensions



TOP VIEW



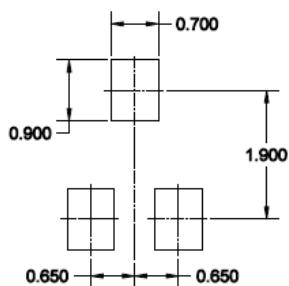
SIDE VIEW



SIDE VIEW

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	0.080	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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