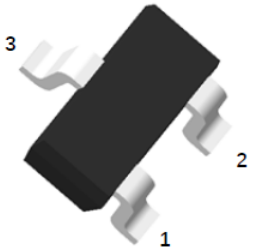
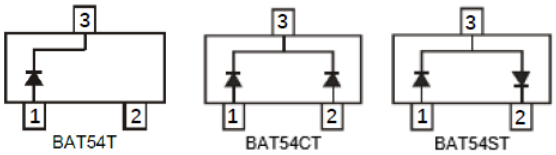
Schottky Barrier Diode





Features

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

Application

- High frequency rectifier
- Signal switching

Mechanical data

- **Package**：SOT-523
- **Terminals**：Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Value
Device marking code			BAT54T	L1
			BAT54CT	L3
			BAT54ST	L4
Repetitive peak reverse voltage	V_R	V		30
Forward current, per leg	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
Repetitive Peak Forward Current@ tp=1ms，δ=0.25	I_{FRM}	A		0.3
Power dissipation	P_D	mW		150
Junction temperature	T_J	℃		-55 to +125
Storage temperature	T_{STG}	℃		-55 to +125

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V_R	V	I_R=100uA	30		
Forward voltage	V_F	V	I_F=0.1mA			0.24
			I_F=1mA			0.32
			I_F=10mA			0.4
			I_F=30mA			0.5
			I_F=100mA			1
Reverse leakage current	I_R	uA	V_R=25V			2
Junction capacitance	Cj	pF	f=1.0MHz, V_R=1V			10
Reverse recovery time	Trr	ns	I_F=I_R=10mA Irr=0.1*I_R, R_L=100Ω			5

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	667
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	534

Note:

（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 25.4mm*25.4mm copper pad areas

■Characteristics

Fig 1：P_D-Ta Curve

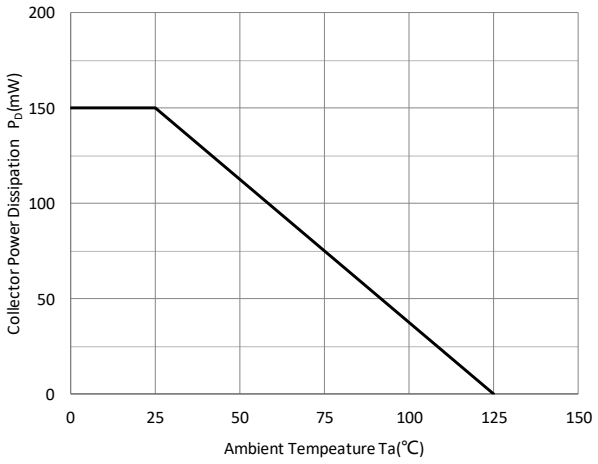


Fig 2：Capacitance Capability

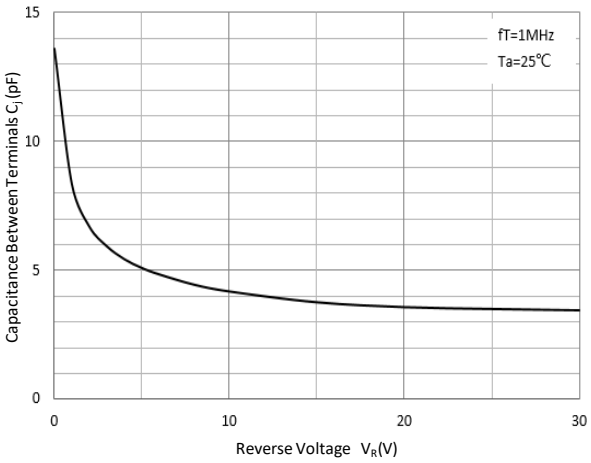


Fig 3：Typical Forward Characteristics

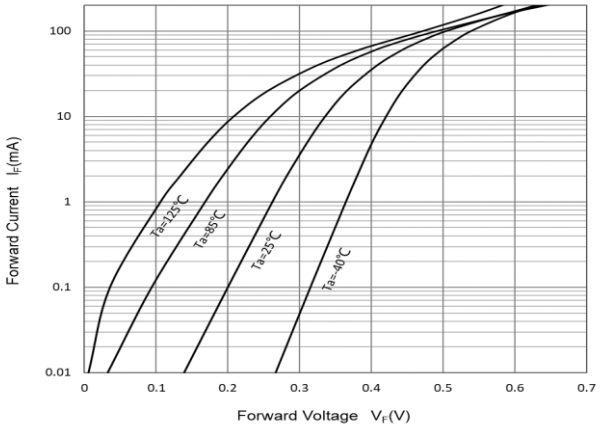
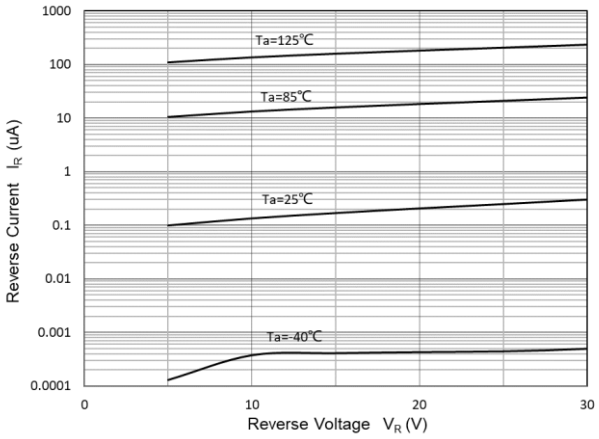


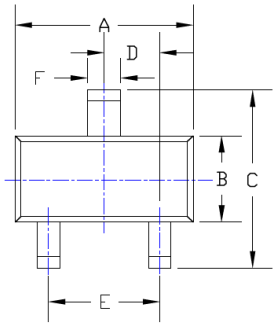
Fig 4：Typical Reverse Characteristics



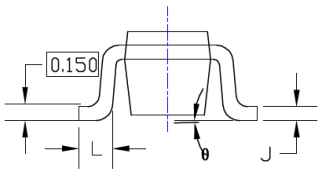
■Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAT54T THRU BAT54ST	F2	Approximate 0.0027	3000	30000	120000	7" reel

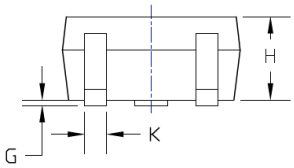
■ Outline Dimensions



TOP VIEW



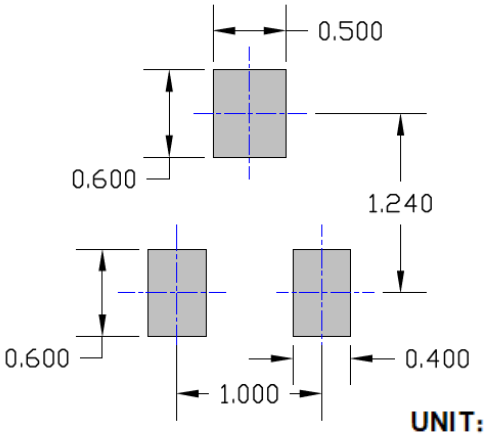
SIDE VIEW



SIDE VIEW

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.059	0.067	1.500	1.700
B	0.030	0.033	0.750	0.850
C	0.057	0.069	1.450	1.750
D	0.020TYP		0.500TYP	
E	0.035	0.043	0.900	1.100
F	0.010	0.018	0.250	0.450
G	0.000	0.004	0.000	0.100
H	0.024	0.031	0.600	0.800
J	0.004	0.008	0.100	0.200
K	0.006	0.014	0.150	0.350
L	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

■ Suggested Pad Layout



UNIT: mm

Note:
1. 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]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.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]
5.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]
6.Dimensions A and B 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.
[A和B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]
7.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]

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