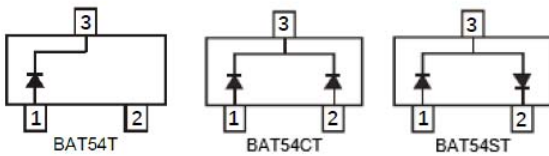
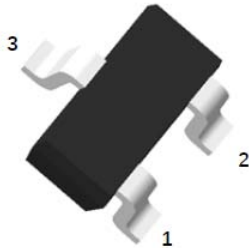


## Schottky Barrier Diode



### 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<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Value
Device marking code			BAT54T	L1
			BAT54CT	L3
			BAT54ST	L4
Repetitive peak reverse voltage	V <sub>R</sub>	V		30
Forward current, per leg	I <sub>F</sub>	mA		200
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I <sub>FSM</sub>	A		0.6
Non-repetitive surge peak forward current @ t=1ms square wave				0.6
Power dissipation	P <sub>D</sub>	mW		150
Junction temperature	T <sub>J</sub>	°C		-55 to +125
Storage temperature	T <sub>STG</sub>	°C		-55 to +125



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## ■ 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> =100uA	30		
Forward voltage	V <sub>F</sub>	V	I <sub>F</sub> =0.1mA			0.24
			I <sub>F</sub> =1mA			0.32
			I <sub>F</sub> =10mA			0.4
			I <sub>F</sub> =30mA			0.5
			I <sub>F</sub> =100mA			1
Reverse leakage current	I <sub>R</sub>	uA	V <sub>R</sub> =25V			2
Junction capacitance	C <sub>j</sub>	pF	f=1.0MHz, V <sub>R</sub> =1V			10
Reverse recovery time	T <sub>rr</sub>	ns	I <sub>F</sub> =I <sub>R</sub> =10mA I <sub>rr</sub> =0.1*I <sub>R</sub> , R <sub>L</sub> =100Ω			5

## ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	667
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/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



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## ■ Characteristics

Fig 1:  $P_D$ - $T_a$  Curve

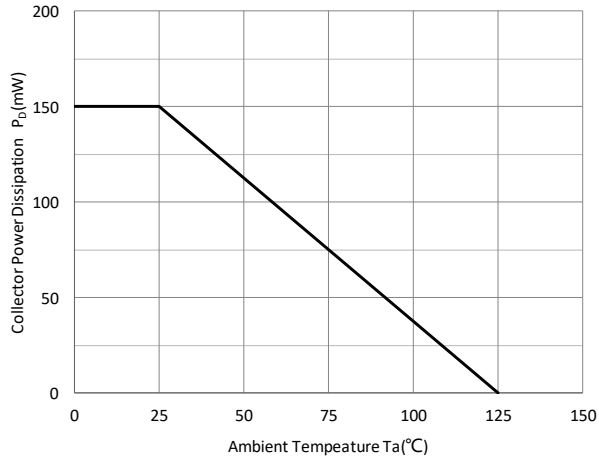


Fig 2: Capacitance Capability

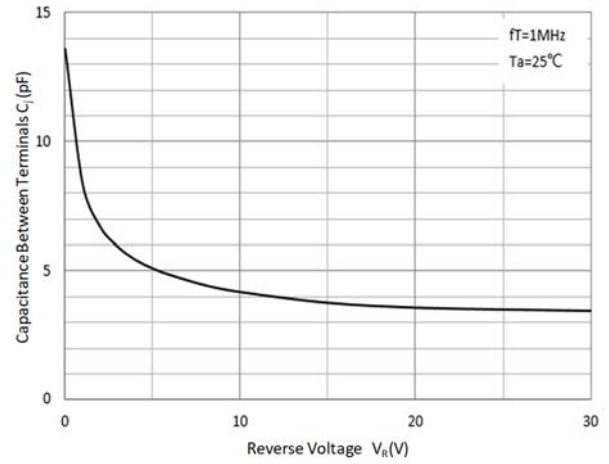


Fig 3: Typical Forward Characteristics

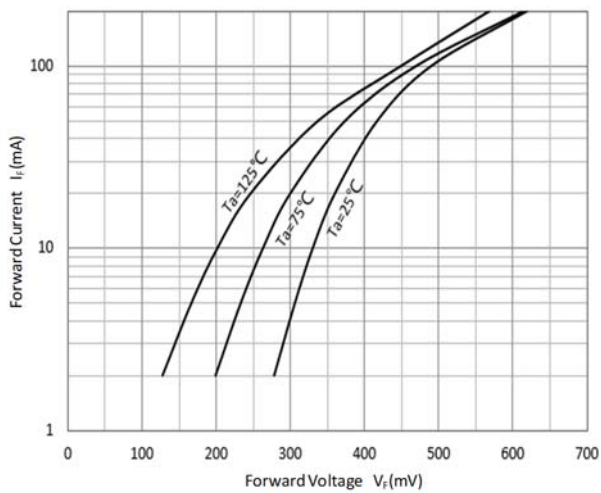
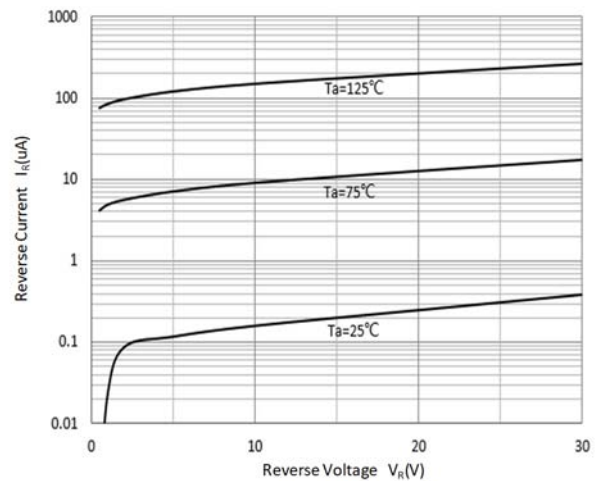


Fig 4: Typical Reverse Characteristics





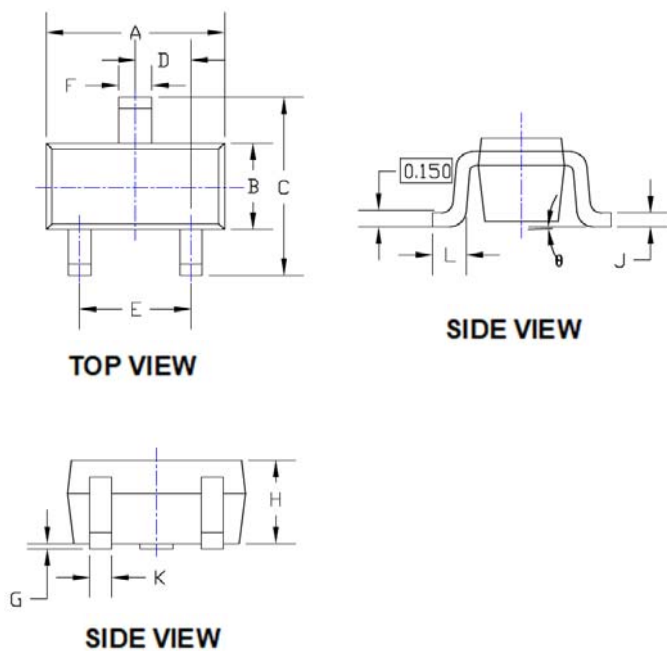
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## Ordering Information

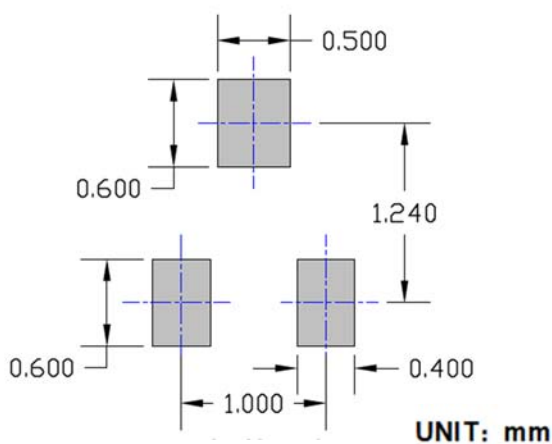
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAT54T THRU BAT54ST	F2	Approximate 0.0027	3000	30000	120000	7" reel

## Outline Dimensions



SYMBOL	DIMENSIONS			
	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
$\theta$	0°	8°	0°	8°

## Suggested Pad Layout





## BAT54T THRU BAT54ST

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