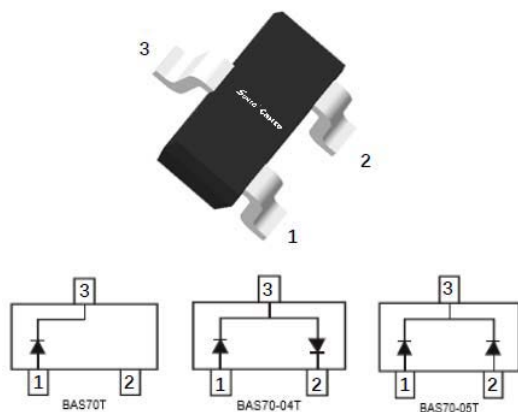


BAT54T THRU BAT54ST

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 ($T_a=25^{\circ}\text{C}$ 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
Power dissipation	P_D	mW		150
Junction temperature	T_J	$^{\circ}\text{C}$		-55 to +125
Storage temperature	T_{STG}	$^{\circ}\text{C}$		-55 to +125

BAT54T THRU BAT54ST

■ Electrical Characteristics (T_a=25°C 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	C _j	pF	f=1.0MHz, V _R =1V			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	667
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°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

BAT54T THRU BAT54ST

■ Characteristics

Fig 1: P_D - T_a Curve

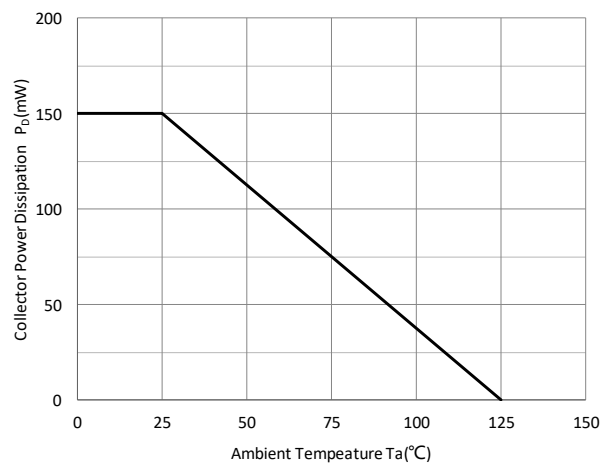


Fig 2: Capacitance Capability

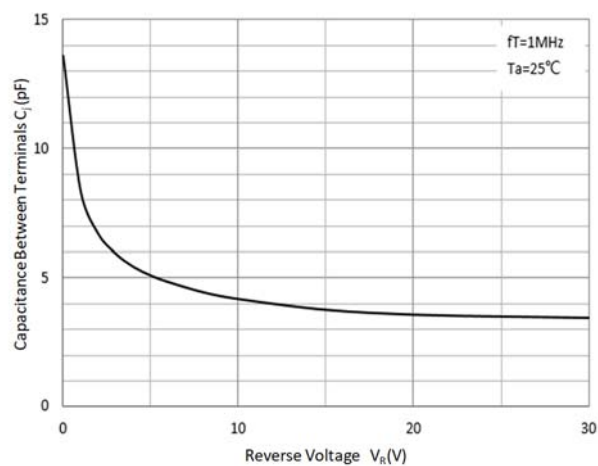


Fig 3: Typical Forward Characteristics

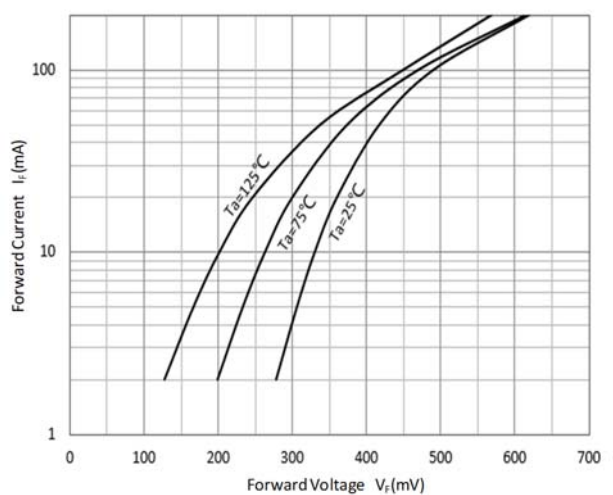
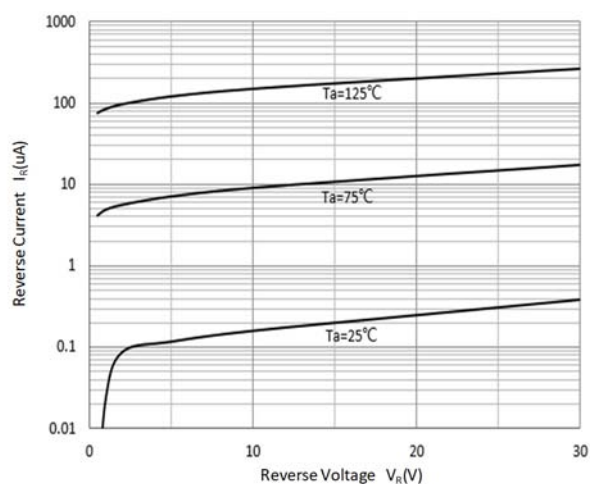


Fig 4: Typical Reverse Characteristics

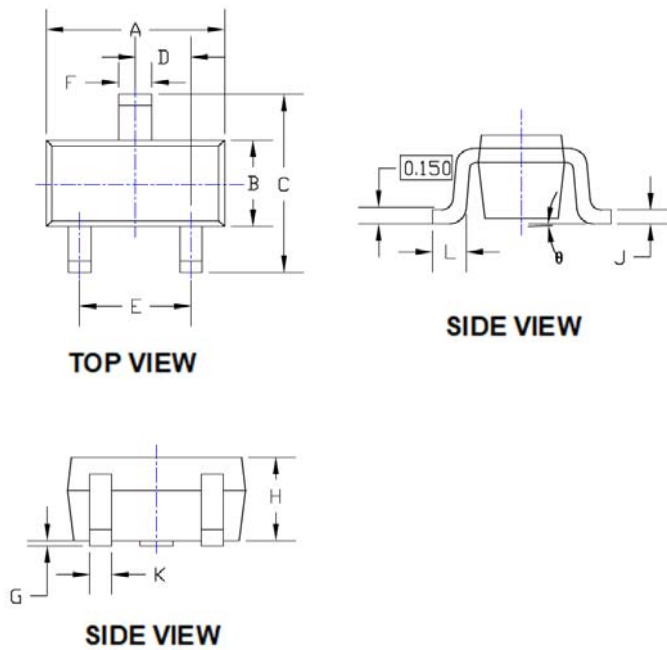


BAT54T THRU BAT54ST

■ Ordering Information

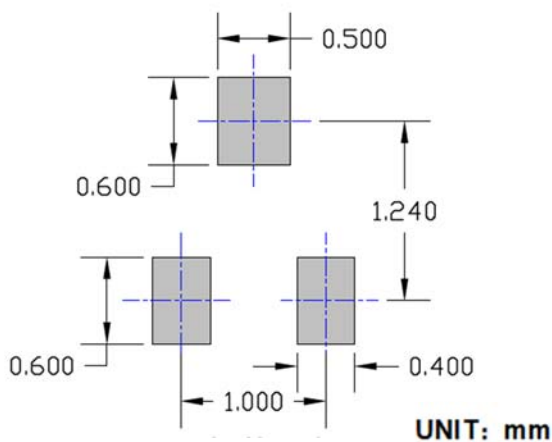
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAT54T THRU BAT54ST	F2	Approximate 0.0027	3000	30000	120000	7" reel

■ 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
θ	0°	8°	0°	8°

■ Suggested Pad Layout



BAT54T THRU BAT54ST

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