BORN SEMICONDUCTOR

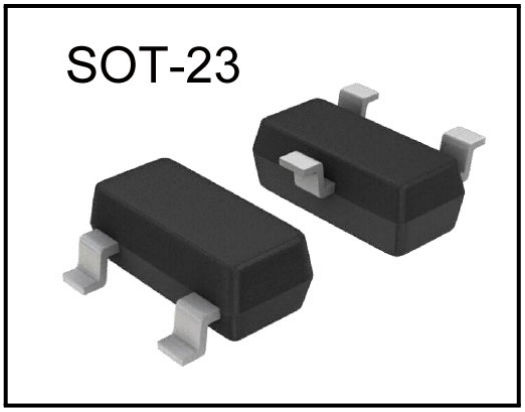
BAT54/A/C/S

Schottky Barrier Diode

Features

- Low forward voltage drop
- High current capability
- High reliability
- Extremely Fast Switching Speed

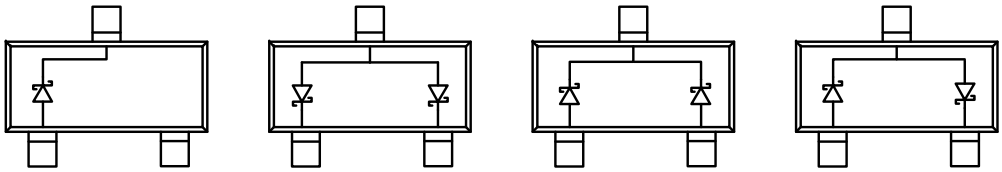
Package



Description

- Case: molded plastic
- Package: SOT-23 Plastic Package

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT54	SOT-23	KL1	3K	Tape and reel
BAT54A	SOT-23	KL2	3K	Tape and reel
BAT54C	SOT-23	KL3	3K	Tape and reel
BAT54S	SOT-23	KL4	3K	Tape and reel

Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	30	V
V_{RWM}	Working Peak Reverse Voltage	30	V
V_R	DC Blocking Voltage	30	V
I_F	Forward Continuous Current	200	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @t=8.3ms	600	mA
I_{FRM}	Repetitive Peak Forward Current @ t≤1s,Duty δ≤0.5	300	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	°C/W
T_J	Junction Temperature	125	°C
T_{STG}	Storage Temperature	-55 to +150	°C

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Schottky Barrier Diode

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{BR}	Reverse Breakdown Voltage	I_R=100uA	30	–	–	V
V_F	Forward Voltage	I_F=0.1mA	–	–	0.24	V
		I_F=1mA	–	–	0.32	V
		I_F=10mA	–	–	0.40	V
		I_F=30mA	–	–	0.50	V
		I_F=100mA	–	–	1	V
I_R	Reverse Current	V_R=25V	–	–	2	uA
C_D	Diode Capacitance	V_R = 1V, f=1MHZ	–	–	20	pF
T_{rr}	Reverse Reverse Time	I_F = I_R=10mA I_{rr} = 0.1×I_R, R_L=100Ω	–	–	5	nS

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BAT54/A/C/S

Schottky Barrier Diode

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

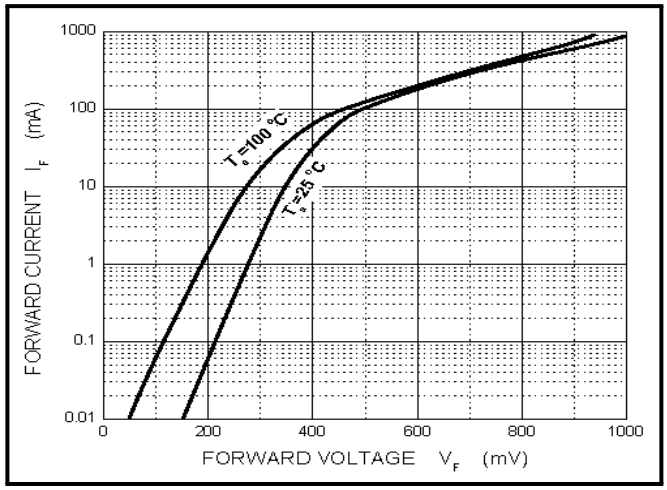


Figure 2: Reverse Characteristics

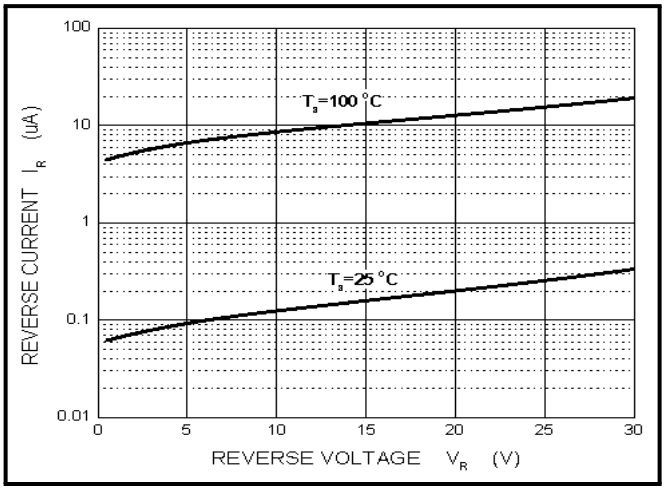


Figure 3: Capacitance Characteristics

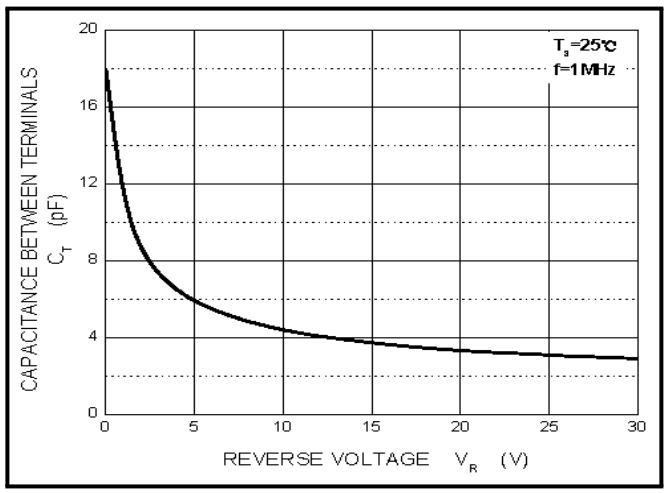
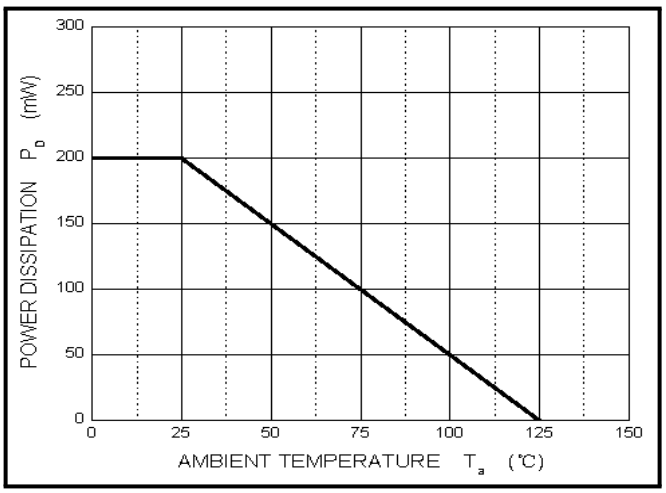


Figure 4: Power Derating Curve



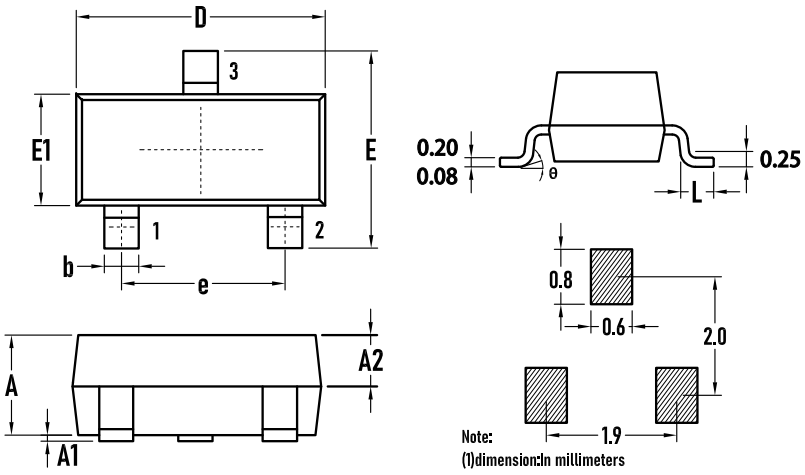
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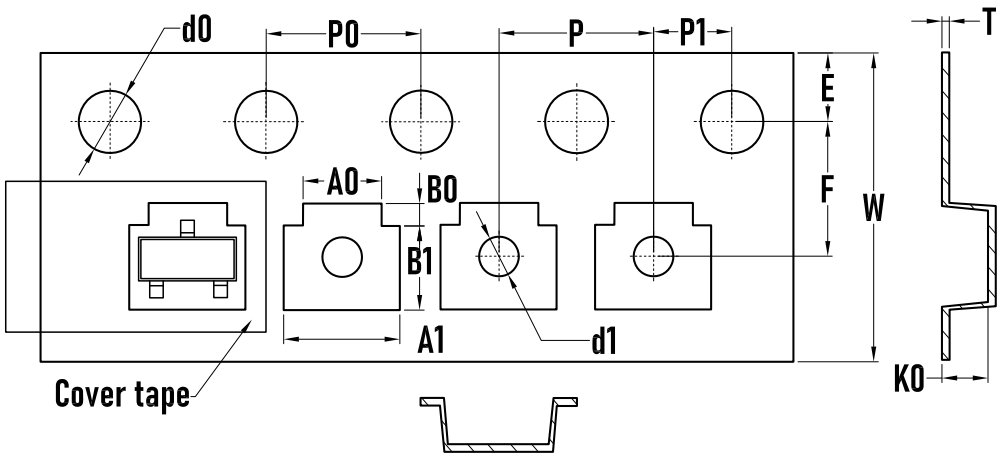
Schottky Barrier Diode

Outline Drawing -SOT-23



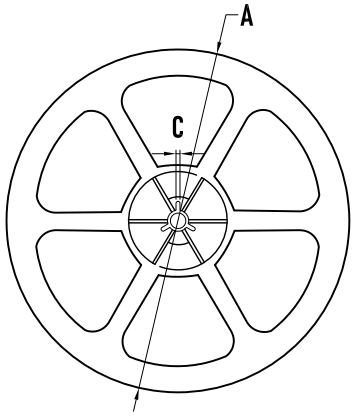
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	–	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	–	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	1.81±0.1
B0	3.71 ±0.1
d0	1.55±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.6 MAX
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.2
T	0.25±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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