BAT54- Series

200mW SMD Schottky Barrier Diode

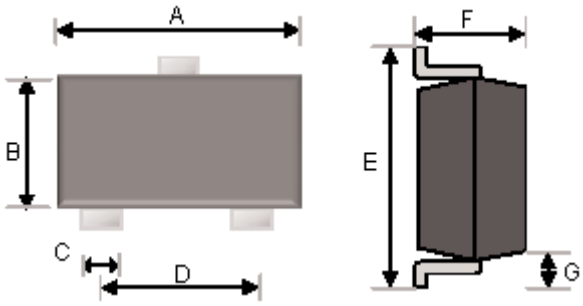
Small Signal Diode

Features :

- Fast switching speed.
- Surface device type mounting.
- Moisture sensitivity level 1.
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate.

RoHS Compliant

SOT-23

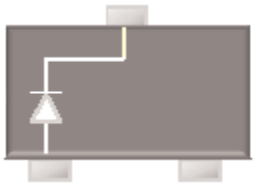


Mechanical Data

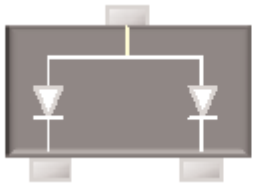
Case	: SOT-23 small outline plastic package.
Terminal	: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed.
High temperature soldering guaranteed	: 260°C/10s.
Marking Code	: KL1, KL2, KL3, KL4.

Dimensions	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.8	3	0.11	0.118
B	1.2	1.4	0.047	0.055
C	0.3	0.5	0.012	0.02
D	1.8	2	0.071	0.079
E	2.25	2.55	0.089	0.1
F	0.9	1.2	0.035	0.043
G	0.55 REF.		0.022 REF.	

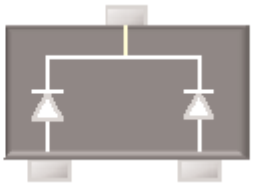
Pin Configuration



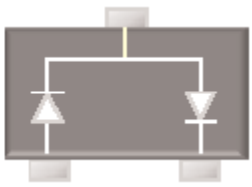
BAT54



BAT54A



BAT54C



BAT54S

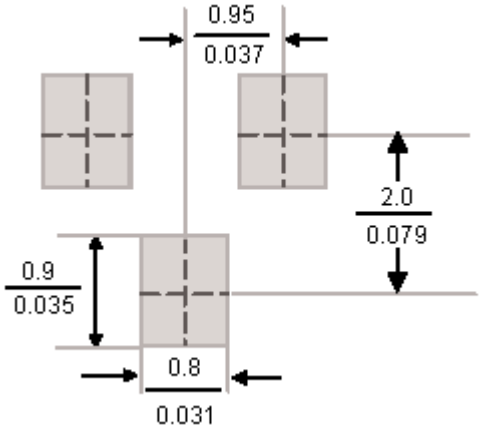
BAT54- Series

200mW SMD Schottky Barrier Diode

Marking Information

Package	Part Number	Packing	Marking
SOT-23	BAT54	3K / 7 Inches Reel	KL1
	BAT54A		KL2
	BAT54C		KL3
	BAT54S		KL4

Suggested PAD Layout



Dimensions : Millimetres

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Peak Repetitive Peak reverse Voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	30	V
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	200	
Forward Surge Current at t<1.0s	I_{FSM}	600	
Power Dissipation	P_d	200	mW
Thermal Resistance, Junction to Ambient air	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature	T_j , T_{STG}	-55 to 150	°C

Electrical Characteristics

Type Number		Symbol	Min.	Max.	Units
Reverse Breakdown Voltage	IR = 100µA	$V_{(BR)}$	30	-	V
Forward Voltage	I_F = 0.1mA	V_F	-	0.24	
	I_F = 1mA		-	0.32	
	I_F = 10mA		-	0.4	
	I_F = 30mA		-	0.5	
	I_F = 100mA		-	1	
Reverse Current	V_R = 25V	I_R	-	2	µA
Total Capacitance	V_R = 1V, f = 1 MHz	C_T	-	10	pF
Reverse Recovery Time	I_F = I_R = 10mA, R_L = 100Ω, I_{RR} = 1mA	t_{rr}	-	5	nS

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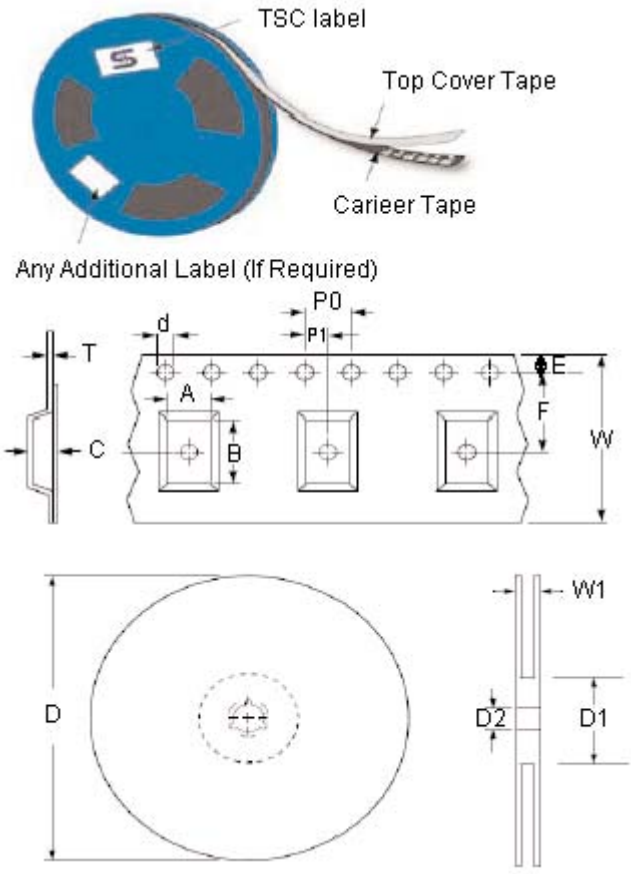
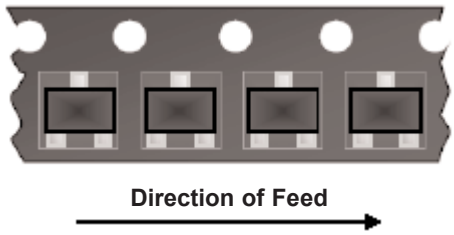
Tape and Reel specification

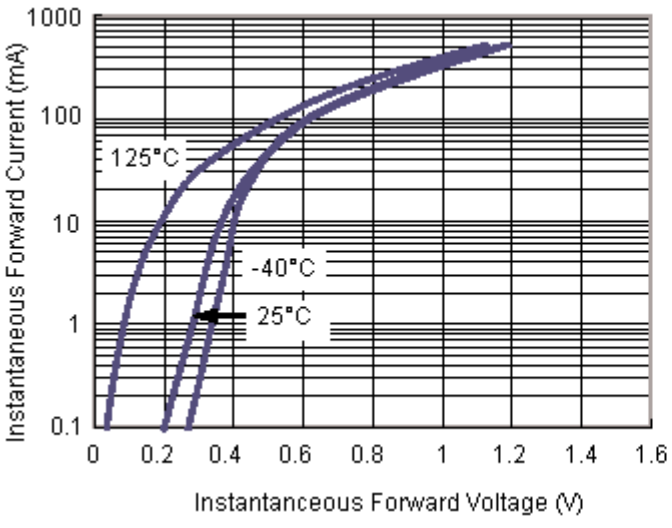


Item	Symbol	Dimension (mm)
Carrier width	A	3.15 ±0.1
Carrier length	B	2.77 ±0.1
Carrier depth	C	1.22 ±0.1
Sprocket hole	d	1.50 ±0.1
Reel outside diameter	D	178 ±1
Reel inner diameter	D1	55 Min.
Feed hole width	D2	13.0 ±0.2
Sprocket hole position	E	1.75 ±0.1
Punch hole position	F	3.50 ±0.05
Sprocke hole pitch	P0	4.00 ±0.1
Embossment centre	P1	2.00 ±0.05
Overall tape thickness	T	0.229 ±0.013
Tape width	W	8.10 ±0.2
Reel width	W1	12.30 ±0.2

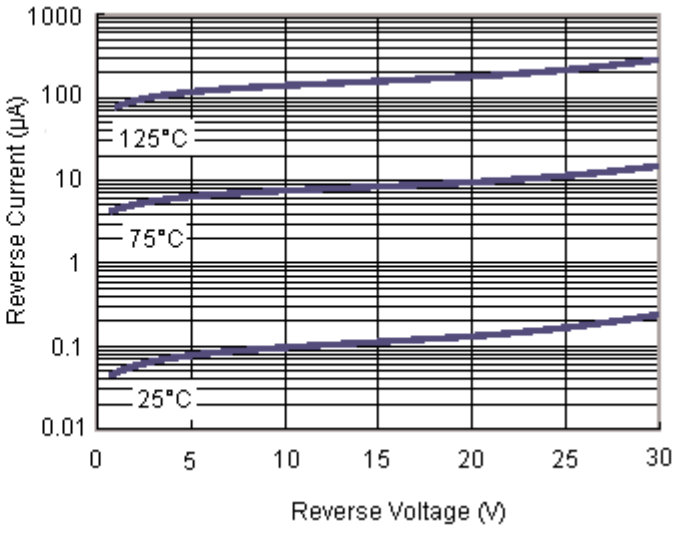


Rating and Characteristic Curves

Typical Forward Characteristics



Typical Reverse Characteristics



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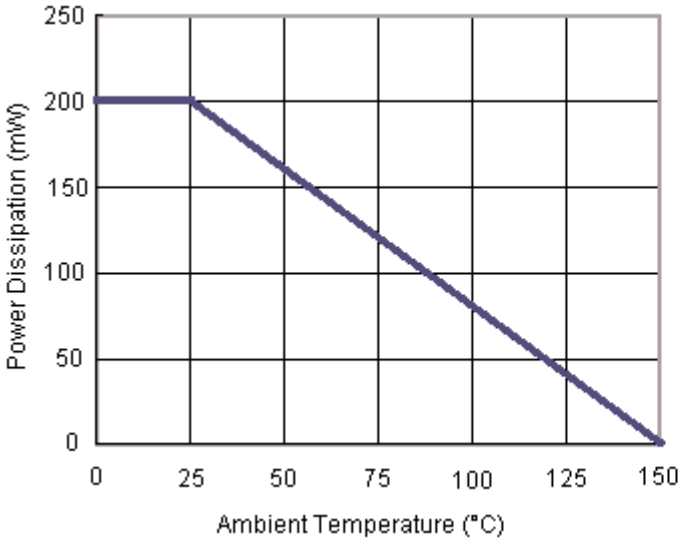
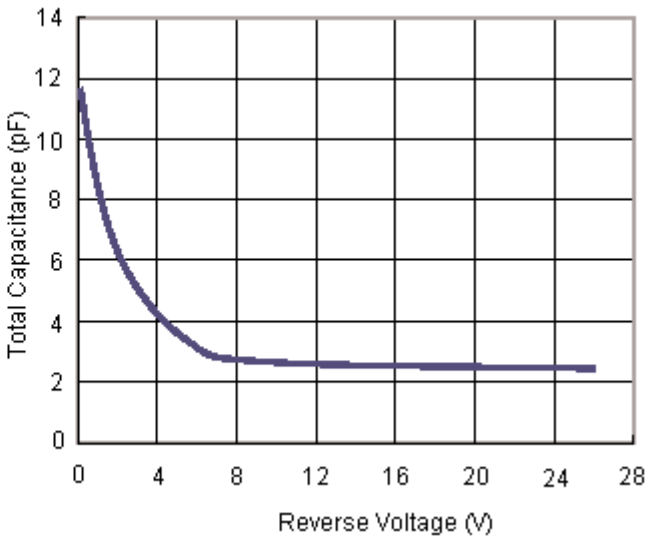
Rating and Characteristic Curves

Admissible Power Dissipation Curve



Typical Junction Capacitance



Part Number Table

Description	Part Number
Diode, Schottky, SOT-23	BAT54
	BAT54A
	BAT54C
	BAT54S