BAT54/BAT54A/BAT54C/BAT54S

Surface Mount Schottky Barrier Diode

Forward Current - 0.2 A
Reverse Voltage - 30 V

Description

- Low Forward Voltage
- High Current Capability
- Fast Switching Speed
- Surface Mound Device Type

Mechanical Data

- Case: SOT23 Package
- Case Material: "Green" Molding Compound UL Flammability Classification Rating 94V-0
- Terminals:Matte tin plated,solderable per MIL-STD-750 ,method 2026
- Component in accordance to RoHS
- Halogen Free

Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

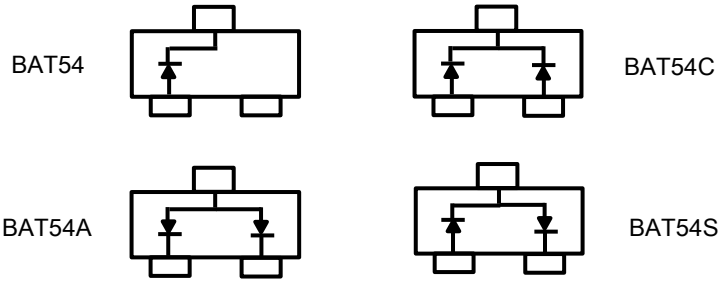
Ordering Information

- Package :SOT23
- Reel Size :7 (inches)
- Quantity Per Reel :3,000/Tape & Reel
- Quantity One Box :45,000/Tape & Reel

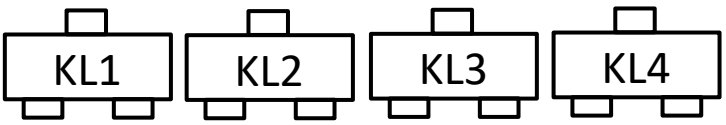
Package Outline

SOT23 Top View

Device Schematic & PIN Configuration



Product Type Marking Code



BAT54 BAT54A BAT54C BAT54S

Maximum Ratings (@TA = +25°C, unless otherwise specified.)

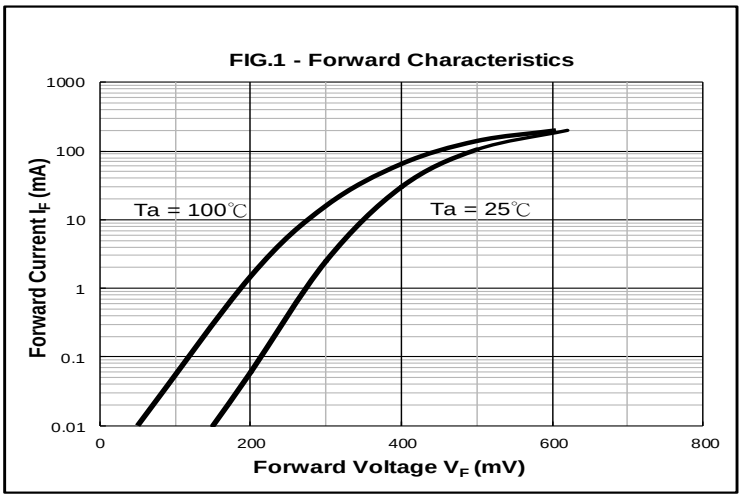
Absolute Ratings

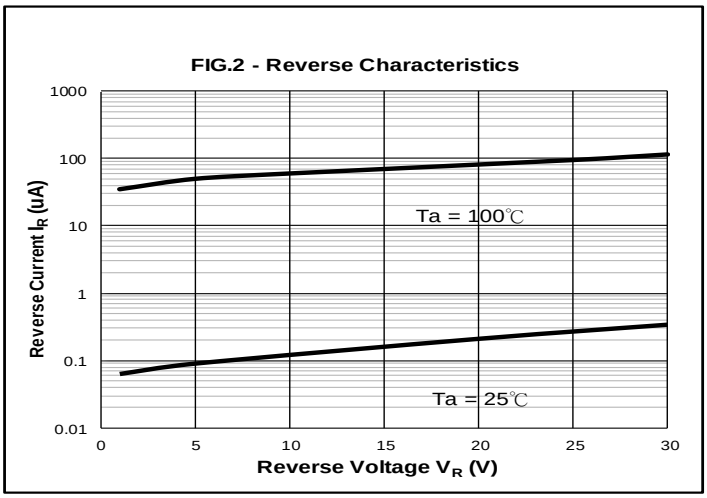
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Forward Rectified Current	I_{FM}	200	mA
Repetitive Peak Forward Current@ t≤1s,δ≤0.5	I_{FRM}	300	mA
Peak Forward Surge Current @ t = 8.3ms	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Storage Temperature Range	T_{STG}	-55 to +150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

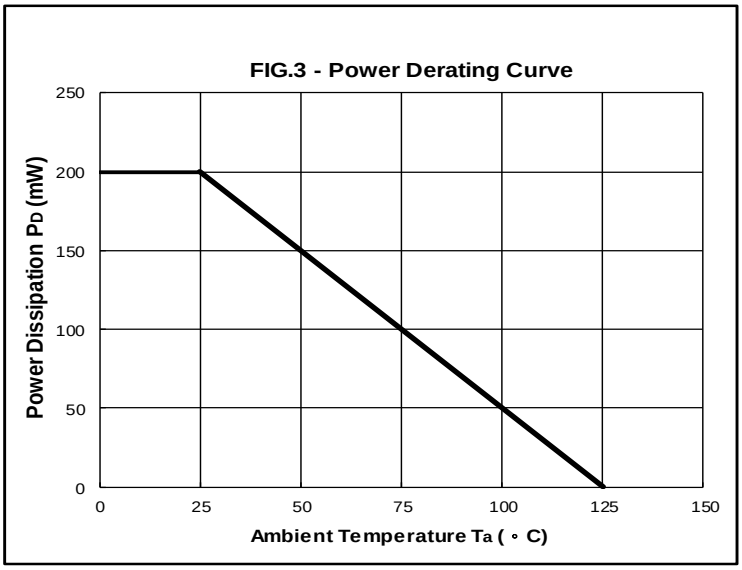
Electrical Characteristics

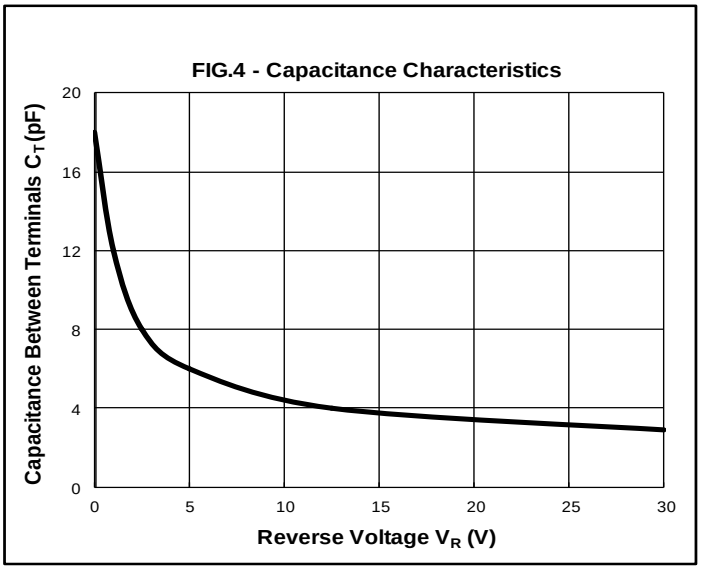
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Voltage	I_R=100uA	V_{BR}	30	–	–	V
Reverse Current	V_R=25V	I_R	–	–	2	uA
Forward Voltage	I_F=0.1mA	V_F	–	–	0.24	V
	I_F=1mA		–	–	0.32	
	I_F=10mA		–	–	0.40	
	I_F=30mA		–	–	0.50	
	I_F=100mA		–	–	1.00	
Junction Capacitance	V_R = 1V, F = 1MHz	C_J	–	–	10	pF
Reverse Recovery time	IF=IR=10mA Irr=0.1xIR , RL=100Ω	T_{RR}	–	–	5	ns

Rating and Characteristic Curves



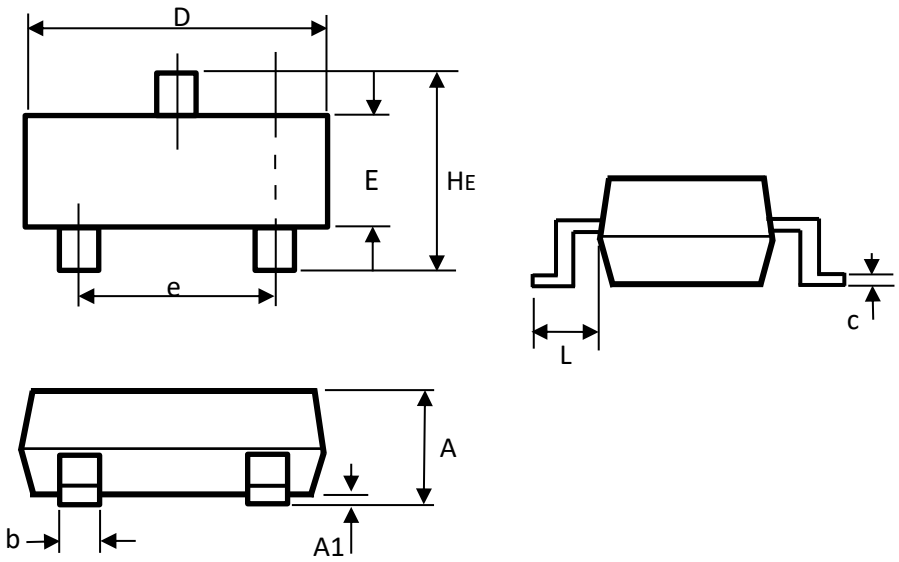






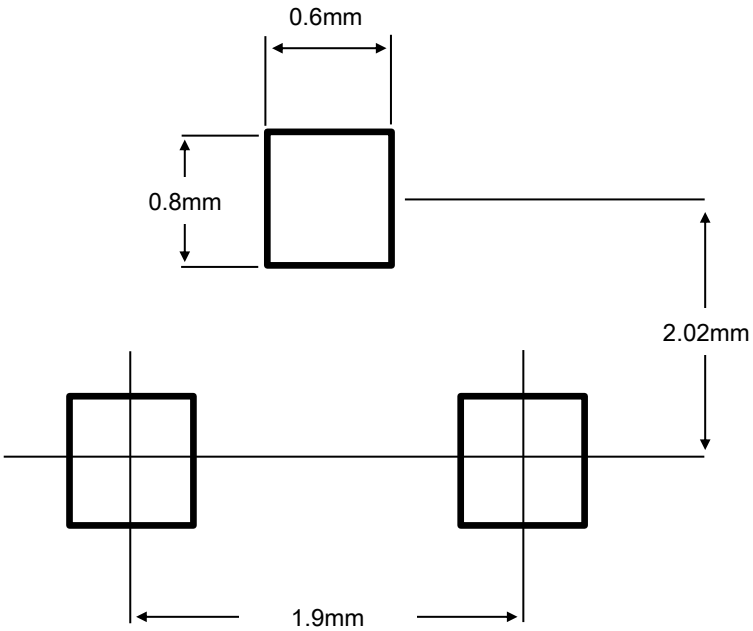
The curve above is for reference only.

Package Outline Dimensions



SOT23 Package		
Dim	Min	Max
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
e	1.80	2.00
L	0.55 REF	
HE	2.25	2.55
All Dimensions in mm		

Suggested Soldering Pad Layout



Note:

1.The pad layout is for reference purposes only.

2.General tolerance ±0.05mm

Legal Disclaimer Notice

Disclaimer

All specifications and data are subject to be changed without notice to improve reliability function or design or other reasons.

HY makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, HY disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special,consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on HY's knowledge of typical requirements that are often placed on HY products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.Parameters provided in datasheets and specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify HY's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, HY products are not designed for use in medical, life-saving, or life-sustaining applications or for any other applications in which the failure of the HY product could result in personal injury or death. Customers using or selling HY products not expressly indicated for use in such applications do so at their own risk.Please contact authorized HY personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of HY. Product names and markings noted herein may be trademarks of their respective owners.