SOT-23 Formed SMD Package **BAT54**

SCHOTTKY BARRIER DIODE

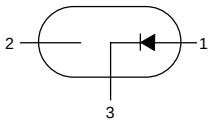
BAT54 single diode

Marking

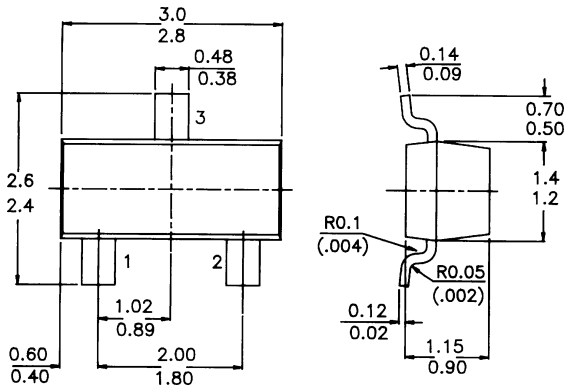
BAT54 -4L

Pin configuration

1 = ANODE
2 = NC
3 = CATHODE



PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



ABSOLUTE MAXIMUM RATINGS

Continuous reverse voltage	V_R	*max.*	*30 V*
Forward current	I_F	*max.*	*200 mA*
Forward voltage at I_F = 10 mA	V_F	<	*400 mV*
Total power dissipation up to T_{amb} = 25 °C	P_{tot}	*max.*	*230 mW*
Reverse recovery time when switched from I_F = 10 mA to I_R = 10 mA; R_L = 100 Ω; measured at I_R = 1 mA	t_{rr}	<	*5 ns*
Junction temperature	T_j	*max.*	*125 °C*

RATINGS *(at T_A = 25°C unless otherwise specified)*

Continuous reverse voltage	V_R	*max.*	*30 V*
Forward current (DC)	I_F	*max.*	*200 mA*
Forward voltage at I_F = 10 mA	V_F	<	*400 mV*
Reverse recovery time when switched from I_F = 10 mA to I_R = 10 mA; R_L = 100 Ω; measured at I_R = 1 mA	t_{rr}	<	*5 ns*
Junction temperature	T_j	*max.*	*125 °C*

Total power dissipation up to T_{amb} = 25 °C	P_{tot}	*max.*	*230 mW*
Storage temperature	*Tstg*	*–55 to +150*	*°C*
Junction temperature	*Tj*	*max.*	*125 °C*

THERMAL RESISTANCE

From junction to ambient; mounted on a ceramic substrate of 10 mm × 8 mm × 0.6 mm	$R_{th\ j-a}$	=	*430 K/W*

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified

Forward voltage			
I_F = 0.1 mA	V_F	£	240 mV
I_F = 1 mA*	V_F	£	320 mV
I_F = 10 mA	V_F	£	400 mV
I_F = 30 mA*	V_F	£	500 mV
I_F = 100 mA	V_F	=	500 mV
	V_F	£	1000 mV
Reverse current			
V_R = 25 V	I_R	£	2 µA
Reverse breakdown voltage	$V_{(BR)R}$	>	30 V
Diode capacitance			
V_R = 1 V; f = 1 MHz	C_d	£	15 pF
Reverse recovery time when switched from			
I_F = 10 mA to I_R = 10 mA; R_L = 100 Ω; measured at I_R = 1 mA	t_{rr}	£	5 ns

* *Temperature coefficient of forward voltage:*
–0.6 %K at I_F = 1 mA
–0.3 %K at I_F = 30 mA

Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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