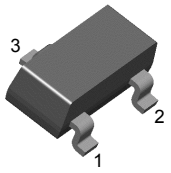
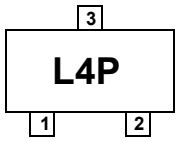
FAIRCHILD SEMICONDUCTOR®

February 2005

BAT54/A/C/S
Schottky Diodes



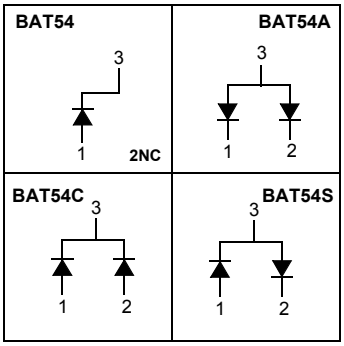
SOT-23



MARKING

BAT54 = L4P BAT54A = L42
BAT54C = L43 BAT54S = L44

Connection Diagram



Absolute Maximum Ratings *

T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	30	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second	600	mA
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	290	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	430	°C/W

Electrical Characteristics

T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	I_R = 10μA	30		V
V_F	Forward Voltage	I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA		240 320 400 500 0.8	mV mV mV mV V
I_R	Reverse Leakage	V_R = 25V		2	μA
C_T	Total Capacitance	V_R = 1V, f = 1.0MHz		10	pF
t_{rr}	Reverse Recovery Time	I_F = I_R = 10mA, I_{RR} = 1.0mA, R_L = 100Ω		5.0	ns

Typical Performance Characteristics

Figure 1. Forward Voltage vs Temperature

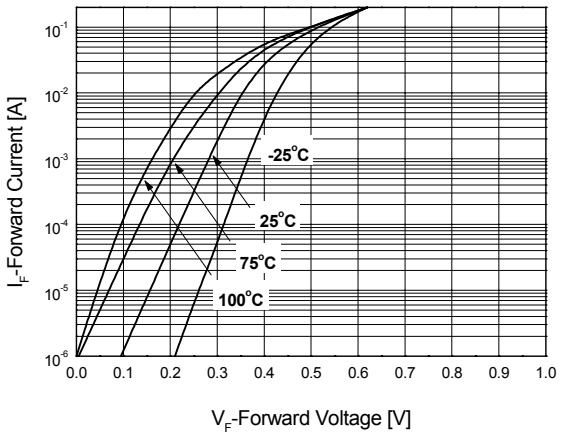


Figure 2. Reverse Leakage Current vs Temperature

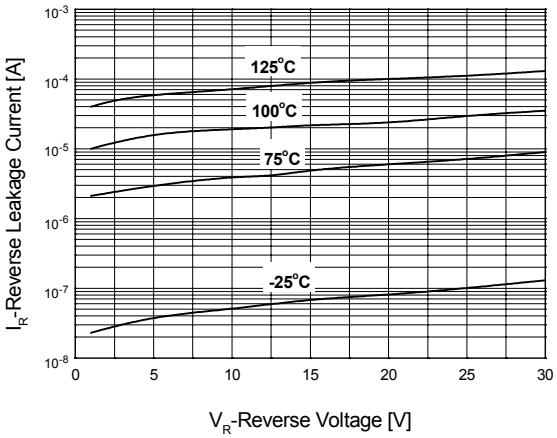
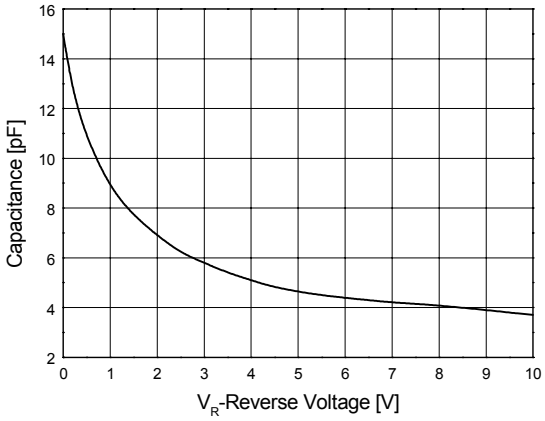


Figure 3. Capacitance vs Reverse Bias Voltage



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