HAICHUANG SEMI

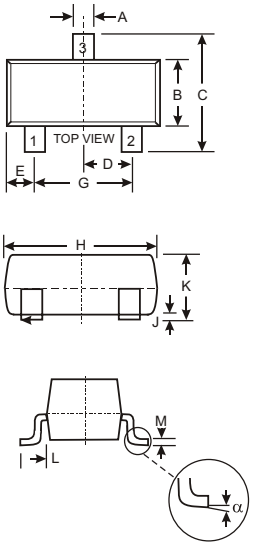
BAT54/A/C/S

SURFACE MOUNT SCHOTTKY BARRIER DIODES

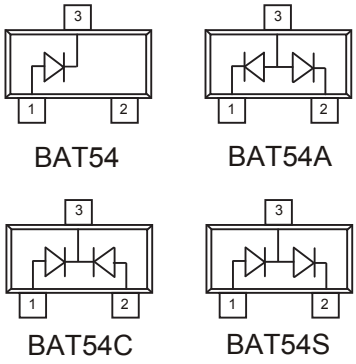
Features

- Low Turn-on Voltage
- Fast switching
- PN junction guard ring for transient and ESD protection

DEVICE	MARKING		TYPE
	1	2	
BAT54	KL1	L4P	Single
BAT54A	KL2	L42	Dual
BAT54C	KL3	L43	Dual
BAT54S	KL4	L44	Dual



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		



Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Limit	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Average rectified forward current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Repetitive peak forward surge current at Pulse width=1 second	I_{FSM}	600	mA
Power dissipation	P_{tot}	290	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	430	℃/W
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	- 55 to + 150	℃

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit
Forward voltage at I_F = 0.1 mA at I_F = 1 mA at I_F = 10 mA at I_F = 30 mA at I_F = 100 mA	V_F	 - - - - -	 240 320 400 500 800	mV
Reverse current at V_R = 25 V	I_R	-	2	μA
Breakdown voltage at I_R =10 μA	V_R	30	-	V
Total capacitance at V_R = 1 V, f = 1 MHz	C_{tot}	-	10	pF
Reverse recovery time at I_F = 10 mA, I_R = 10 mA, I_{RR} = 1 mA, R_L = 100 Ω	t_{rr}	-	5	ns

TYPICAL TRANSIENT CHARACTERISTICS

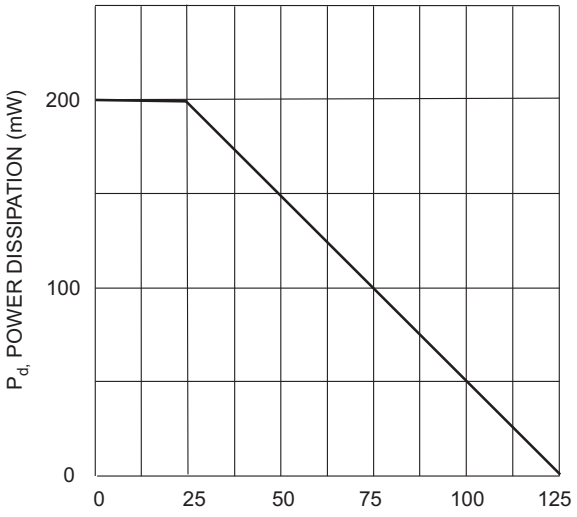


Fig. 1 Power Derating Curve

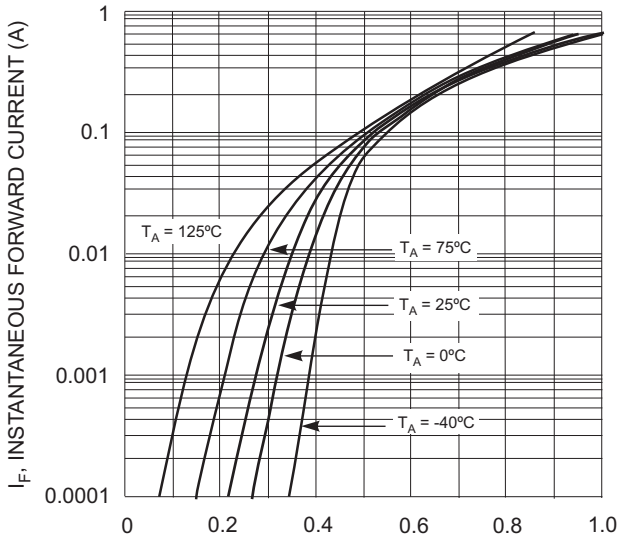


Fig. 2 Forward Characteristics

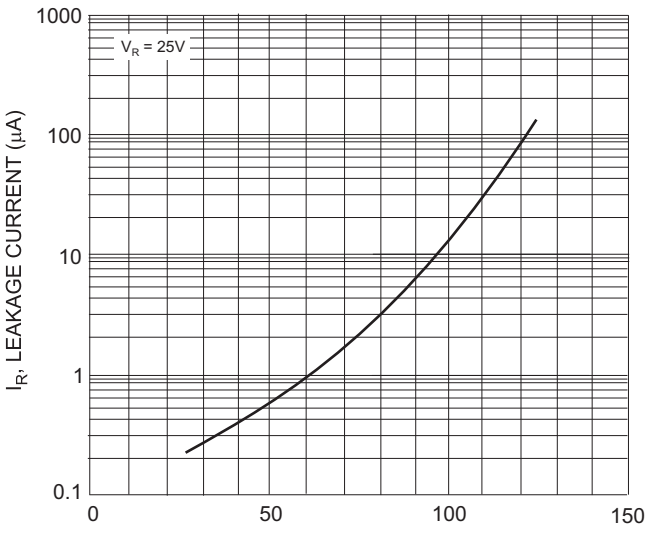


Fig. 3, Typical Reverse Characteristics

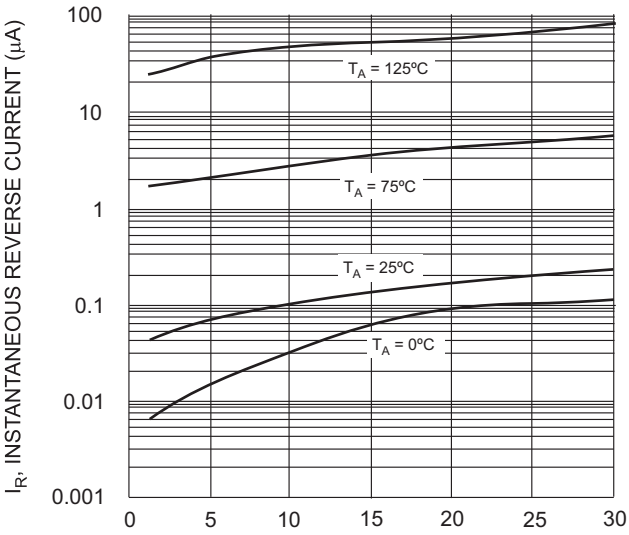


Fig. 4 Typical Reverse Characteristics

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