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BAT54 THRU BAT54S

250mWatt, 30Volt Schottky Barrier Diode

Features

- Low Forward Voltage
- Surface Mount device
- Very small conduction losses

Catalog Number	Device Marking				Type	Pin Configuration See page 3
	1	2	3	4		
BAT54	KL1	L4	**L4P**	LV3	Single	Figure 1
BAT54A	KL2	L42	L42	B6	Dual	Figure 2
BAT54C	KL3	L43	L43		Dual	Figure 3
BAT54S	KL4	L44	L44	LD3	Dual	Figure 4

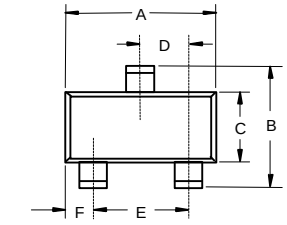
Maximum Ratings

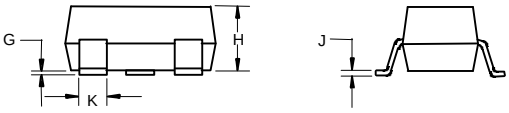
Continuos Reverse Voltage	V_R	30V
Forward Current	I_F	0.3A
Non-Repetitive Peak Forward Current t<1s	I_{FSM}	1.0A
Total Power Dissipation @ T_A = 25°C	P_D	250mW
Storage Temperature Range	T_{stg}	-55°C to 150°C
Junction Temperature	T_j	150°C
Soldering temperature during 10s	T_j	260°C

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Ratings	Symbol	Max.	Notes
Forward Voltage at I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA	V_F	 240mV 320mV 400mV 500mV 900mV	
Reverse Current	I_R	2.0 uA	V_R = 25V
Reverse Breakdown Voltage	$V_{(BR)}$	>30V	
Capacitance	C_J	10pF	Measured at 1.0MHz, V_R=1.0V
Reverse Recovery Time	t_{rr}	5nS	I_F=I_R=10mA; $I_{(REC)}$ = 1mA
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	430°C/W	

SOT-23





DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

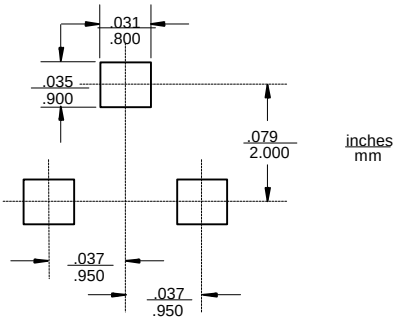


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Fig.1 : Average forward power dissipation versus average forward current.

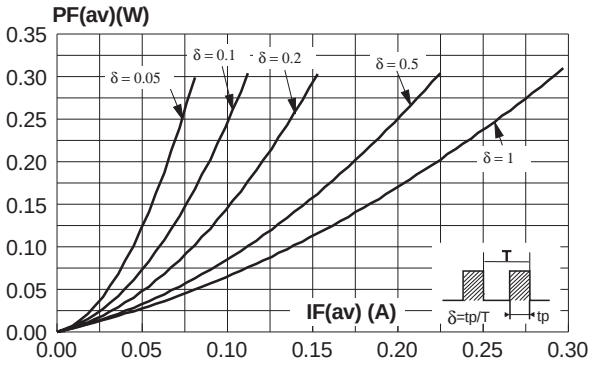


Fig.2 : Average forward current versus ambient temperature (δ = 1).

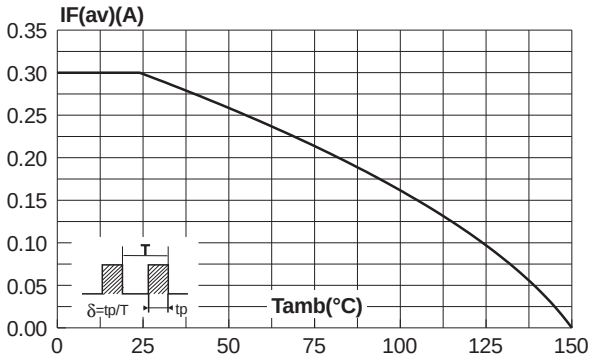


Fig.3 : Non repetitive surge peak forward current versus overload duration (maximum values).

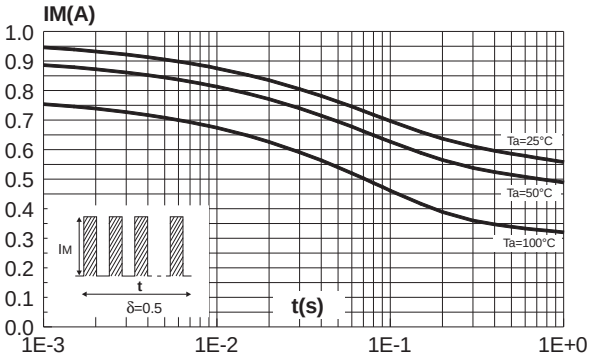


Fig.4 : Relative variation of thermal impedance junction to ambient versus pulse duration (alumine substrate 10mm x 8mm x 0.5mm).

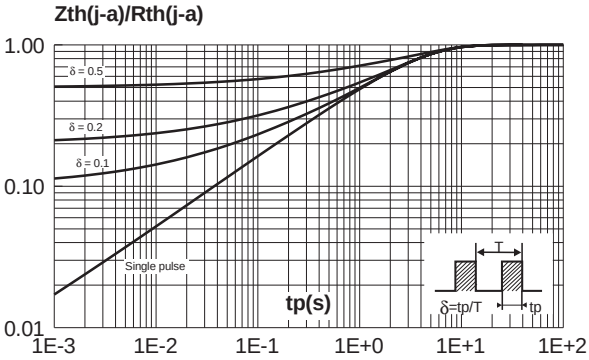


Fig.5 : Reverse leakage current versus reverse voltage applied (typical values).

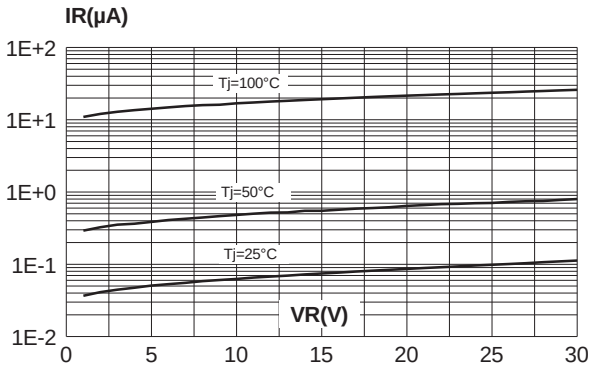


Fig.6 : Reverse leakage current versus junction temperature.

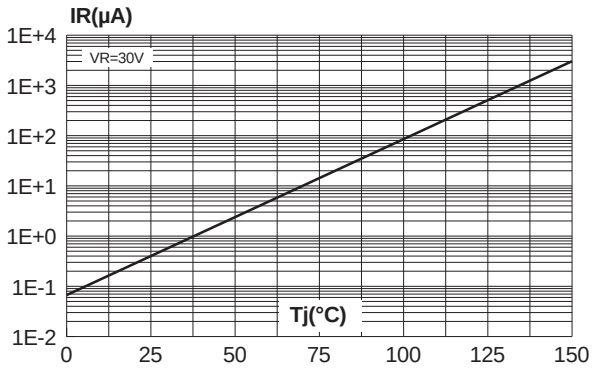


Fig.7 : Junction capacitance versus reverse voltage applied (typical values).

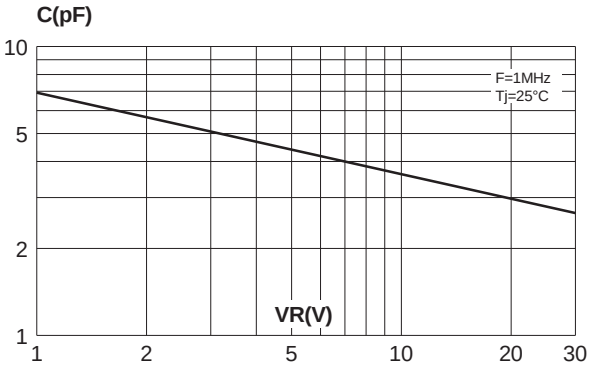
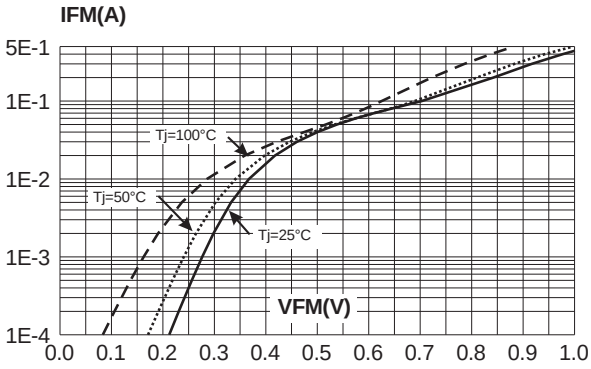


Fig.8 : Forward voltage drop versus forward current (typical values).



Pin Configuration - Top View

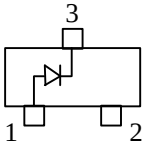


Figure 1

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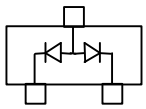

Figure 2

BAT54A

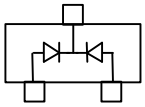

Figure 3

BAT54C

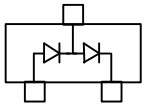

Figure 4

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