

MSKSEMI

SEMICONDUCTOR



ESD



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GDT

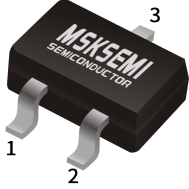


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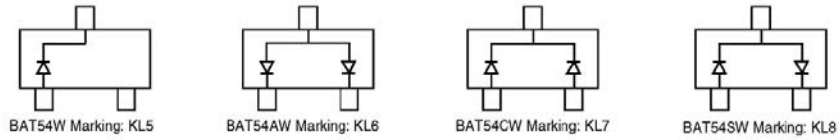
Product data sheet

FEATURES

- Extremely Fast Switching Speed
- Low forward voltage



SOT-323



MARKING:

BAT54W	BAT54AW	BAT54CW	BAT54SW

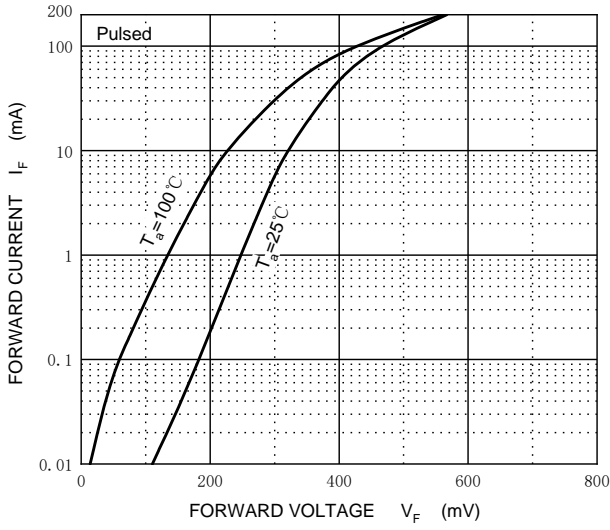
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Forward Continuous Current	I _{FM}	200	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I _{FSM}	600	mA
Repetitive Peak Forward Current @ t≤1s, δ ≤0.5	I _{FRM}	300	mA
Power Dissipation	P _D	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	500	°C/W
Operating Junction Temperature Range	T _j	-40 ~ +125	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

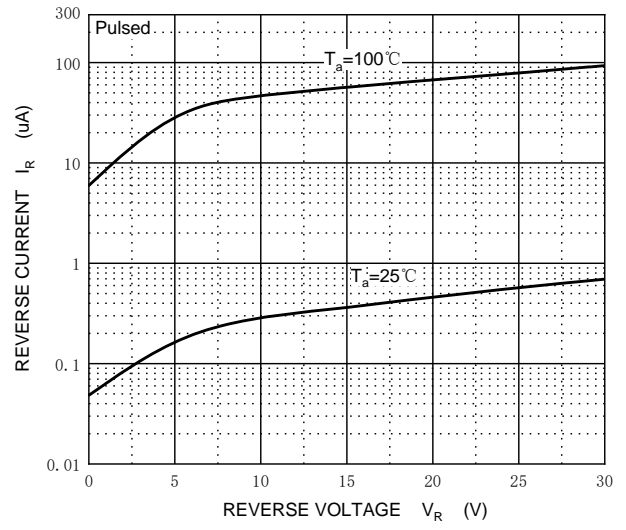
ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V _(BR)	I _R =100μA	30			V
Reverse current	I _R	V _R =25V			2	μA
Forward voltage	V _F	I _{F1} =0.1mA			0.24	V
		I _{F2} =1mA			0.32	V
		I _{F3} =10mA			0.40	V
		I _{F4} =30mA			0.50	V
		I _{F5} =100mA			1	V
Diode capacitance	C _D	V _R =1V, f=1MHz			10	pF
Reverse recovery time	t _{rr}	I _F =I _R =10mA I _{rr} =0.1×I _R ,R _L =100 Ω			5	ns

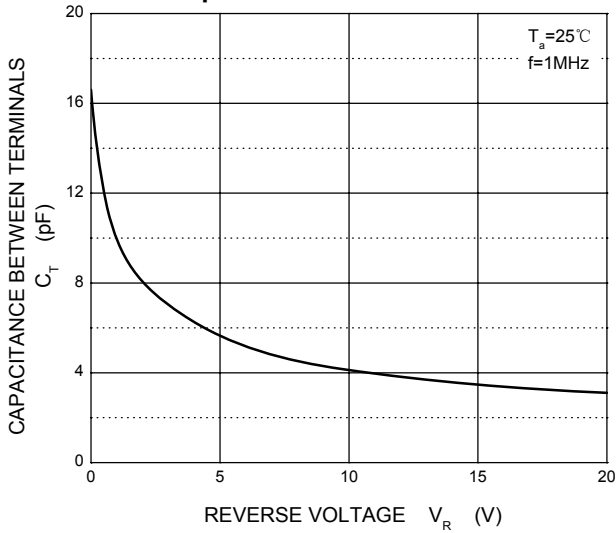
Forward Characteristics



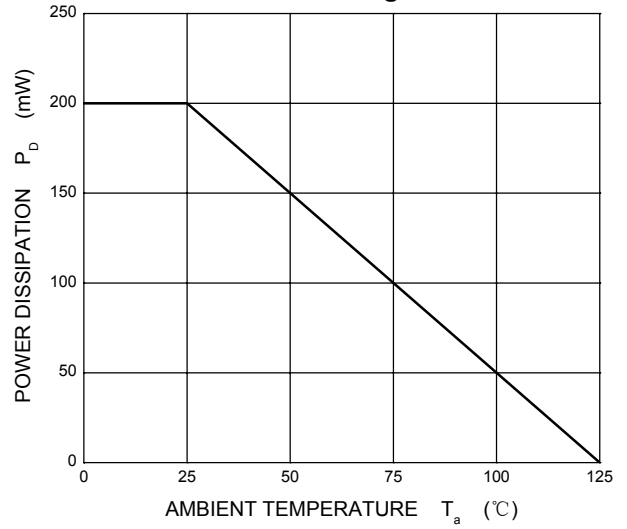
Reverse Characteristics



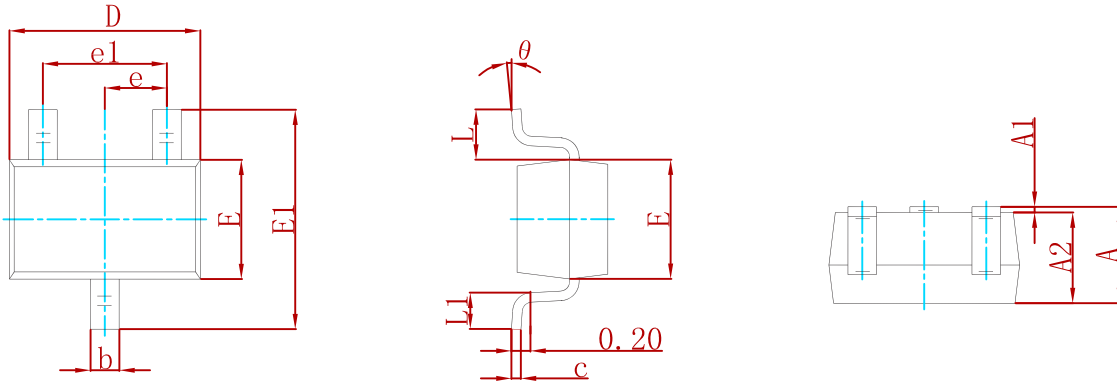
Capacitance Characteristics



Power Derating Curve

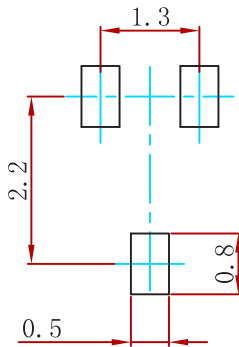


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BAT54AW	SOT-323	3000

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