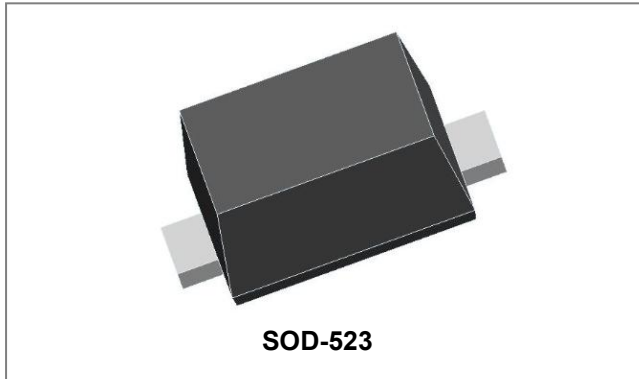


BAT54M5 Schottky Barrier Diode



Features

- Low current rectification
- Low forward voltage
- SOD523 Micro SMD package
- RoHS compliant
- Terminals finish: Tin Lead-free plated
- “-A” is an AEC-Q101 qualified device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Characteristics

- Case: SOD-523, Molded plastic
- Matte Tin (Sn) Lead finish
- Polarity: Cathode Band
- Weight: 0.002 grams(approx)

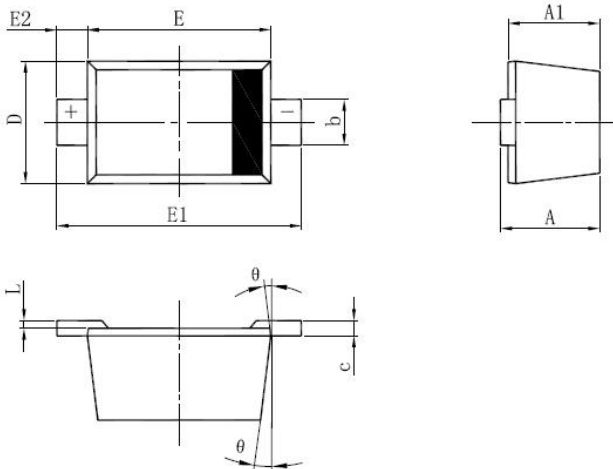
Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Limits	Unit
Non- Repetitive Peak Reverse Voltage	V_{RM}	30	V
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Continuous Forward Current	I_O	200	mA
Power Dissipation	P_D	200	mW
Non-Repetitive Peak Forward Surge Current @ $t=1\mu\text{s}$	I_{FSM}	0.6	A
Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$

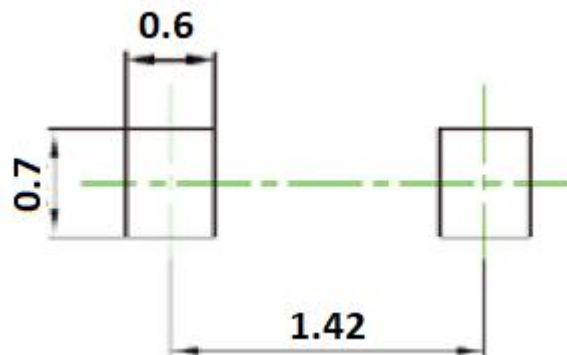
Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Units	Test Condition
Breakdown Voltage*	V _{BR}	30	-	V	@I _R =10uA
Forward Voltage*	V _{FM}	-	0.24 0.32 0.40 0.50 0.80	V	@I _F =0.1mA @I _F =1mA @I _F =10mA @I _F =30mA @I _F =100mA
Reverse Leakage Current**	I _{RM}	-	2	uA	@V _R =25V
Capacitance	C _T	-	10	pF	@V _R = 1V, f = 1MHz
Reverse Recovery Time	T _{rr}		5	ns	@I _r = 10mA, I _R = 10mA~1mA

* Pulse width < 300 μs, duty cycle < 2%

Mechanical Dimensions SOD-523


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.200	0.003	0.008
D	0.700	0.850	0.028	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF.	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

Land Pattern Recommendation SOD-523 (Millimeters)


Tolerance: ±0.05mm

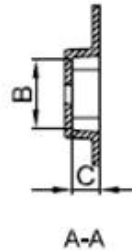
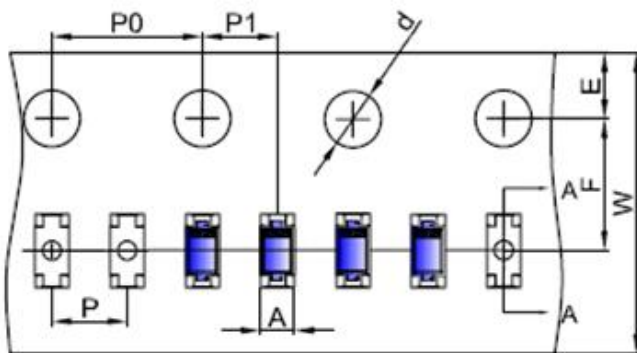
Ordering Information

Device	Package	Shipping
BAT54M5	SOD-523	8000pcs / reel
BAT54M5TR	SOD-523	8000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


JV =Marking code

Carrier Tape & Reel Specification SOD-523


SYMBOL	Millimeters	
	Min.	Max.
A	0.85	0.95
B	1.89	1.99
C	0.68	0.78
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	1.90	2.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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