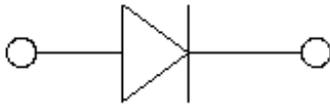


Schottky Rectifier



Features

- Moisture sensitivity level 1
- Reverse voltage: 30V
- Average forward current : 0.2A

Application

- High frequency and low voltage rectifier

Mechanical data

- **Package:** SOD-123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			L9
Repetitive peak reverse voltage	V _{RRM}	V	30
Forward current	I _F	A	0.2
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I _{FSM}	A	0.6
Non-repetitive surge peak forward current @ t=1ms square wave			0.6
Repetitive Peak Forward Current @ t _p =1ms, δ=0.25	I _{FRM}	A	0.3
Power dissipation	P _D	mW	500
Junction temperature	T _J	°C	-55 to +125
Storage temperature	T _{STG}	°C	-55 to +150



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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Breakdown voltage	V _R	V	I _R =100uA	30		
Forward voltage	V _{F1}	V	I _F =0.1mA			0.24
	V _{F2}	V	I _F =1mA			0.32
	V _{F3}	V	I _F =10mA			0.4
	V _{F4}	V	I _F =30mA			0.5
	V _{F5}	V	I _F =100mA			1
Reverse leakage current	I _R	uA	V _R =25V			2
Junction capacitance	C _j	pF	V _R =1V, f =1MHz			10
Reverse recovery time	T _{rr}	ns	I _F =I _R =10mA, I _{rr} =1mA, R _L =100Ω			5

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	200
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	160

Note:

(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas



■ Characteristics

Fig 1: P_D - T_a Curve

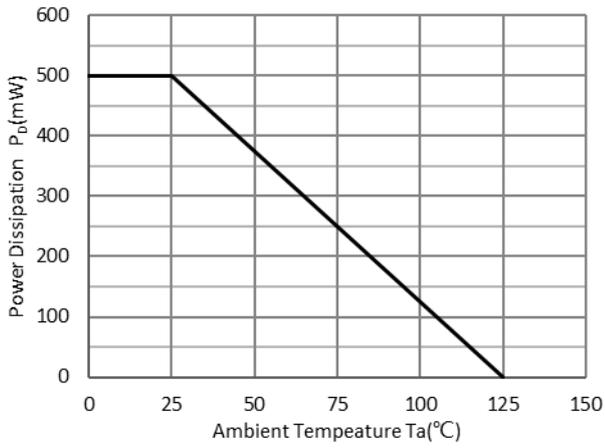


Fig 2: Capacitance Capability

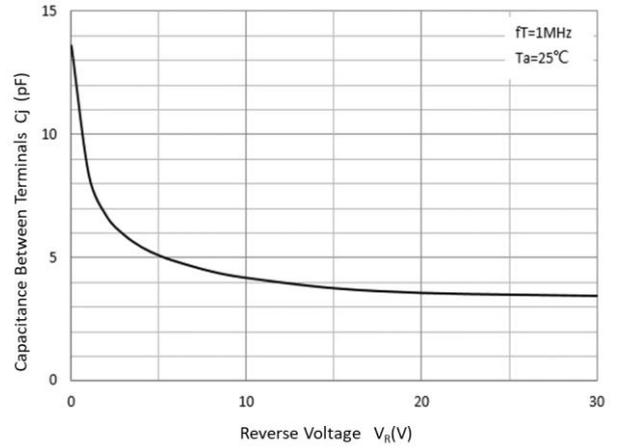


Fig 3: Typical Forward Characteristics

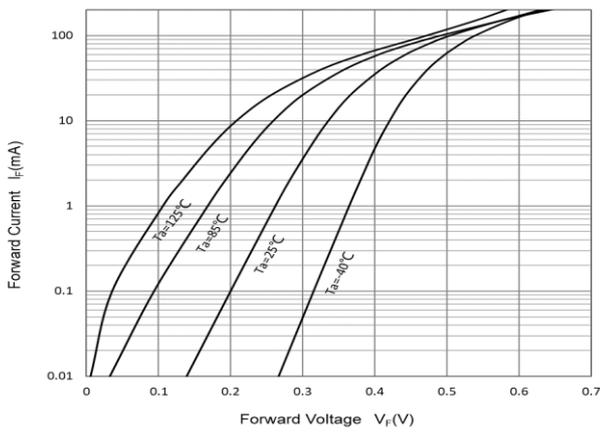
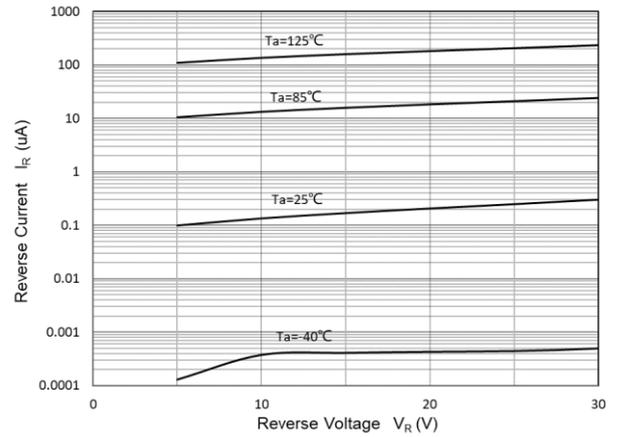


Fig 4: Typical Reverse Characteristics



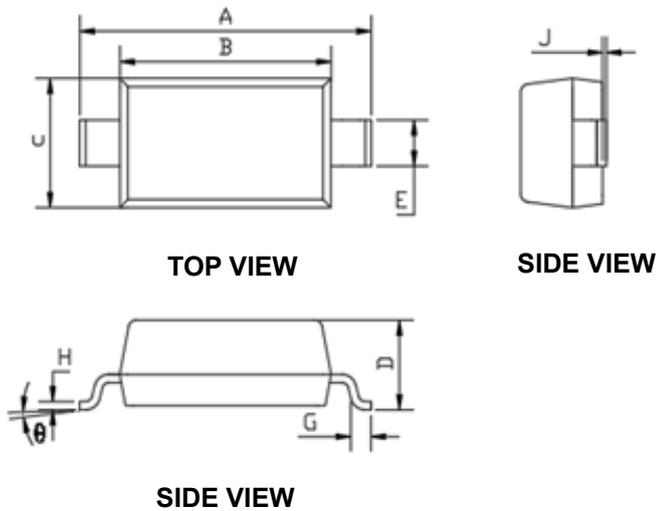


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Ordering Information

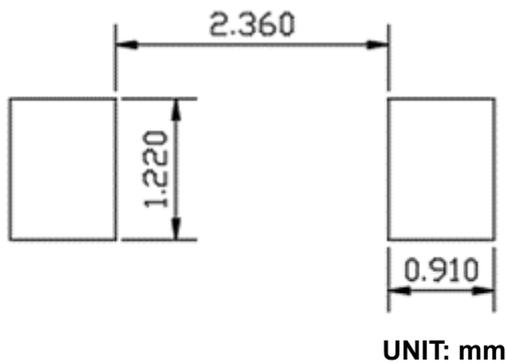
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAT54W	F2	Approximate 0.011	3000	30000	120000	7" reel
BAT54W	F3	Approximate 0.011	10000	/	210000	13" reel

Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

Suggested Pad Layout



Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
- General tolerances: $\pm 0.10\text{mm}$ unless otherwise specified.
[通用公差为 $\pm 0.10\text{mm}$ ，除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues.
Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
- Dimensions B and C are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[B和C是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]



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