

SCHOTTKY BARRIER DIODE

Features

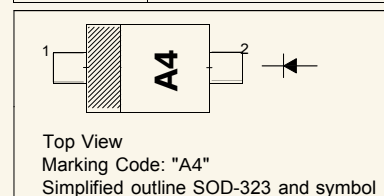
- Ultra high-speed switching
- Very low forward voltage
- Very small SMD plastic package

Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

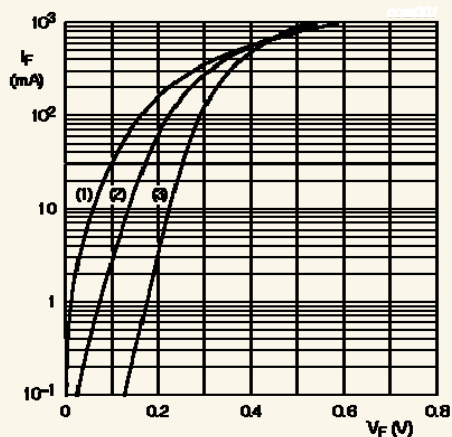
Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	20	V
Continuous Forward Current	I_F	1	A
Non-repetitive Peak Forward Current (t = 8.3 ms Half Sine Wave, JEDEC method)	I_{FSM}	5	A
Junction Temperature	T_J	125	$^{\circ}\text{C}$
Operating Ambient Temperature Range	T_{op}	- 65 to + 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	220 ¹⁾ 180 ²⁾	K/W

¹⁾ Mounted on P.C.B. 10 X 10 mm² Cu

²⁾ Mounted on P.C.B. 40 X 40 mm² Cu

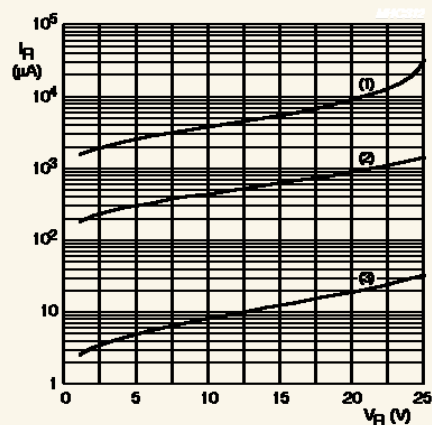
Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$ at $I_F = 100\text{ mA}$ at $I_F = 1\text{ A}$	V_F	0.27 0.35 0.65	V
Reverse Current at $V_R = 5\text{ V}$ at $V_R = 8\text{ V}$ at $V_R = 15\text{ V}$	I_R	10 20 50	μA
Diode Capacitance at $V_R = 5\text{ V}$, f = 1 MHz	C_d	25	pF



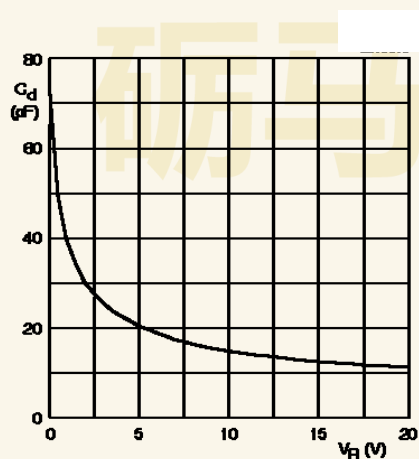
- (1) $T_{amb} = 85\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = -40\text{ }^{\circ}\text{C}$.

Fig.1 Forward current as a function of forward voltage; typical values.



- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$.

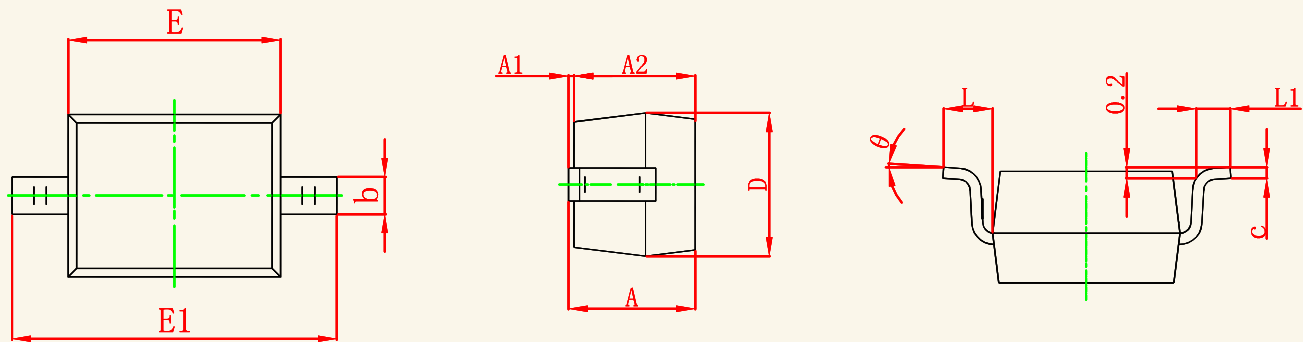
Fig.3 Reverse current as a function of reverse voltage; typical values.



$T_{amb} = 25\text{ }^{\circ}\text{C}$; $f = 1\text{ MHz}$.

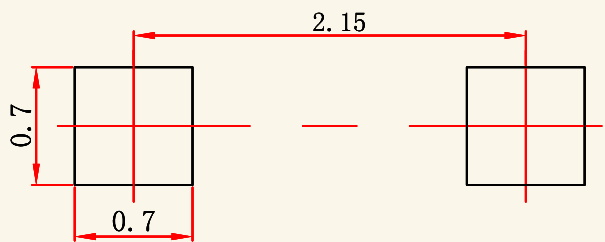
Fig.4 Diode capacitance as a function of reverse voltage; typical values.

SOD-323 Package Outline Dimensions



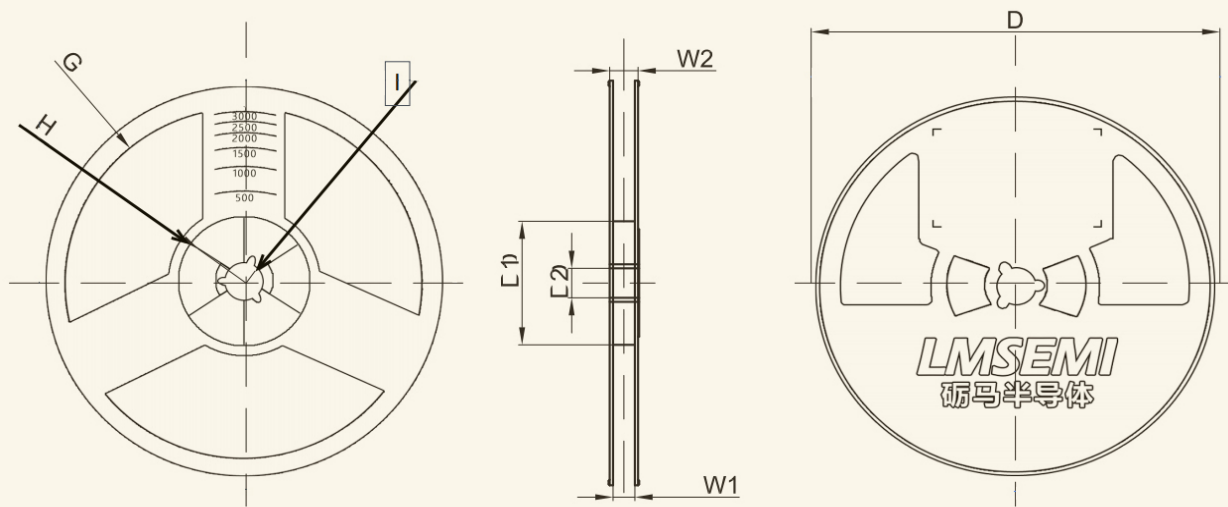
Symbol	Dimensions In Millimeters		Min	Max
	Min	Max		
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



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

SOD-323 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	183×126×183	180,000 pcs	395×380×200	

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