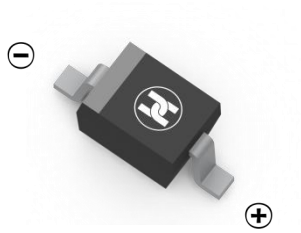
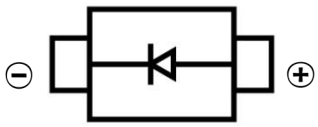
SCHOTTKY BARRIER DIODE

FEATURES

- Low Forward Voltage
- Fast Switching
- Surface Mount device
- For Low Current Rectifier Circuits Applications



SOD-323



MECHANICAL DATA

- Case: SOD-323
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)
- Marking:86

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Forward Current	I_F	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 10 ms	I_{FSM}	0.6	A
Power Dissipation	P_D	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	550	°C/W
Junction Temperature	T_J	125	°C
Storage Temperature	T_{STG}	-55 ~+150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30			V	I_R=0.1mA
Forward voltage	V_F			0.23	V	I_F=0.1mA
				0.30		I_F=1.0mA
				0.40		I_F=10mA
				0.5		I_F=30mA
				1.0		I_F=100mA
Reverse voltage leakage current	I_R			2	μA	V_R=25V,T_J=25°C
				100		V_R=25V,T_J=100°C
Diode capacitance	C_D			10	pF	V_R=1.0V,f=1.0MHz
Reverse recovery time	T_{rr}			5	nS	I_F=10mA,I_R=10~1mA,R_L=100Ω

SCHOTTKY BARRIER DIODE

Typical Characteristics

Fig. 1-1: Forward voltage drop versus forward current (typical values, low level).

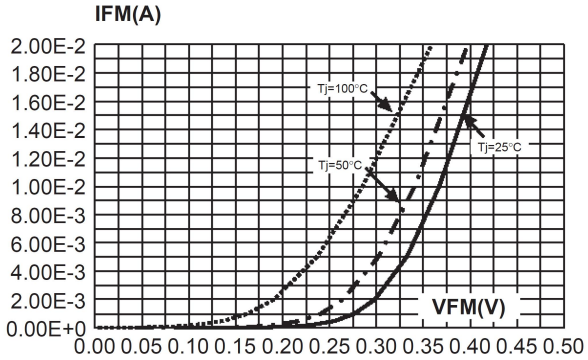


Fig. 1-2: Forward voltage drop versus forward current (typical values, high level).

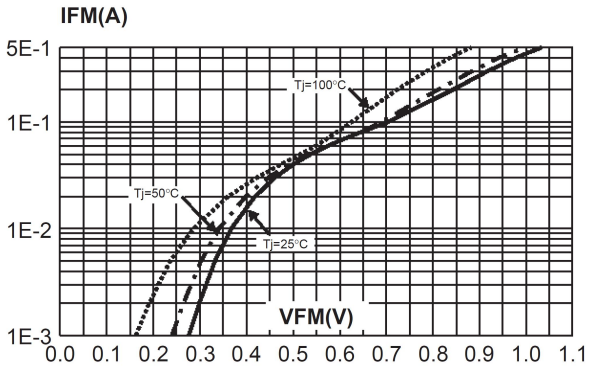


Fig. 2: Reverse leakage current versus reverse voltage applied (typical values).

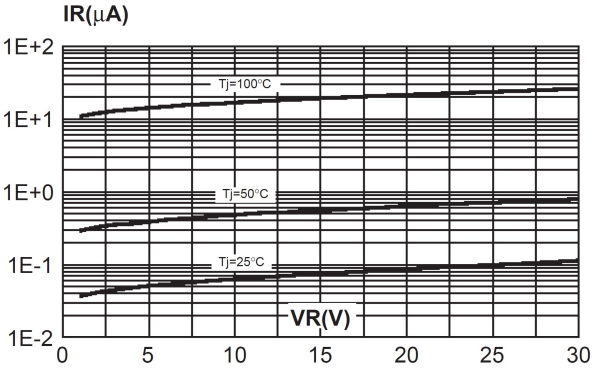


Fig. 3: Reverse leakage current versus junction temperature.

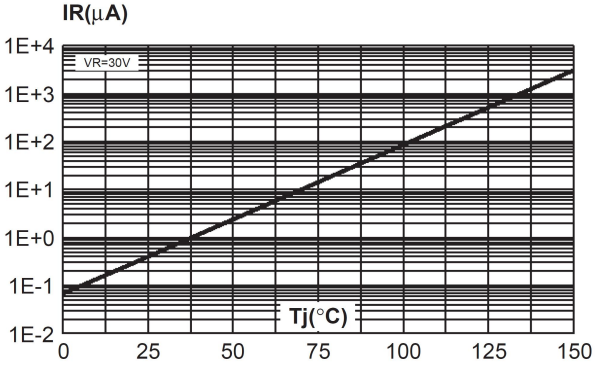


Fig. 4: Junction capacitance versus reverse voltage applied (typical values).

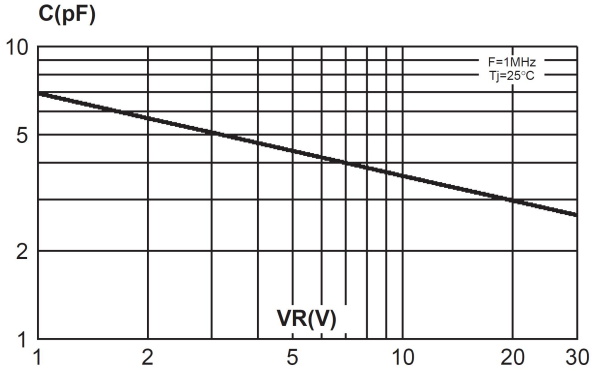


Fig. 5: Relative variation of thermal impedance junction to ambient versus pulse duration (epoxy FR4 with recommended pad layout, e(Cu)=35µm)

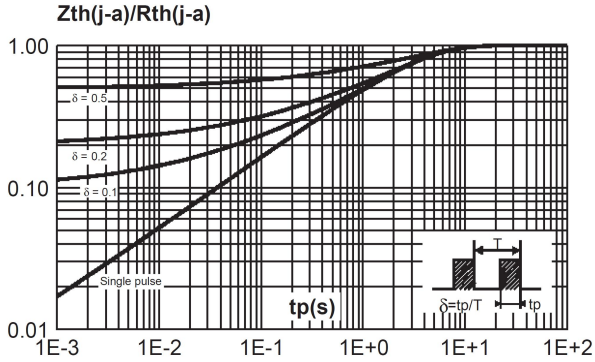
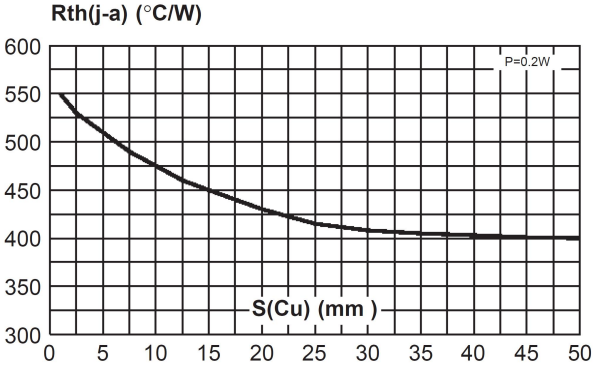
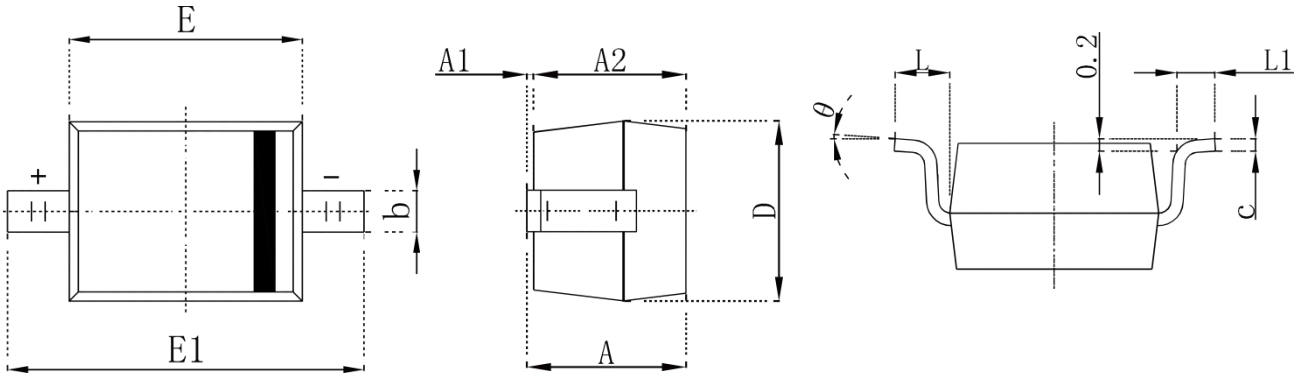


Fig. 6: Thermal resistance junction to ambient versus copper surface under each lead (Epoxy printed circuit board FR4, copper thickness: 35µm.)

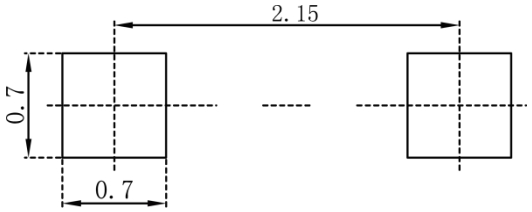


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
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	2.250	2.750	0.100	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

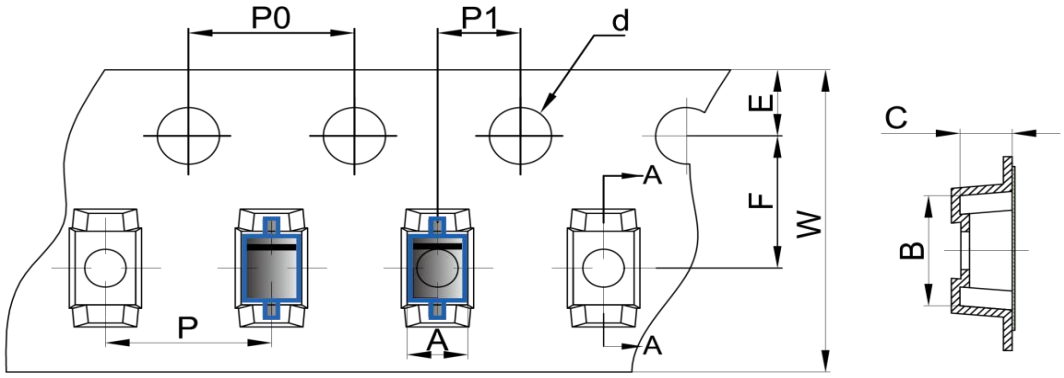
2.General tolerance: ±0.05mm

3.The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

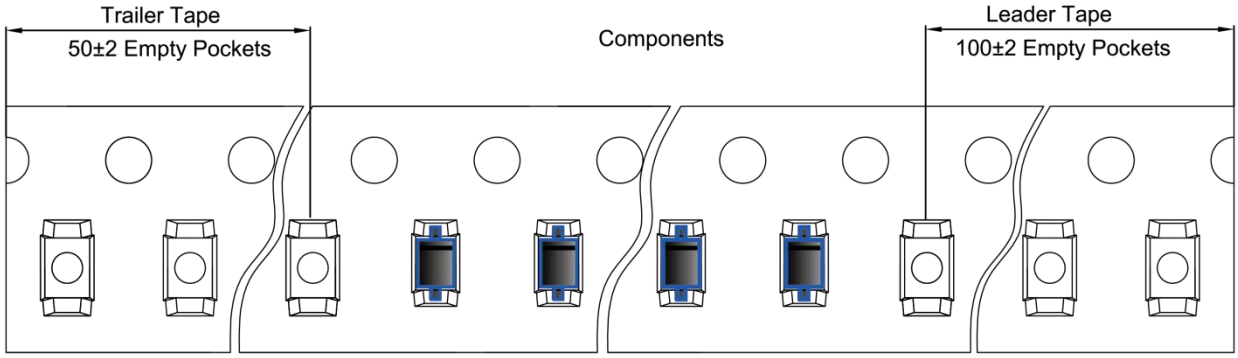
SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

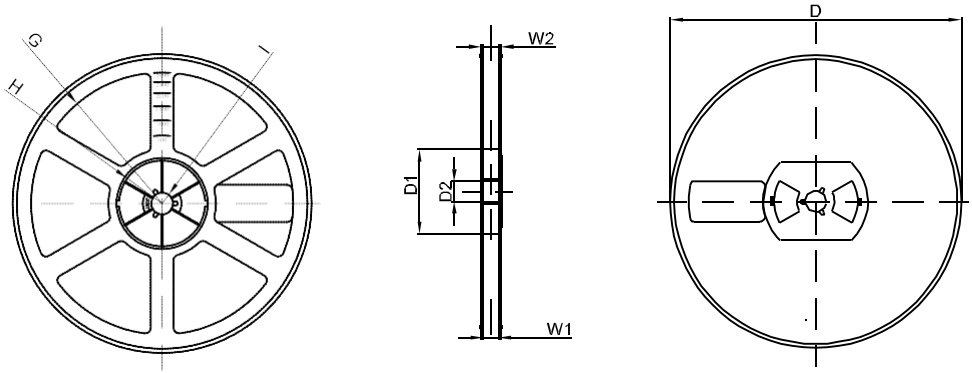


	DIMENSIONS ARE IN MILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.48	3.3	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOD-323 Tape Leader and Trailer



SOD-323 Reel



	DIMENSIONS ARE IN MILLIMETER							
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1