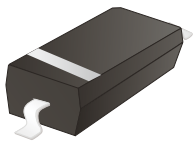
SMD Schottky Barrier Diode

ACDBW0540-HF

Reverse Voltage: 40 Volts
Forward Current: 0.5 Amp
RoHS Device
Halogen Free



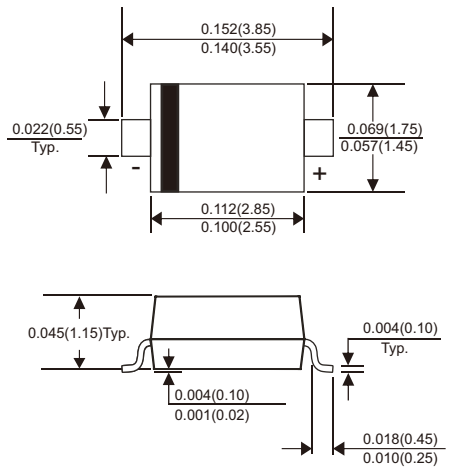
Features

- Low forward voltage drop.
- High conductance.
- Guard ring construction for transient protection.
- Comply with AEC-Q101.

Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: Color band denotes cathode end.
- Weight: 0.01 gram(approx.).

SOD-123



Dimensions in inches and (millimeter)

Circuit Diagram

Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	V_{RRM} V_{RWM} V_R	40	V
RMS reverse voltage	$V_{R(RMS)}$	28	V
Average rectified output current @ T_L=100°C	Io	0.5	A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	5.5	A
Power dissipation	P_D	410	mW
Typical thermal resistance (Junction to ambient)	$R_{\theta JA}$	244	°C/W
Operating junction temperature	T_J	-40 ~ +125	°C
Storage temperature	T_{STG}	-55 ~ +125	°C
Voltage rate of change	dv/dt	1000	V/μs

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	I_R=20μA	$V_{(BR)R}$	40			V
Forward voltage	I_F=0.5A, T_J=25°C I_F=0.5A, T_J=100°C	V_F			0.51 0.46	V
Leakage current	V_R=20V, T_J=25°C V_R=40V, T_J=25°C	I_R			0.01 0.02	mA
Junction capacitance	V_R=0V, f=1MHz	C_J			170	pF

RATING AND TYPICAL CHARACTERISTIC CURVES (ACDBW0540-HF)

Fig.1 - Forward Current Derating Curve

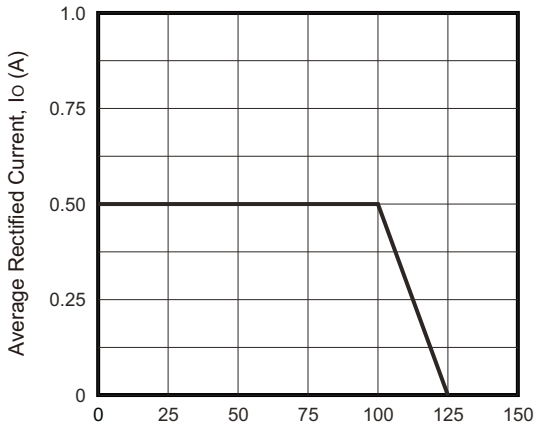


Fig.2 - Typical Forward Characteristics

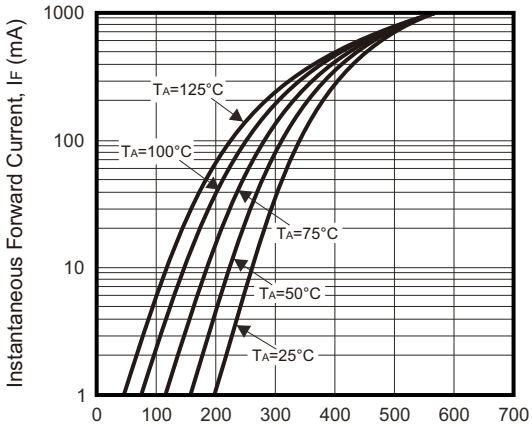
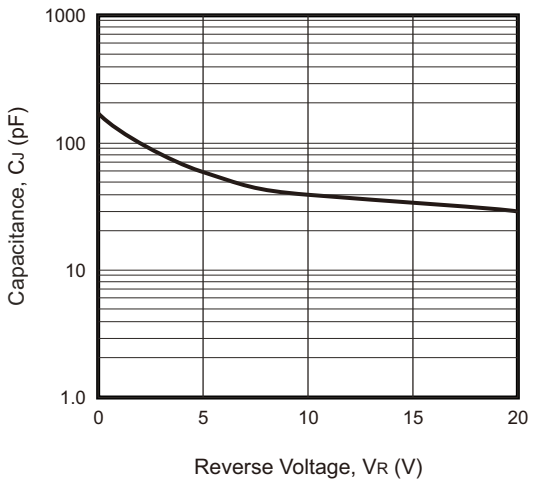
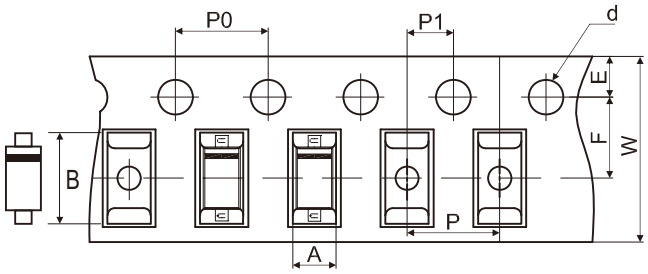


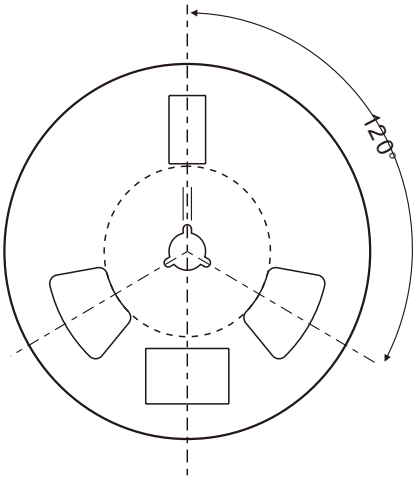
Fig.3 - Typ. Junction Capacitance vs. Reverse Voltage

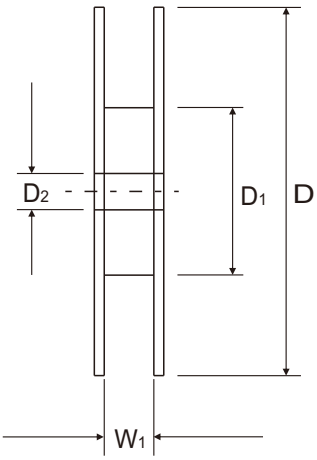


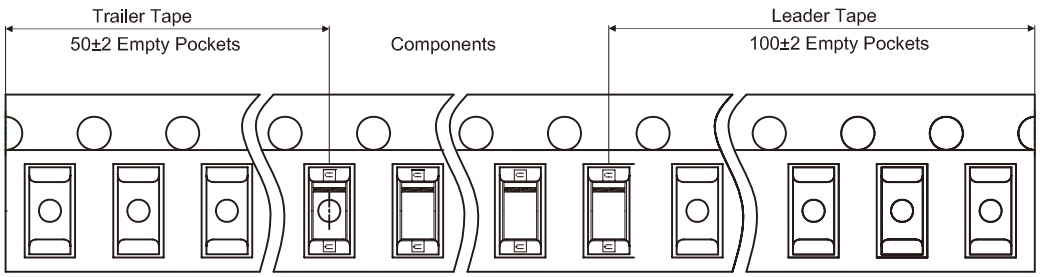
Company reserves the right to improve product design , functions and reliability without notice.

Reel Taping Specification









	SYMBOL	A	B	C	d	D	D_1	D_2
SOD-123	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 + 0.05	178 ± 1.00	54.0 ± 0.50	13.0 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 + 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P_0	P_1	W	W_1
SOD-123	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00+0.20/-0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.002	0.315+0.008/-0.004	0.374 ± 0.039

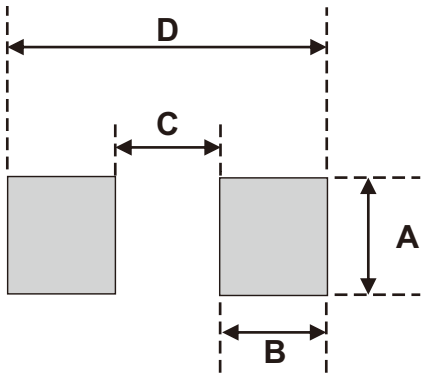
Marking Code

Part Number	Marking Code
ACDBW0540-HF	SF

xx = Product type marking code

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.22	0.048
B	0.91	0.036
C	2.36	0.093
D	4.19	0.165



Note:
1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7

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