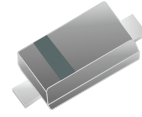


ACDBW0520L-HF

RoHS Device
Halogen Free



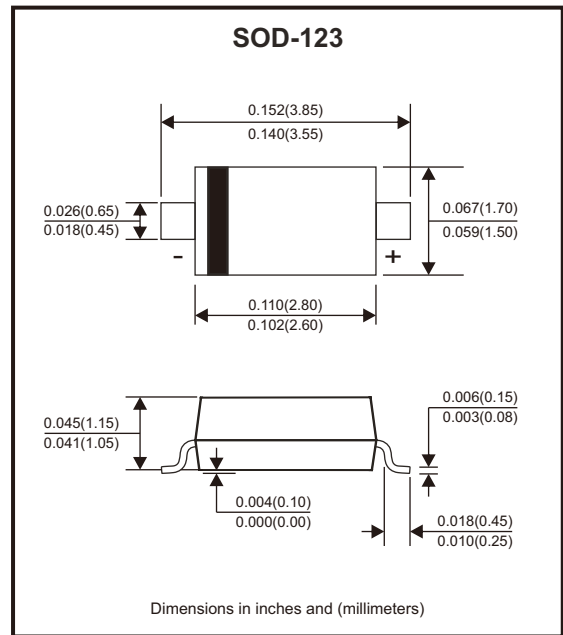
Features

- Guard ring construction for transient protection.
- Low voltage.
- High conductance.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
DC blocking voltage	V_R	20	V
Peak repetitive peak reverse voltage	V_{RRM}	20	V
Working peak reverse voltage	V_{RWM}	20	V
RMS reverse voltage	V_{RMS}	14	V
Forward current	I_O	0.5	A
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	I_{FSM}	5.5	A
Power dissipation	P_D	500	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	200	$^{\circ}\text{C/W}$
Operation junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Voltage rate of change	dv/dt	1000	$\text{V}/\mu\text{s}$

Electrical Characteristics (at $T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_{BR}	$I_R = 250\mu\text{A}$	20			V
Forward voltage	V_F	$I_F = 0.1\text{mA}$			0.33	V
		$I_F = 0.5\text{mA}$			0.39	
Reverse current	I_R	$V_R = 10\text{V}$			75	μA
		$V_R = 20\text{V}$			250	
Capacitance between terminals	C_J	$V_R = 1\text{V}, f = 1\text{MHz}$		170		pF

Typical Rating and Characteristic Curves (ACDBW0520L-HF)

Fig.1 - Forward Characteristic

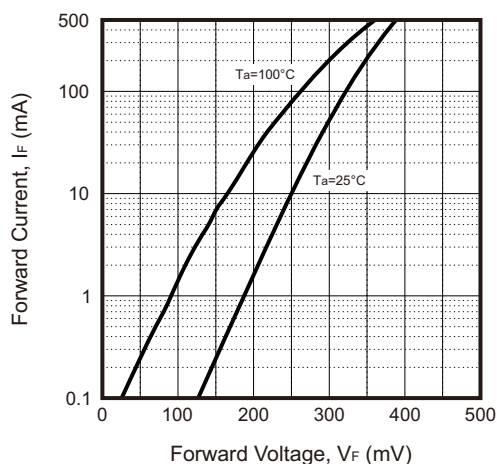


Fig.2 - Reverse Characteristic

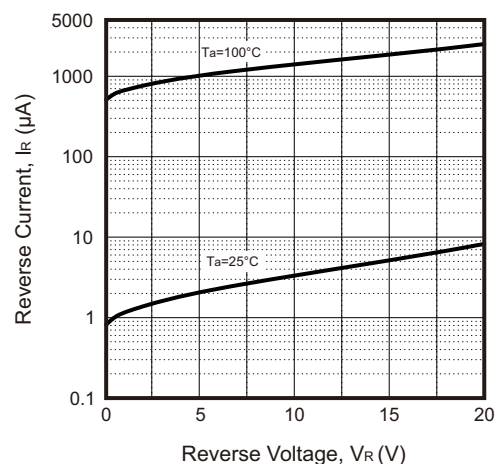


Fig.3 - Capacitance Characteristics

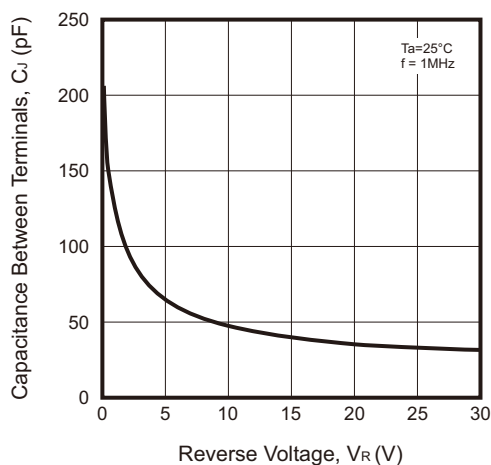
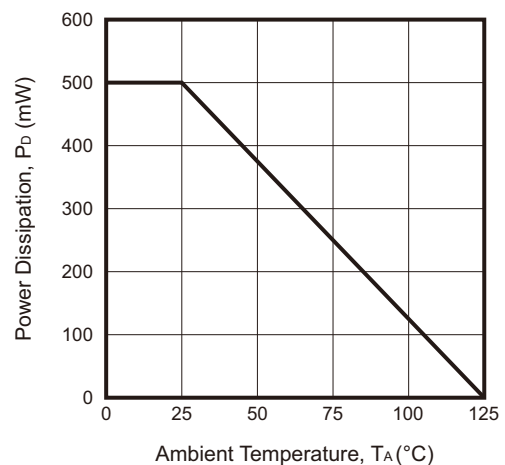
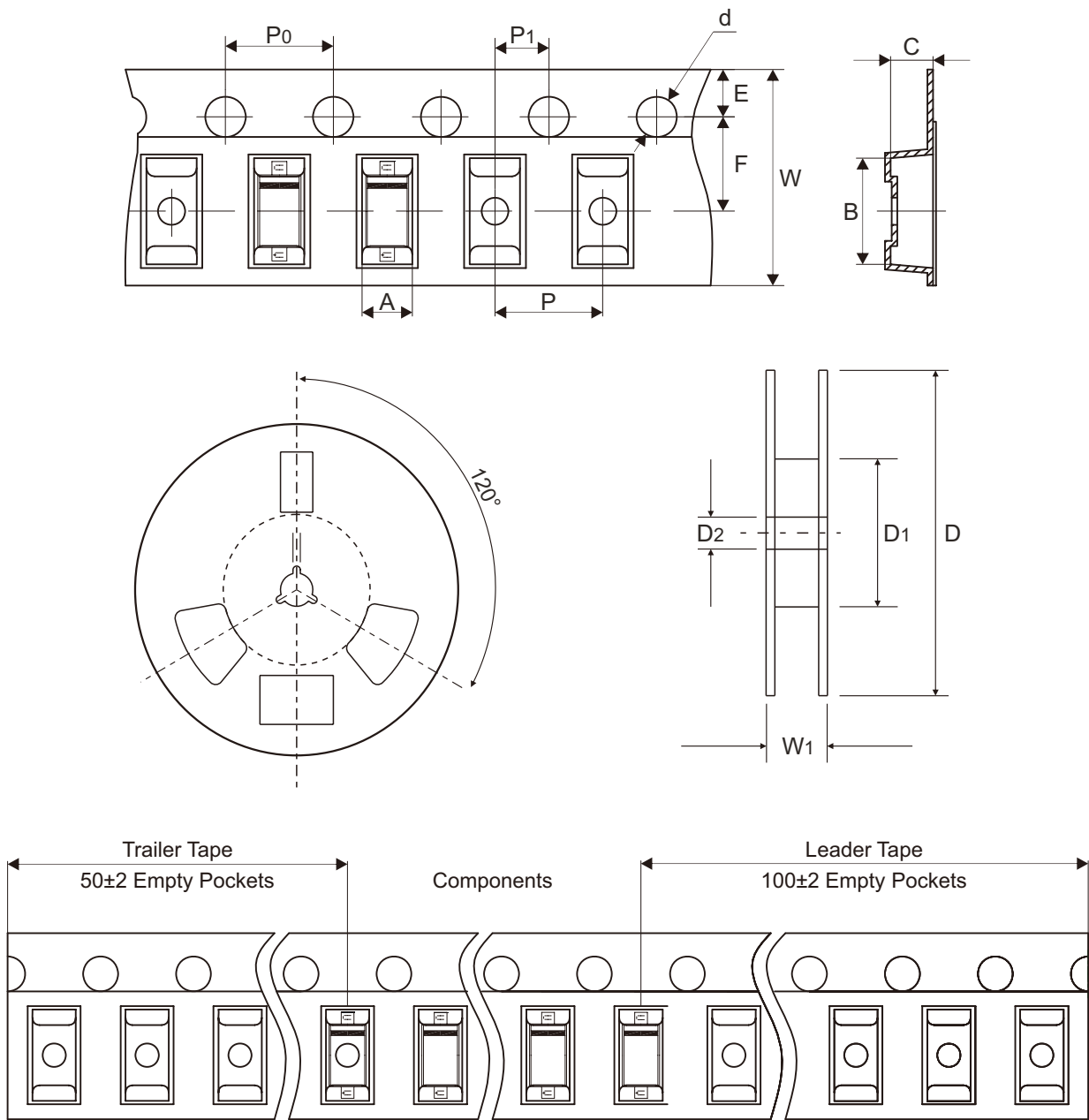


Fig.4 - Power Derating Curve



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.95 ± 0.10	1.57 ± 0.10	1.55 ± 0.10	178.00 ± 1.00	54.40 ± 0.04	13.00 ± 0.20
	(inch)	0.073 ± 0.004	0.156 ± 0.004	0.062 ± 0.004	0.061 ± 0.004	7.008 ± 0.039	2.142 ± 0.002	0.512 ± 0.008

SOD-123	SYMBOL	E	F	P	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	8.00 + 0.20 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.315 + 0.008 - 0.004	0.484 ± 0.039

Marking Code

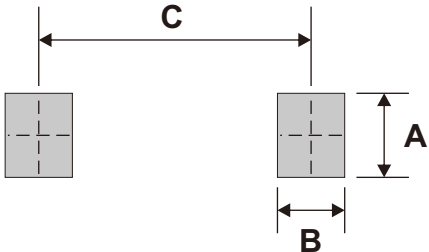
Part Number	Marking Code
ACDBW0520L-HF	SD



■ = Cathode band

Suggested P.C.B. PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.00	0.039
B	0.80	0.031
C	3.24	0.128



Standard Packaging

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