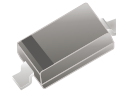


BAT46WS-HF

RoHS Device
Halogen Free



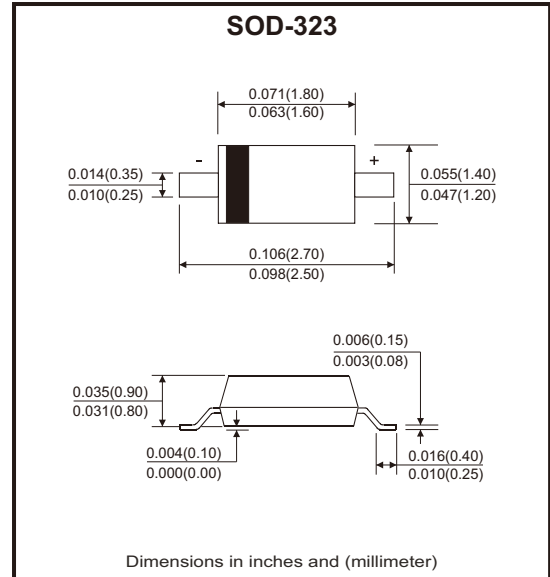
Features

- High current capability.
- Low forward voltage drop.

Mechanical data

- Case: SOD-323, molded plastic.
- Polarity: Cathode line denotes the cathode end.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	100	V
Forward continuous current	I_O	150	mA
Repetitive peak forward current (Note 1) @tp<1s, duty cycle < 50%	I_{FRM}	350	mA
Peak forward surge current 8.3ms single half sine-wave	I_{FSM}	750	mA
Typical thermal resistance	$R_{\theta JA}$	500	°C/W
Power dissipation	P_D	200	mW
Operating junction temperature range	T_J	-40 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage (Note 2)	V_F	$I_F = 0.1\text{mA}$			250	mV
		$I_F = 10\text{mA}$			450	
		$I_F = 250\text{mA}$			1000	
Reverse breakdown voltage	V_{BR}	$I_R = 100\mu\text{A}$	100			V
Reverse current	I_R	$V_R = 1.5\text{V}$			0.3	μA
		$V_R = 10\text{V}$			0.5	
		$V_R = 50\text{V}$			1	
		$V_R = 75\text{V}$			2	
Junction capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		20		pF
		$V_R = 1\text{V}, f = 1\text{MHz}$		12		

Notes: 1. Part mounted on FR-4 board with recommended pad layout.
2. Short duration pulse test used to minimize self-heating effect.

Typical Rating and Characteristic Curves (BAT46WS-HF)

Fig.1 - Forward Characteristics

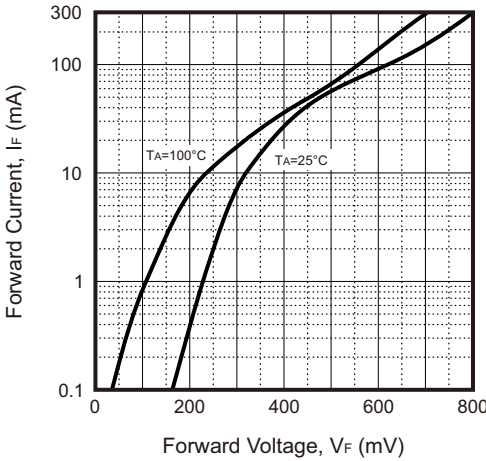


Fig.2 - Reverse Characteristics

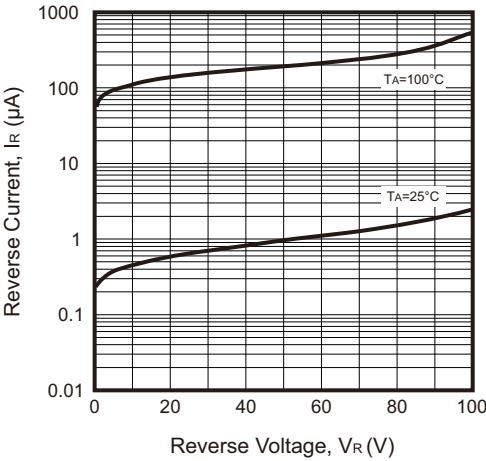


Fig.3 - Capacitance Characteristics

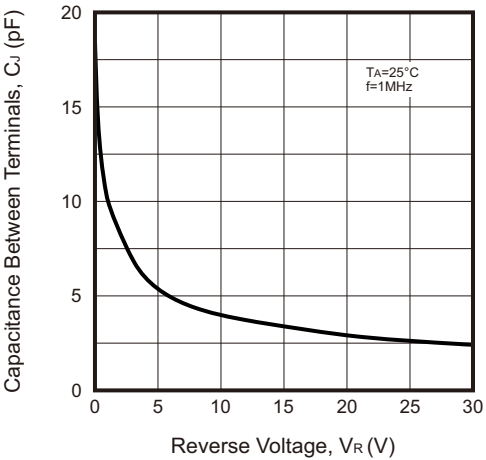
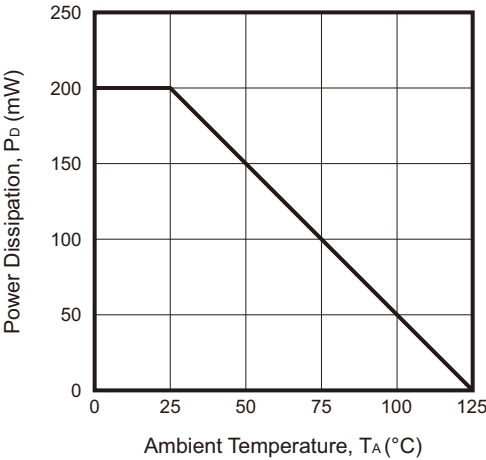
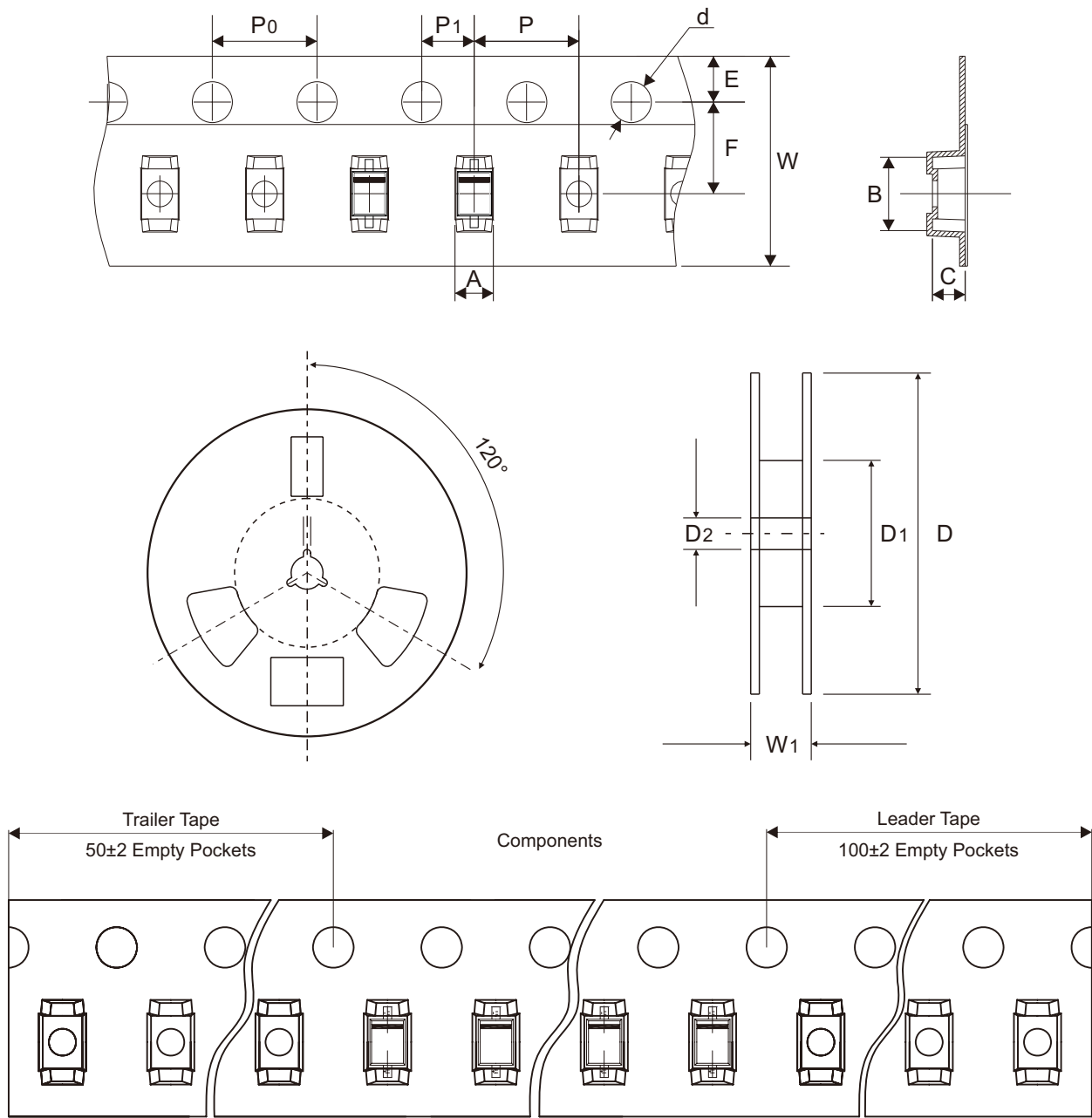


Fig.4 - Power Derating Curve



Reel Taping Specification

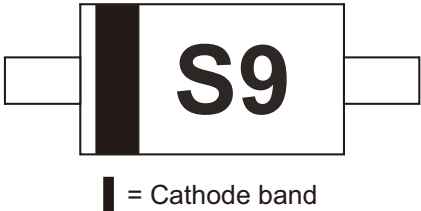


SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.46 ± 0.05	2.90 ± 0.05	1.25 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.057 ± 0.002	0.114 ± 0.002	0.049 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30 - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012 - 0.004$	0.484 ± 0.039

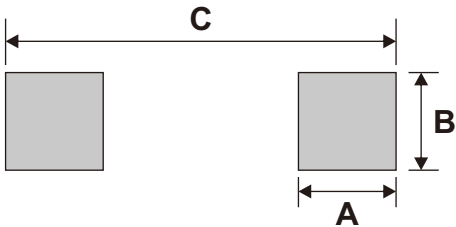
Marking Code

Part Number	Marking Code
BAT46WS-HF	S9



Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	0.80	0.031
B	0.80	0.031
C	3.00	0.118



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323	3,000	7