

B0540W-HF

RoHS Device

Halogen Free

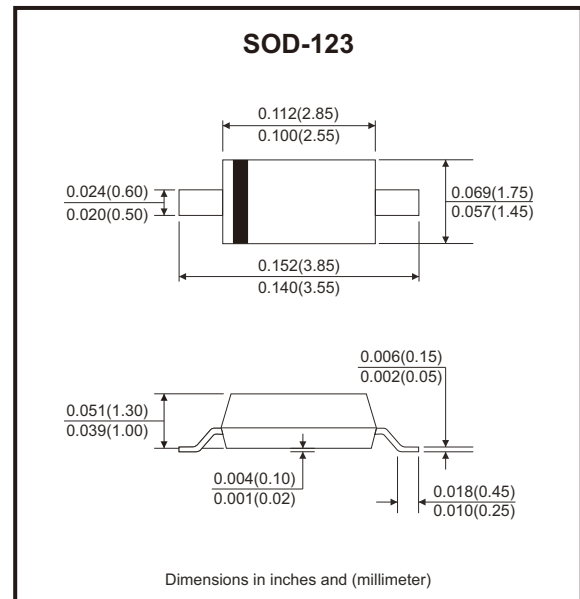


Features

- Low forward voltage drop.
- Guard ring construction for transient protection.
- High conductance.

Mechanical data

- Case: Molded plastic, SOD-123.
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Tin plated leads, solderable per MIL-STD-202, method 208.
- Polarity: Cathode line denotes the cathode end.



Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	40	V
RMS reverse voltage	V_{RMS}	28	V
Average rectified output current	I_O	0.5	A
Peak forward surge current , 8.3ms single half-sine-wave	I_{FSM}	10	A
Power dissipation	P_D	500	mW
Typical thermal resistance per leg (Note 1)	$R_{\theta JA}$	250	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Note: 1. Part mounted on FR-4 board with recommended pad layout.

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

Parameter	Symbol	Conditions	Min	Max	Unit
Forward voltage (Note 1)	V_F	$I_F = 0.5\text{A}$ $I_F = 1\text{A}$		0.51 0.62	V
Max. peak reverse current (Note 2)	I_R	$V_R = 20\text{V}$ $V_R = 40\text{V}$		10 20	μA
Capacitance between terminals	C_T	$V_R = 0\text{V}$, $f = 1\text{MHz}$		170	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$		4	ns

Notes: 1. Pulse width $\leq 380\mu\text{s}$, duty cycle $< 2\%$.

2. Pulse test, $t_p \leq 5\text{ms}$.

Rating and Characteristic Curves (B0540W-HF)

Fig.1 - Typical Reverse Characteristic

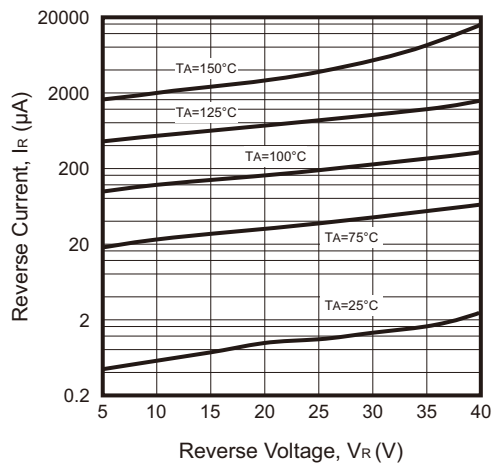


Fig.2 - Typical Forward Characteristic

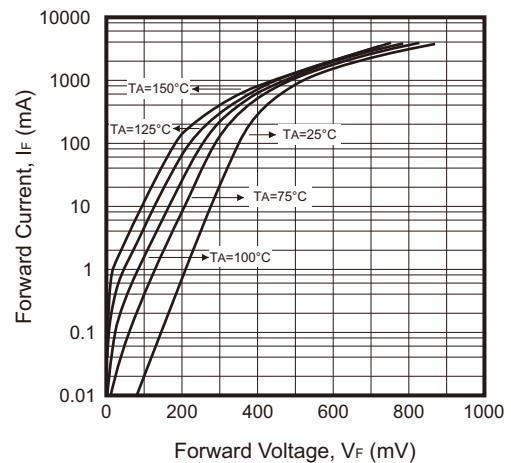


Fig.3 - Capacitance vs Reverse Voltage

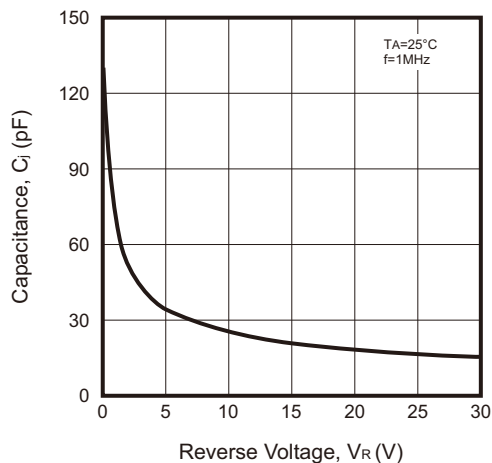
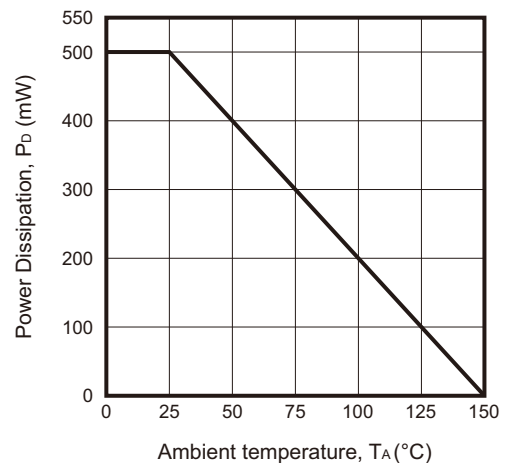
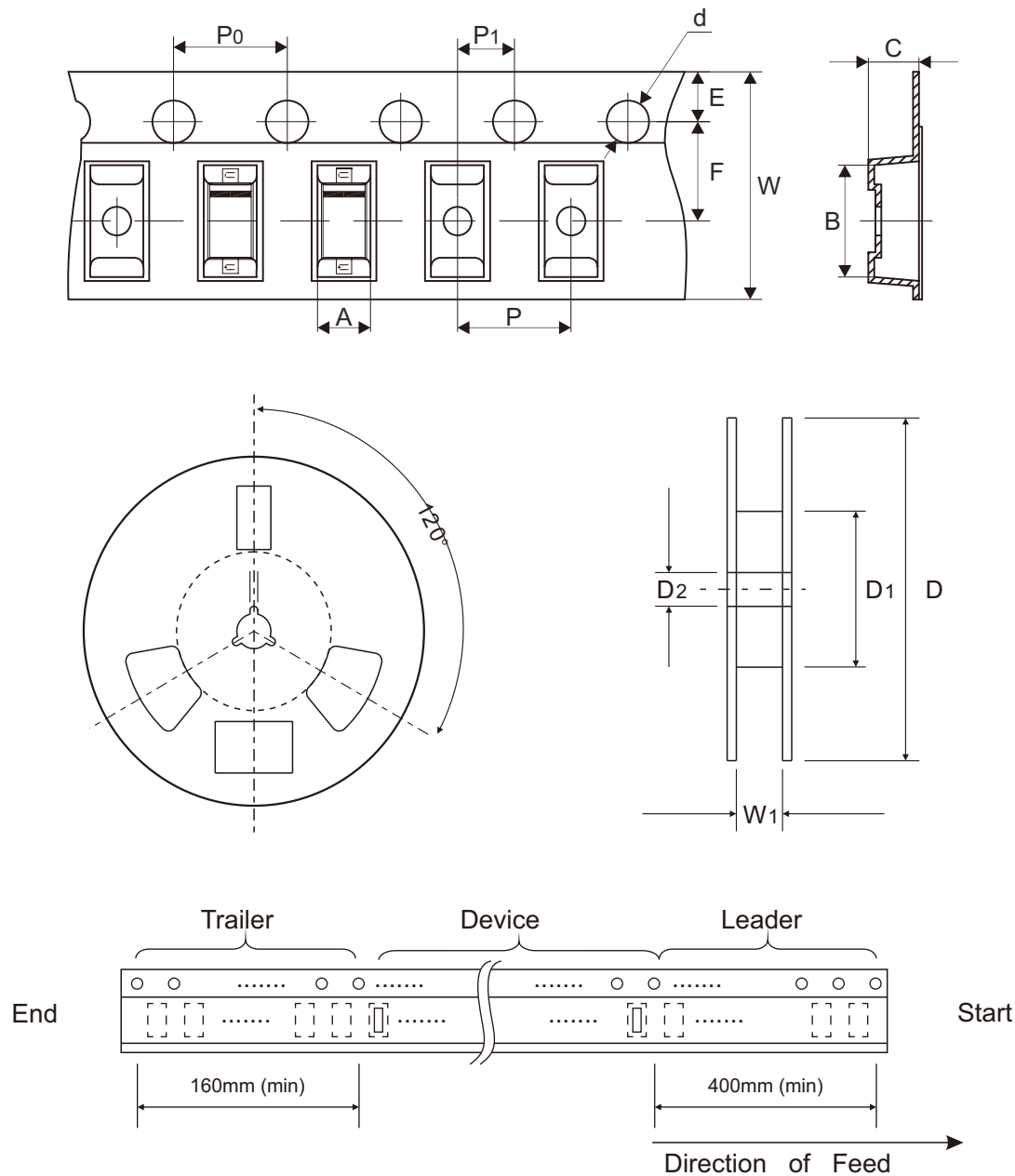


Fig.4 - Derating Curve (P_D - T_A)



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

Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 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

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 + 0.30 - 0.10	9.50 ± 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 + 0.012 - 0.004	0.374 ± 0.039

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Marking Code

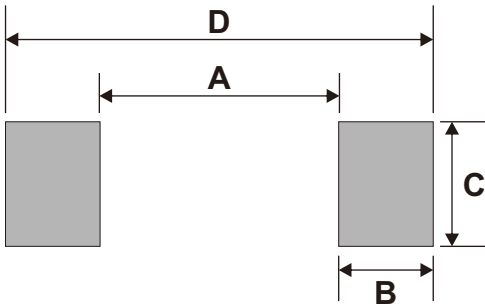
Part Number	Marking Code
B0540W-HF	SFH



Suggested P.C.B. PAD Layout

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