

## B0540WS-HF

RoHS Device  
Halogen Free

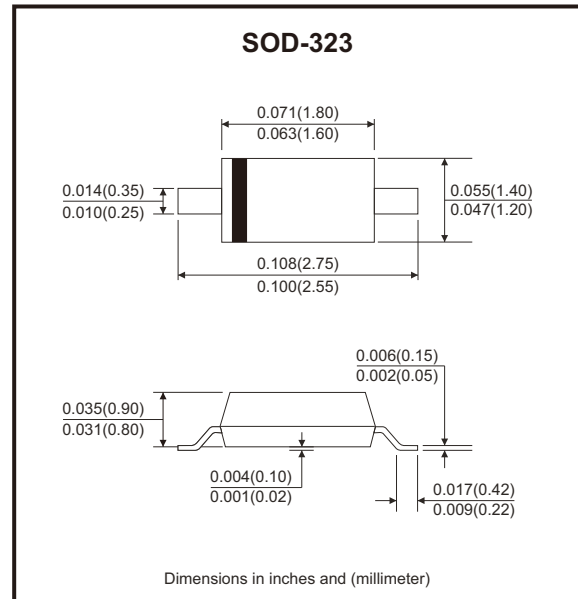


### Features

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

### Mechanical data

- Case: Molded plastic, SOD-323.
- 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	$P_D$	250	mW
Typical thermal resistance per leg (Note 1)	$R_{\theta JA}$	500	°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 Ta=25°C unless otherwise noted)

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

Notes: 1. Pulse width  $\leq 380\mu s$ , duty cycle  $< 2\%$ .  
2. Pulse test,  $t_p \leq 5ms$ .

## Rating and Characteristic Curves (B0540WS-HF)

Fig.1 - Typical Reverse Characteristic

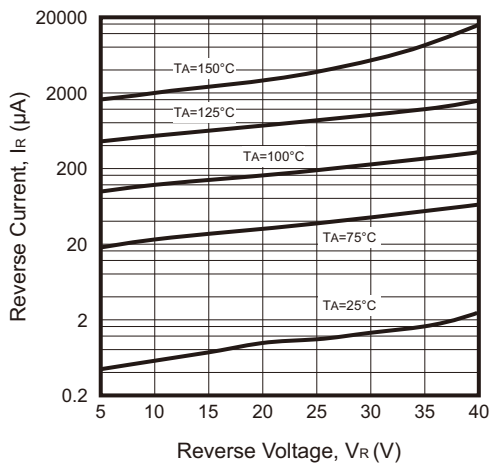


Fig.2 - Typical Forward Characteristic

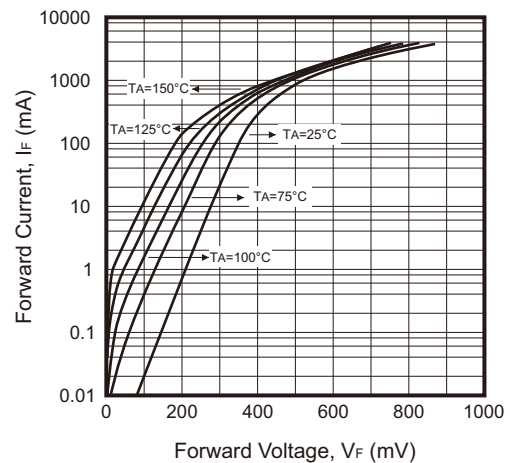


Fig.3 - Capacitance vs Reverse Voltage

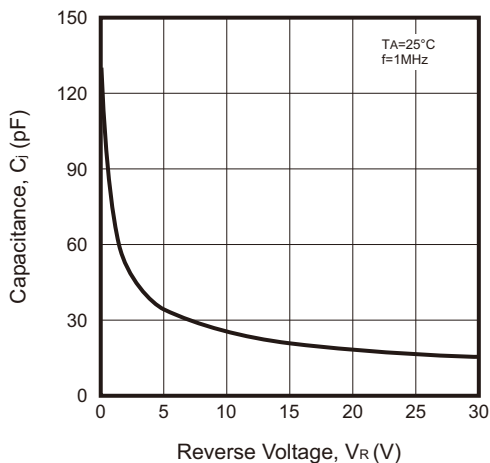
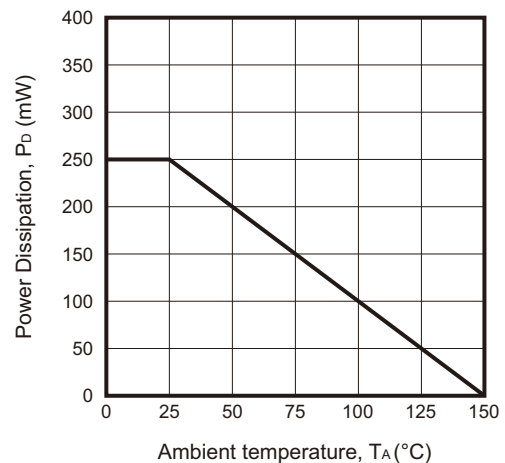
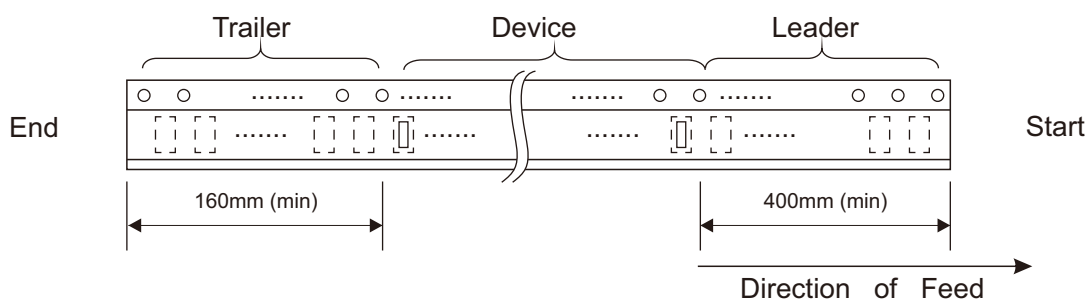
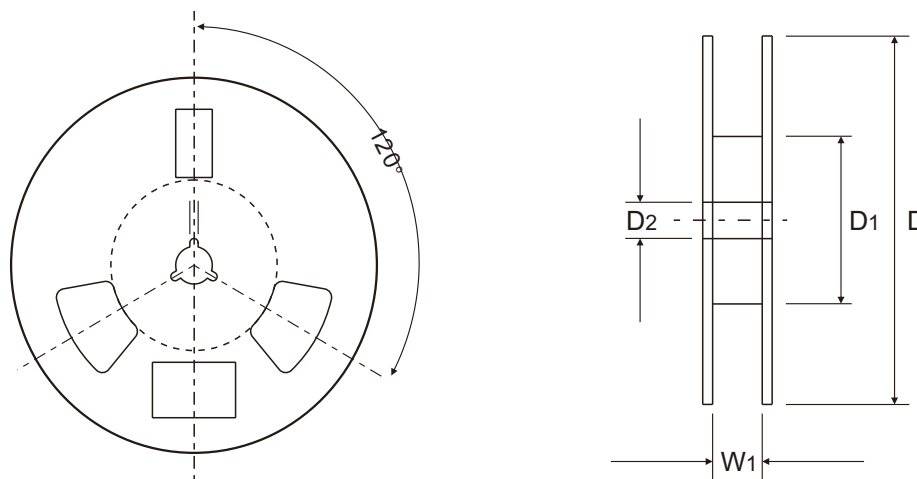
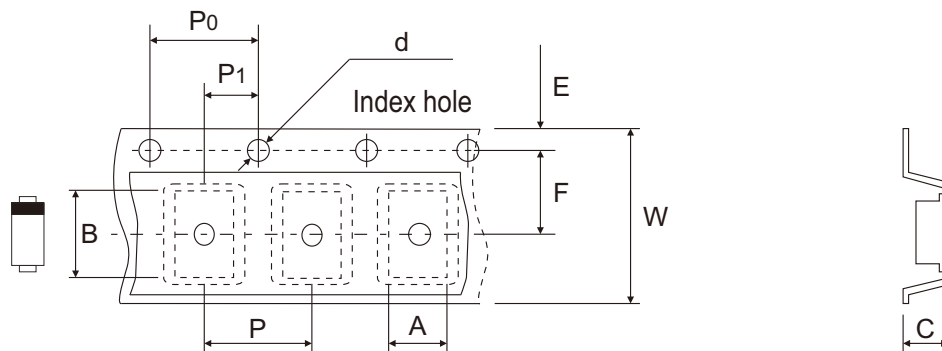


Fig.4 - Derating Curve ( $P_D$ - $T_A$ )



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

## Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.46 ± 0.05	3.30 ± 0.05	1.25 ± 0.05	1.50 + 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.057 ± 0.002	0.130 ± 0.002	0.049 ± 0.002	0.059 + 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.374 ± 0.039

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REV:A

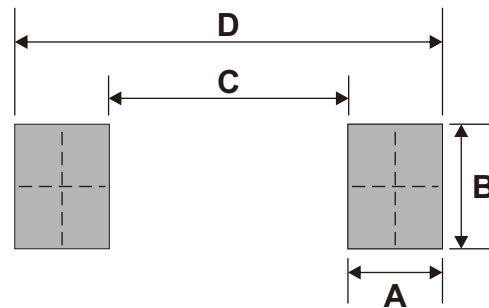
## Marking Code

Part Number	Marking Code
B0540WS-HF	SFH



## Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	0.63	0.025
B	0.83	0.033
C	1.60	0.063
D	2.85	0.112



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

## Standard Packaging

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

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