

B160WS-FL

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1.0A 60V Schottky Barrier Rectifiers

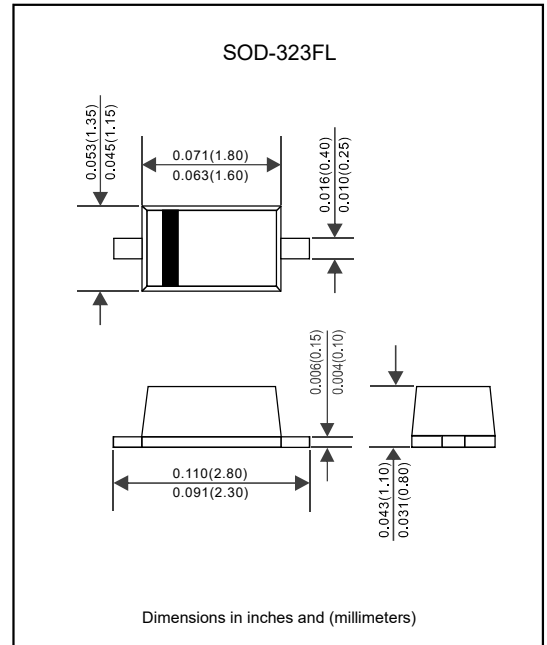
Features

- Low forward voltage drop.
- For use in low voltage, high frequency inverters.
- High surge current capability.
- Guard ring protection.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. B160WS-FL-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic, SOD-323FL.
- Polarity : Indicated by cathode band.

Package Outline



Maximum ratings (At $T_A=25^\circ\text{C}$ unless otherwise noted)

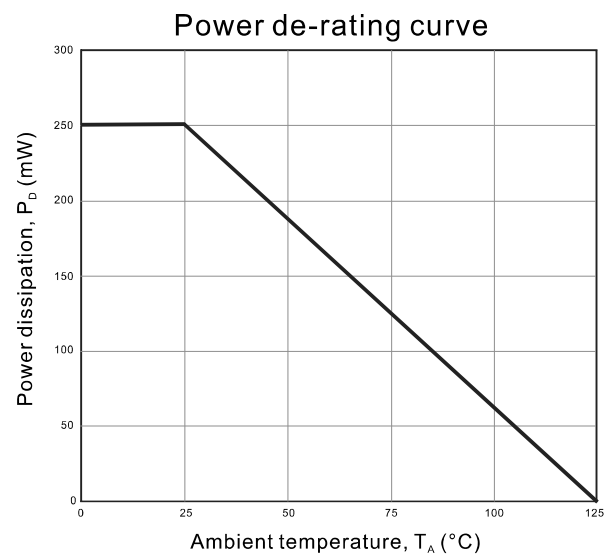
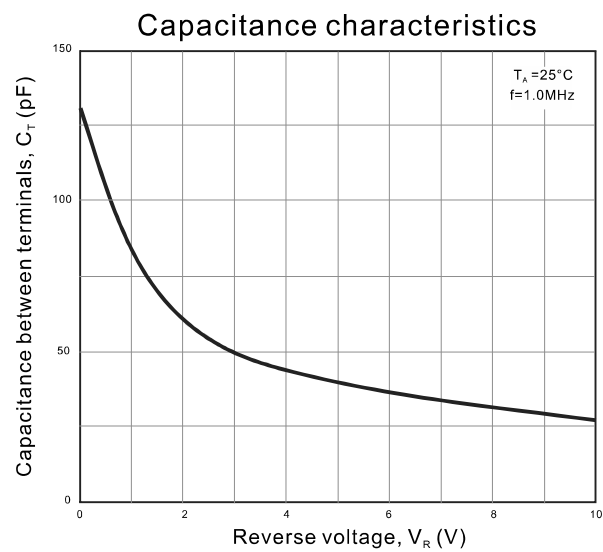
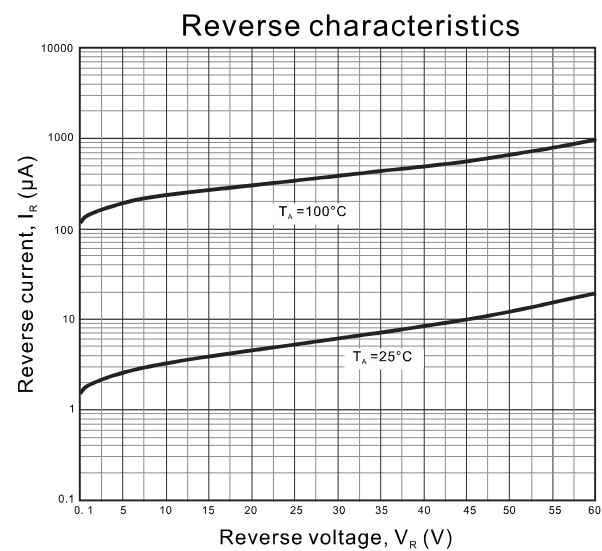
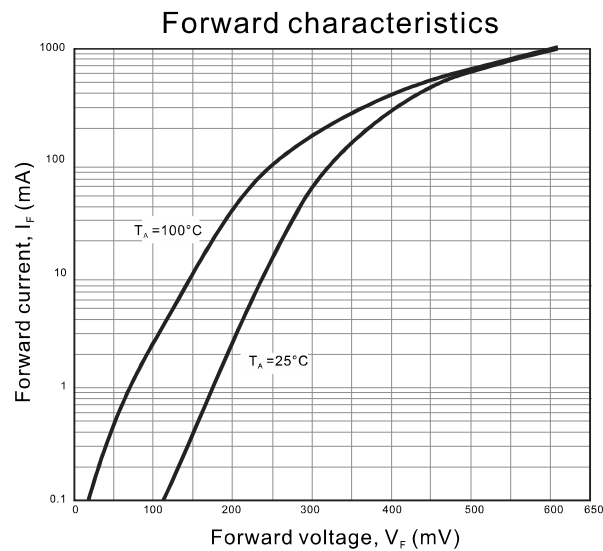
Parameter	Symbol	Ratings	Units
Peak repetitive reverse voltage	V_{RRM}	60	V
RMS Reverse voltage	V_{RMS}	42	V
DC Blocking voltage	V_{DC}	60	V
Continuous forward current	I_F	1	A
Non-repetitive peak forward surge current (@ $t=8.3\text{ms}$)	I_{FSM}	10	A
Total power dissipation	P_{tot}	250	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	400	$^\circ\text{C/W}$
Junction temperature	T_J	+125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical characteristics (At $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Instantaneous forward voltage	$I_F=1\text{A}$	V_F			0.7	V
DC reverse current at rated DC blocking voltage	$V_R=60\text{V}$	I_R			0.1	mA
Total capacitance	$V_R=4\text{V}$, $f=1\text{MHz}$	C_{tot}			120	pF

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Rating and characteristic curves



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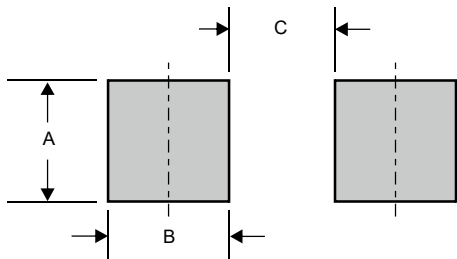
Pinning information

Pin	Simplified outline	Symbol
Pin1 Cathode Pin2 Anode		

Marking

Type number	Marking code
B160WS-FL	SM

Suggested solder pad layout

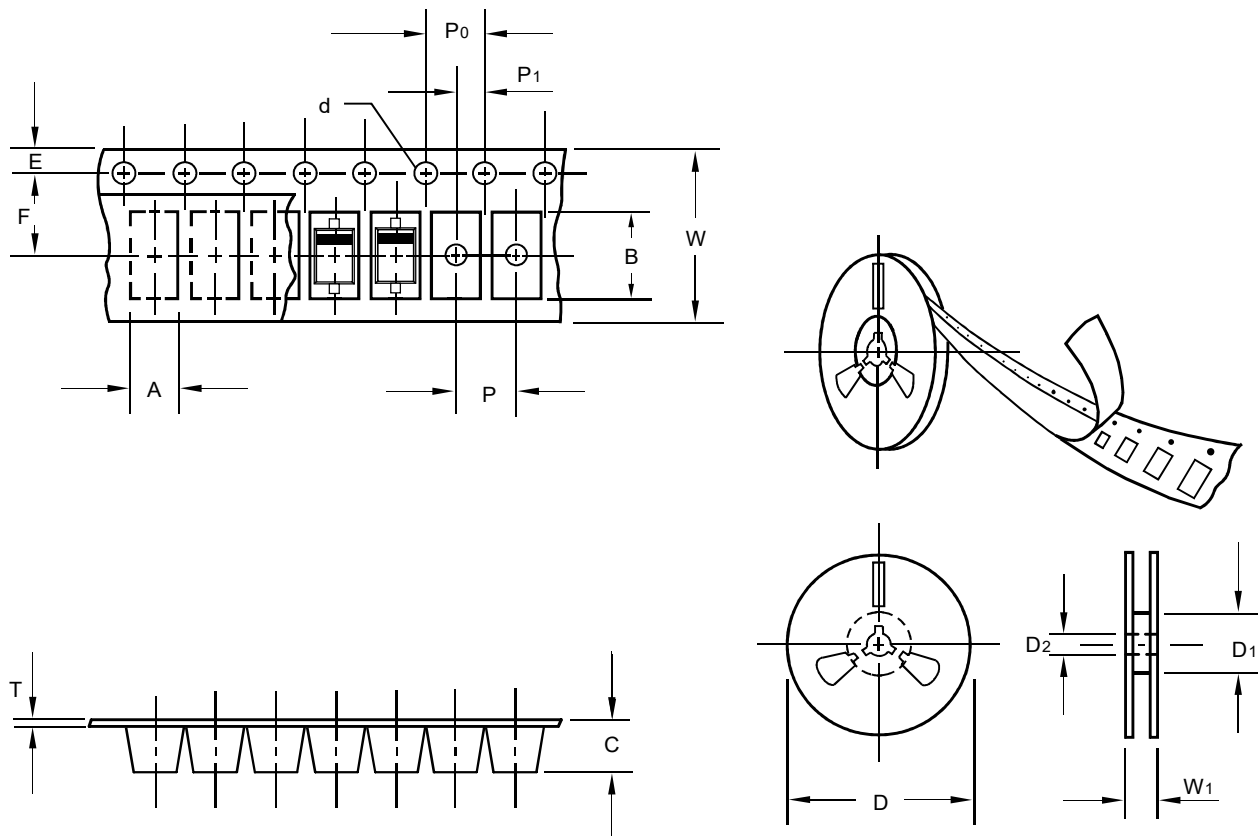


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323FL	0.033 (0.83)	0.027 (0.70)	0.057 (1.45)

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Packing information



unit:mm

Item	Symbol	Tolerance	SOD-323FL
Carrier width	A	0.1	1.45
Carrier length	B	0.1	2.75
Carrier depth	C	0.1	0.97
Sprocket hole	d	0.1	1.55
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D1	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Carrier thickness	T	0.02	0.21
Tape width	W	0.1	8.00
Reel width	W1	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

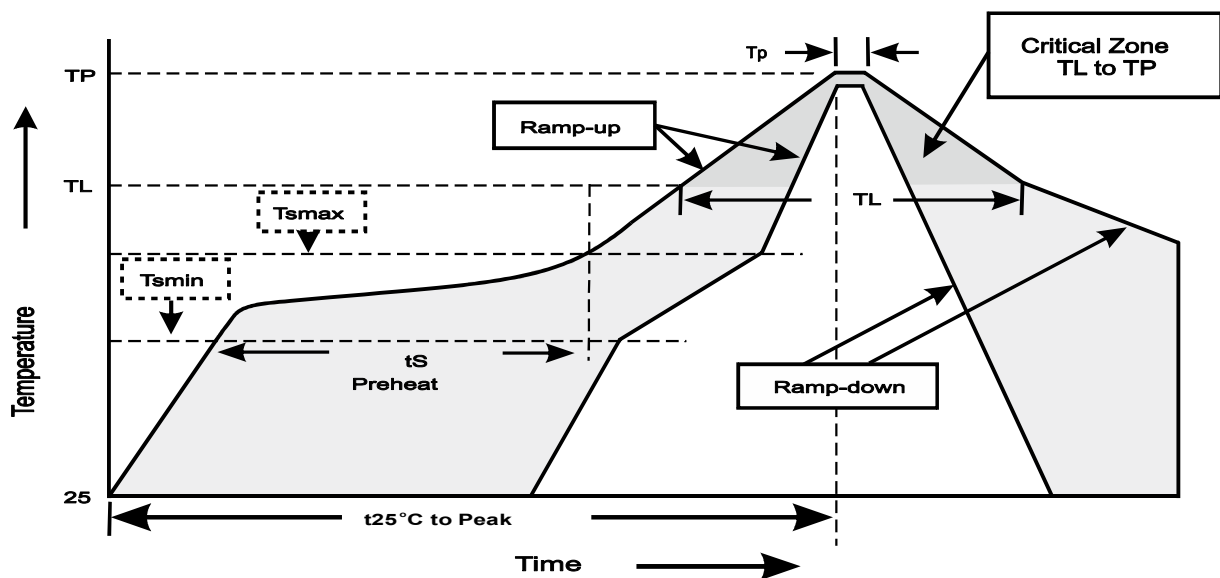
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Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)
SOD-323FL	7"	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes