

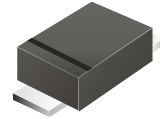
## ACDBMS140-HF Thru. ACDBMS1100-HF

Reverse Voltage: 40 to 100 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

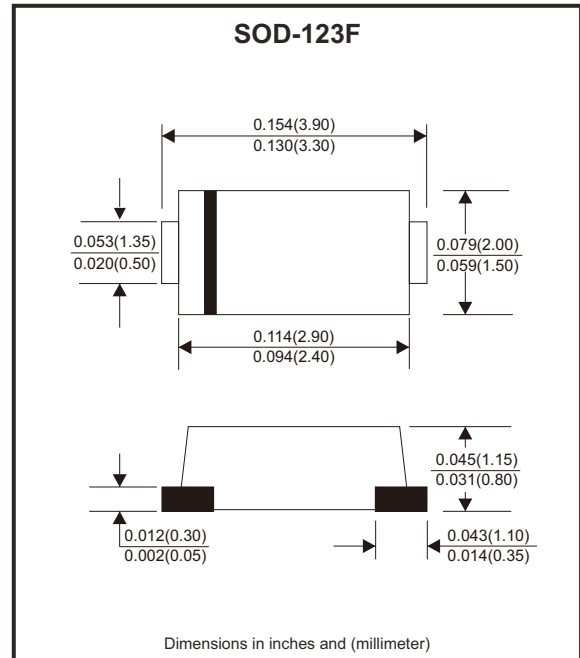


### Features

- High current capability.
- Extremely low thermal resistance.
- For surface mount application.
- Low forward voltage.
- AEC-Q101 Qualified

### Mechanical data

- Epoxy: UL 94V-0 rated flame retardant.
- Case: SOD-123F, molded plastic.
- Terminals: Lead Free Plating (Tin Finish) solderable per MIL-STD-202, method 208.
- Polarity: Indicated by cathode band.
- Weight: 0.022 grams (Approx.)



### Circuit diagram



### Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	ACDBMS140-HF	ACDBMS160-HF	ACDBMS1100-HF	Unit
Max. Repetitive peak reverse voltage	V <sub>RRM</sub>	40	60	100	V
Max. RMS voltage	V <sub>RMS</sub>	28	42	70	V
Max. DC blocking voltage	V <sub>DC</sub>	40	60	100	V
Max. average forward rectified current	I <sub>F</sub>	1.0			A
Max. Instantaneous forward voltage I <sub>F</sub> =1A @ 25°C	V <sub>F</sub>	0.52	0.66	0.83	V
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30			A
Max. DC reverse current @TA=25°C at Rated DC blocking voltage @TA=100°C	I <sub>R</sub>	0.5 20			mA
Typical junction capacitance (Note 1)	C <sub>J</sub>	60		25	pF
Typical thermal resistance	R <sub>θJC</sub>	45			°C/W
Operating temperature range	T <sub>J</sub>	-50 to +125		-50 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150			°C

Note: 1. Measured at 1.0MHZ and applied reverse voltage of 4V DC.

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

## Rating and Characteristic Curves (ACDBMS140-HF Thru. ACDBMS1100-HF)

Fig.1 - Typical Forward Current Derating Curve

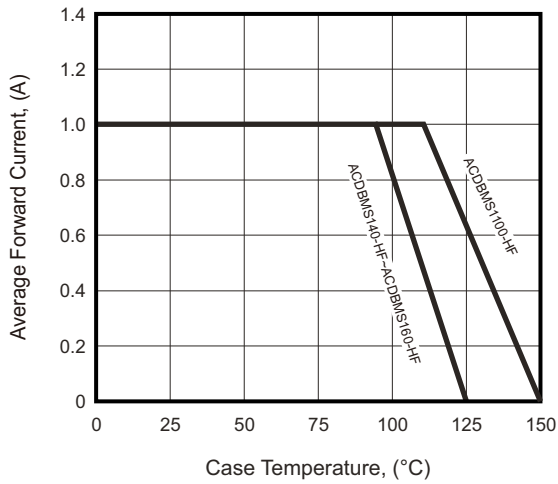


Fig.2 - Typical Forward Characteristics

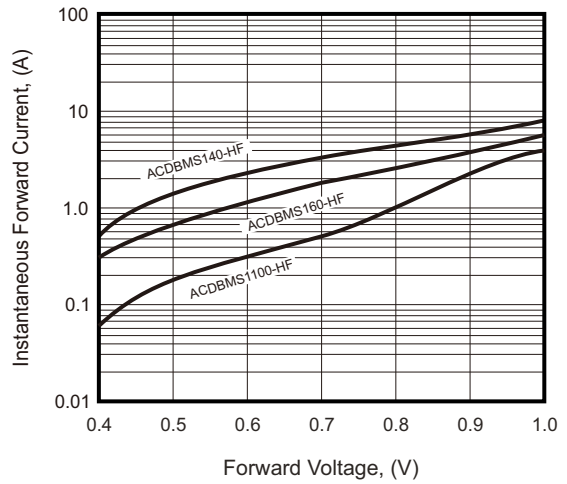


Fig.3 - Maximum Non-repetitive Forward Surge Current

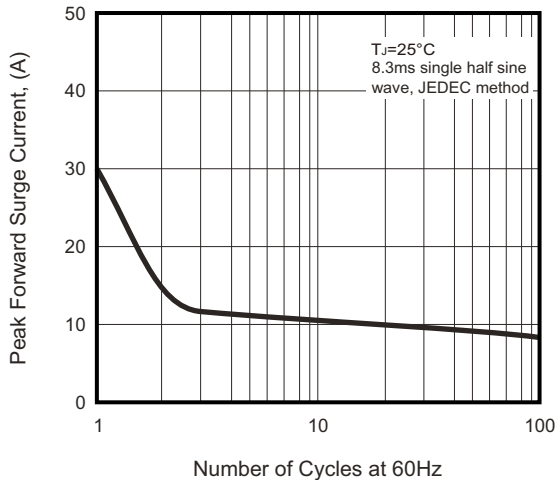


Fig.4 - Typical Reverse Characteristics

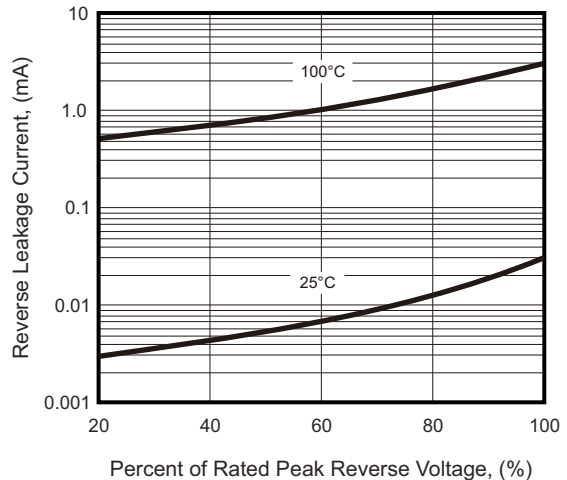
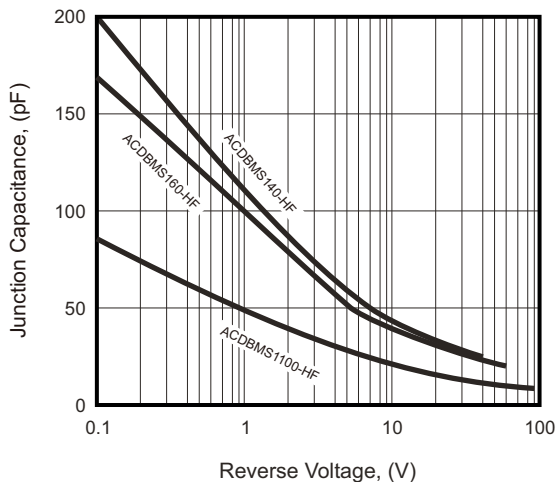
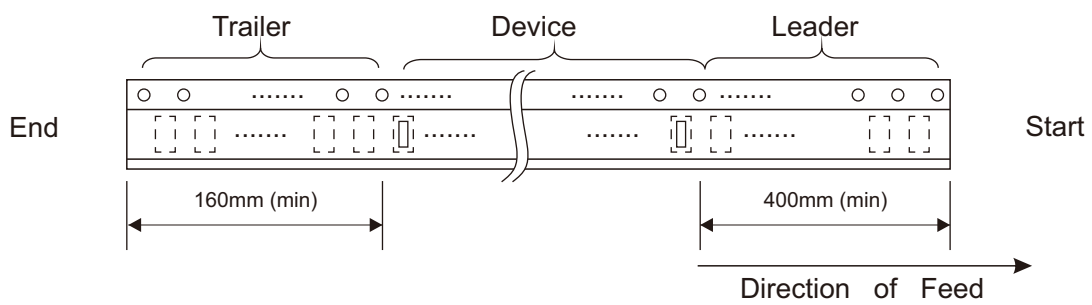
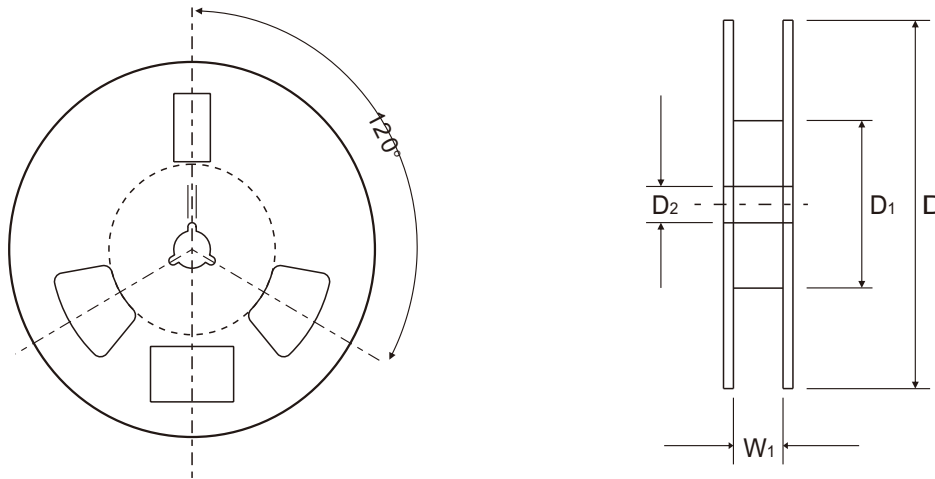
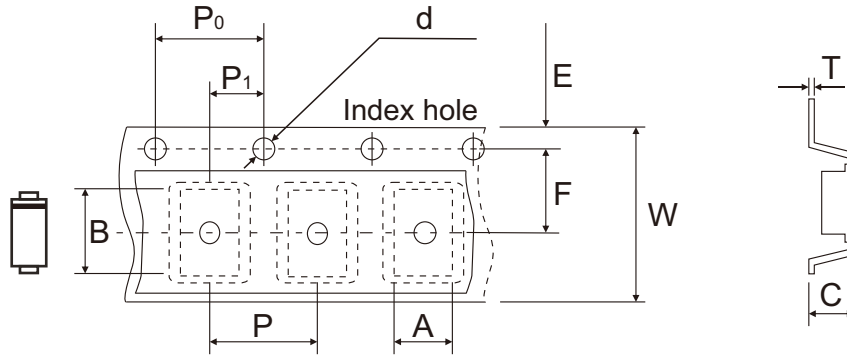


Fig.5 - Typical Junction Capacitance



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## Reel Taping Specification



SOD-123F	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$2.05 \pm 0.10$	$4.01 \pm 0.10$	$1.32 \pm 0.10$	$2.00 \pm 0.10$	178 Max.	50 Min.	$13.30 \pm 0.10$
	(inch)	$0.081 \pm 0.004$	$0.158 \pm 0.004$	$0.052 \pm 0.004$	$0.079 \pm 0.004$	7.008 Max.	1.969 Min.	$0.524 \pm 0.004$

SOD-123F	SYMBOL	E	F	P	$P_0$	$P_1$	T	W	$W_1$
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$0.24 \pm 0.03$	$8.00 \pm 0.30$	$9.30 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.004$	$0.157 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.002$	$0.009 \pm 0.001$	$0.315 \pm 0.012$	$0.366 \pm 0.039$

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REV: B

## Marking Code

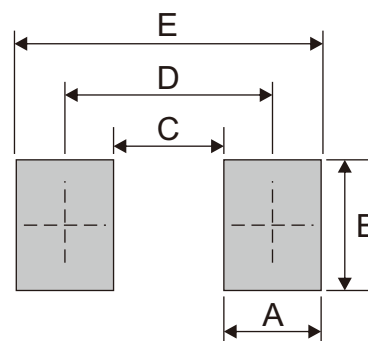
Part Number	Marking Code
ACDBMS140-HF	C4.
ACDBMS160-HF	C6.
ACDBMS1100-HF	CA.



**XX** = Product type marking code  
**“.”** = Halogen Free

## Suggested PAD Layout

SIZE	SOD-123F	
	(mm)	(inch)
A	1.34	0.053
B	1.80	0.071
C	1.52	0.060
D	2.86	0.113
E	4.25	0.167



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

## Standard Packaging

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