

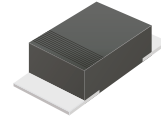
## ACDBMT140-HF Thru. ACDBMT1200-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

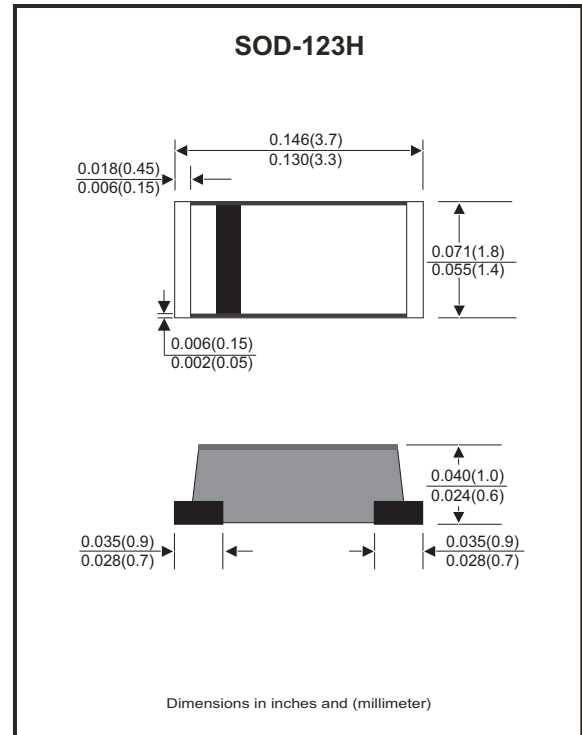


### Features

- Excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guarding for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free part meets environmental standards of MIL-STD-19500/228
- Comply with AEC-Q101.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOD-123H/MINI SMA
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: any
- Weight: 0.011 grams approx.



### Maximum Ratings and Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	ACDBMT 140-HF	ACDBMT 160-HF	ACDBMT 1100-HF	ACDBMT 1150-HF	ACDBMT 1200-HF	Units
Repetitive peak reverse voltage	$V_{RRM}$	40	60	100	150	200	V
RMS voltage	$V_{RMS}$	28	42	70	105	140	V
Continuous reverse voltage	$V_R$	40	60	100	150	200	V
Max. forward voltage @ $I_F=1.0A$	$V_F$	0.50	0.70	0.85	0.90	0.92	V
Operating Temperature	$T_J$	-55 to +125	-55 to +150				$^\circ\text{C}$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.1	$I_o$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			30	A
Reverse Current	$V_R = V_{RRM}$ $T_J=25^\circ\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM}$ $T_J=100^\circ\text{C}$	$I_R$			10	mA
Thermal resistance	Junction to case	$R_{\theta JC}$		40		$^\circ\text{C/W}$
Diode Junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse Voltage	$C_J$		120		pF
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

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

REV: A

## Rating and Characteristic Curves (ACDBMT140-HF Thru. ACDBMT1200-HF)

Fig.1 - Typical Forward Current Derating Curve

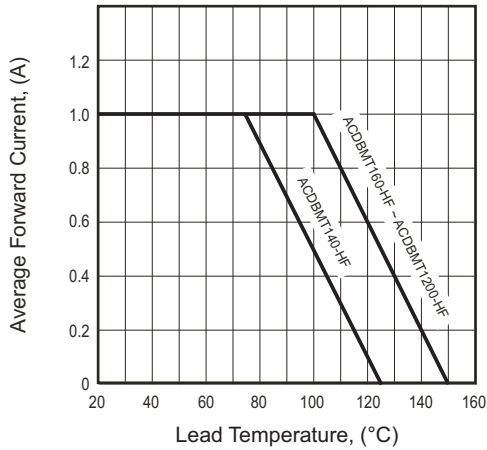


Fig.2 - Typical Forward Characteristics

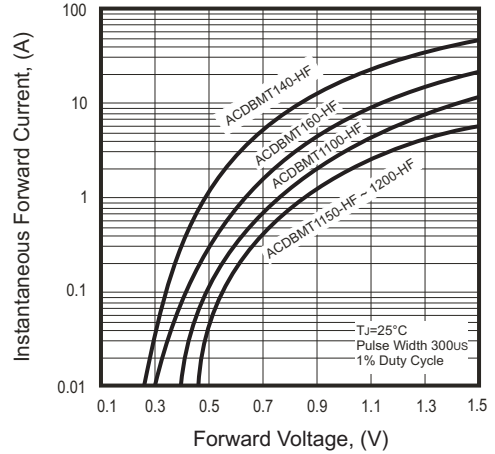


Fig.3 - Maximum Non-repetitive Forward Surge Current

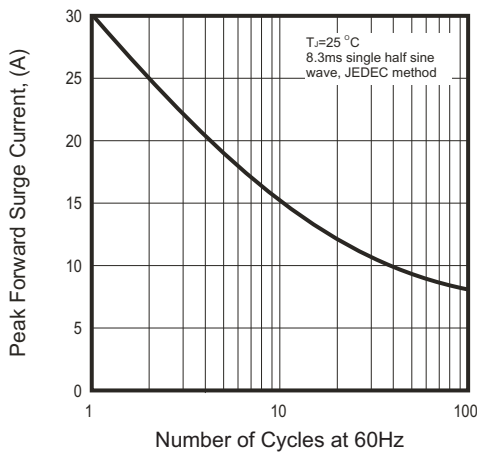


Fig.4 - Typical Junction Capacitance

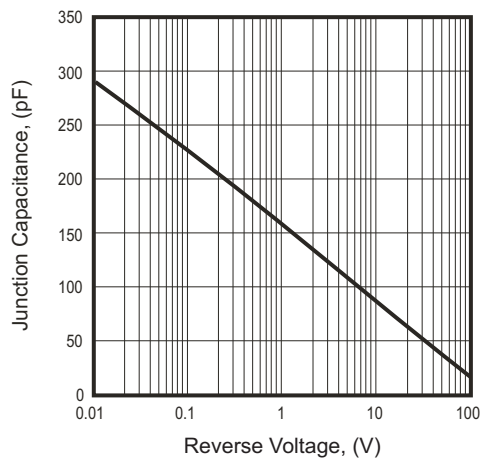
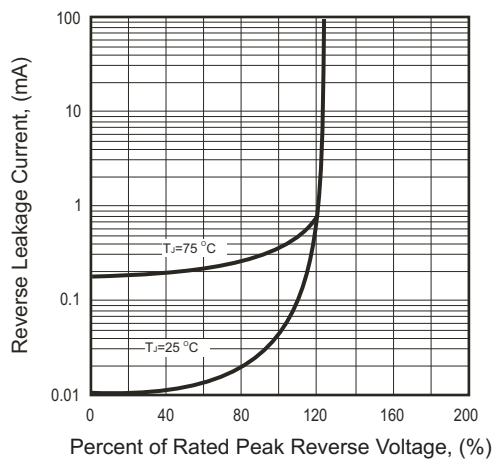
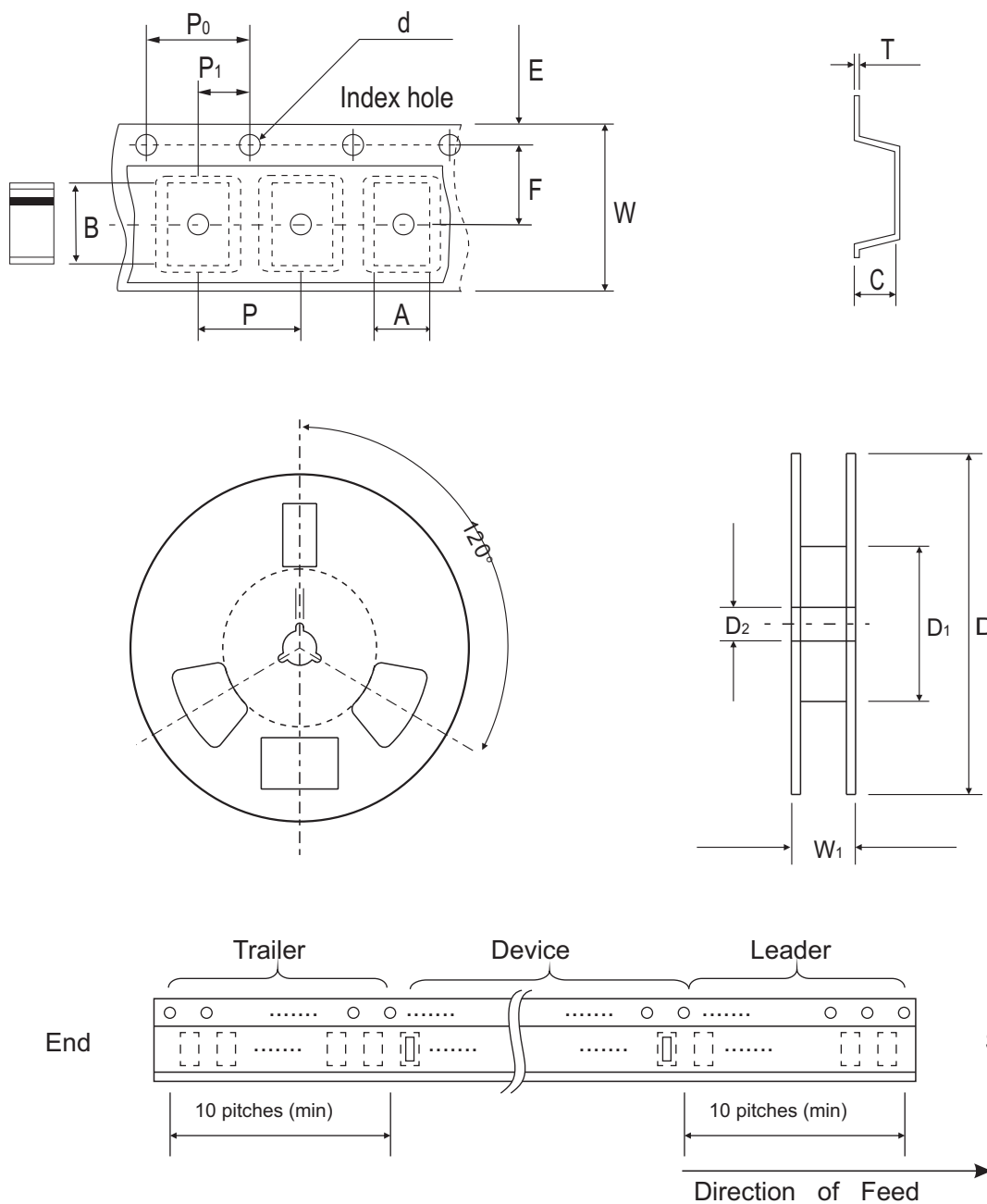


Fig.5 - Typical Reverse Characteristics



## Reel Taping Specification



SOD-123H	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.00 ± 0.10	3.85 ± 0.10	1.10 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	62.00 (min)	13.00 ± 0.50
	(inch)	0.079 ± 0.004	0.152 ± 0.004	0.043 ± 0.004	0.059 ± 0.004	7.007 ± 0.079	2.441 (min)	0.512 ± 0.020

SOD-123H	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	11.40 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.04	0.315 ± 0.012	0.449 ± 0.039