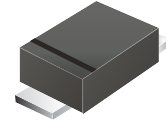


## ACGRMS4007-HF

**Reverse Voltage: 1000 Volts**  
**Forward Current: 1.0 Amp**  
**RoHS Device**  
**Halogen Free**

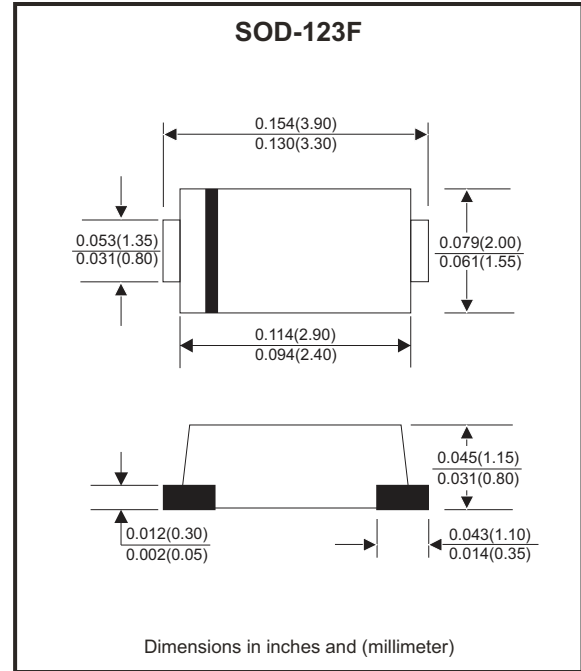


### Features

- Glass Passivation Junction.
- High current capability.
- High surge current capability.
- Low reverse current.
- Comply with AEC-Q101

### Mechanical data

- Case: SOD-123F, molded plastic.
- Epoxy: UL flammability classification rate 94V-0.
- 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	ACGRMS4007-HF	Units
Max. repetitive peak reverse voltage	$V_{RRM}$	1000	V
Max. DC blocking voltage	$V_{DC}$	1000	V
Max. RMS voltage	$V_{RMS}$	700	V
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30	A
Max. average forward rectified current	$I_F$	1.0	A
Max. instantaneous forward voltage $I_F=1.0A @ 25^\circ C$	$V_F$	1.1	V
Max. DC reverse current at rated	$I_R$	10	$\mu A$
DC blocking voltage	$I_R$	100	
Typical junction capacitance (Note 1)	$C_J$	10	pF
Typical thermal resistance	$R_{\theta JC}$	50	$^\circ C/W$
Operating temperature range	$T_J$	-55 to +150	$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ C$

Notes: 1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

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

REV: A

## Rating and Characteristic Curves (ACGRMS4007-HF)

Fig.1 - Typical Forward Current Derating Curve

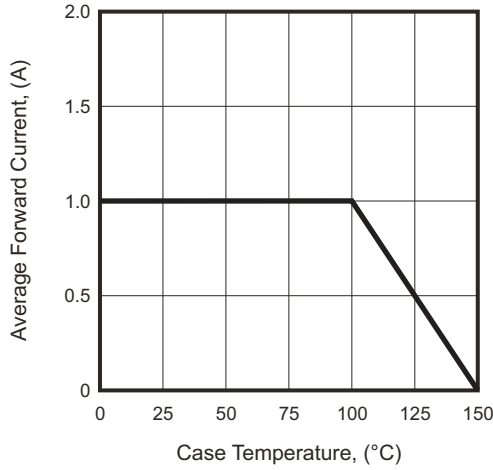


Fig.2 - Typical Forward Characteristics

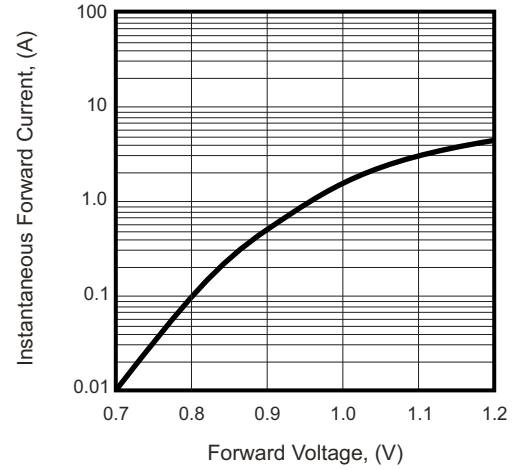


Fig.3 - Maximum Non-repetitive Forward Surge Current

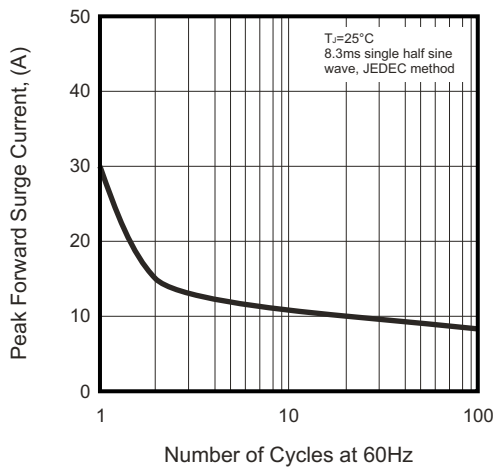


Fig.4 - Typical Reverse Characteristics

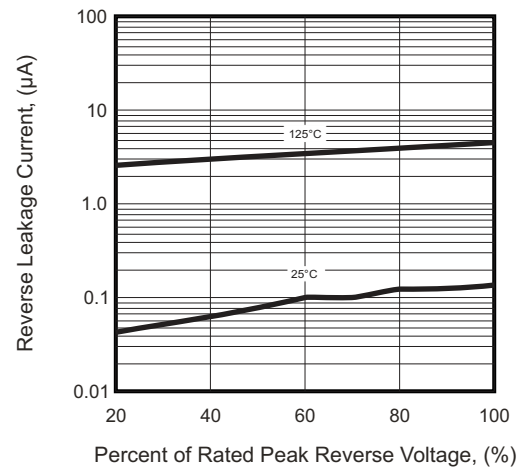
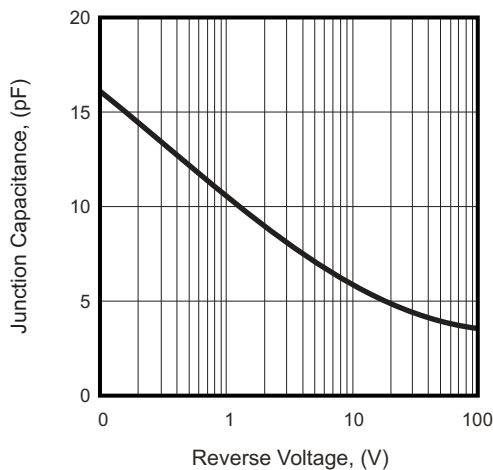


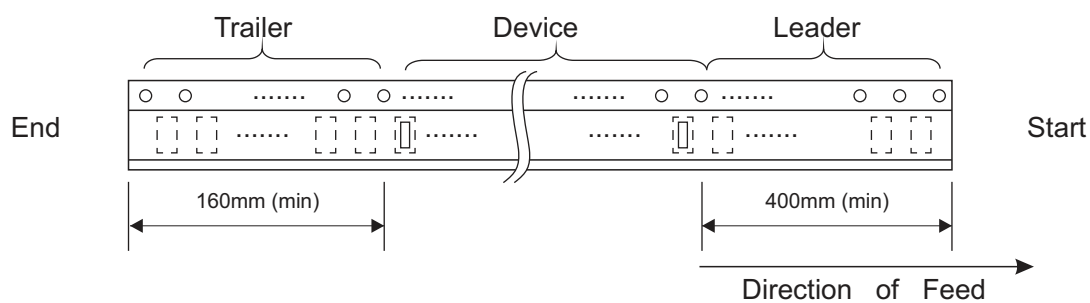
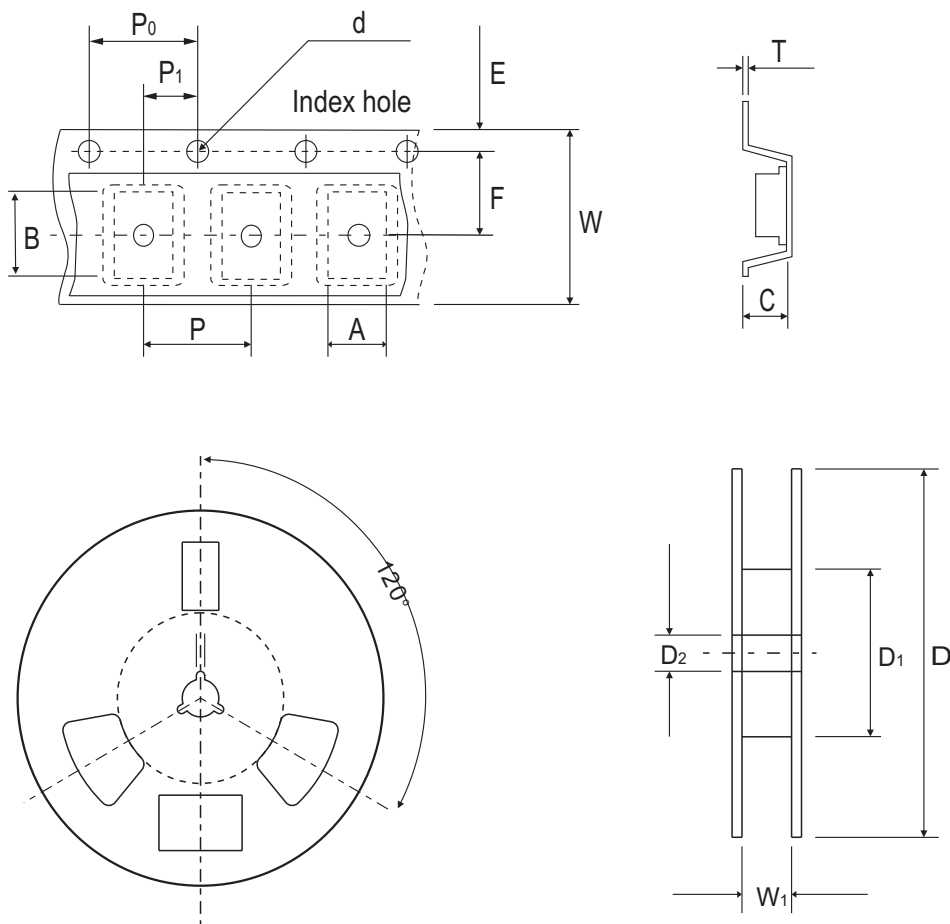
Fig.5 - Typical Junction Capacitance



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

REV: A

## Reel Taping Specification



SOD-123F	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$1.90 \pm 0.10$	$4.01 \pm 0.10$	$1.32 \pm 0.10$	$1.50 \pm 0.10$	178 Max.	$60.30 \pm 1.00$	$13.30 \pm 0.10$
	(inch)	$0.075 \pm 0.004$	$0.158 \pm 0.004$	$0.052 \pm 0.004$	$0.059 \pm 0.004$	7.00 Max.	$2.374 \pm 0.039$	$0.524 \pm 0.004$

SOD-123F	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$8.00 + 0.30 - 0.10$	$9.30 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.158 \pm 0.004$	$0.158 \pm 0.004$	$0.079 \pm 0.002$	$0.315 + 0.012 - 0.004$	$0.366 \pm 0.039$

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

REV: A

## Marking Code

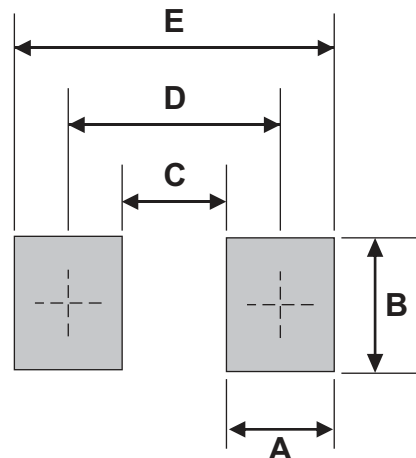
Part Number	Marking code
ACGRMS4007-HF	D7



**XX = Product type marking code**

## 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	4.20	0.165



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