SMD Switching Diode

Comchip
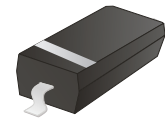SMD Diode Specialist

ACDSW4448-HF

Reverse Voltage: 75 V
Forward Current: 200mA
**RoHS Device**
Halogen Free

Features

- Fast switching speed.

- High conductance.

- Surface mount package ideally suited for automatic insertion.

- For general purpose switching applications.

- Comply with AEC-Q101

Mechanical data

- Case: SOD-123, Molded Plastic

- Terminals: Solderable per MIL-STD-750, method 2026.

- Weight: 0.012 grams(approx.).

Circuit diagram

SOD-123

Dimensions in inches and (millimeter)
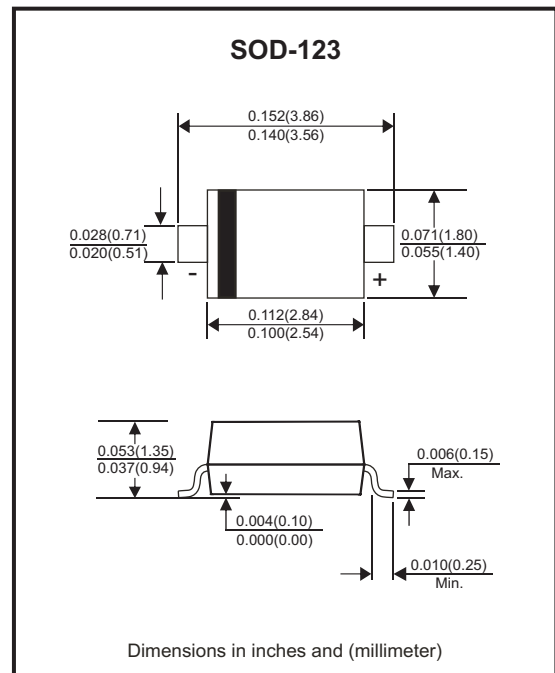
Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_O	200	mA
Repetitive peak forward current	I_{FM}	300	mA
Non-Repetitive peak forward surge current @t=1μs	I_{FSM}	2	A
Power dissipation (Note 1)	P_D	425	mW
Thermal resistance from junction to ambient air (Note 1)	$R_{\theta JA}$	290	°C/W
Junction and Storage temperature range	T_J, T_{STG}	-55~+150	°C

Note: 1. Valid provided that terminals are kept at ambient temperature.

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

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Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Max	Unit
Forward voltage	I_F = 1 mA	V_F		715	mV
	I_F = 10mA			855	
	I_F = 50mA			1000	
	I_F = 150mA			1250	
Reverse current (Note 1)	V_R = 75V	I_R		2.5	µA
	V_R = 75V, T_J=150°C			50	
	V_R = 25V, T_J=150°C			30	
	V_R = 20V			0.025	
Capacitance between terminals	f = 1 MHz , V_R=0V	C_J		2	pF
Reverse recovery time	I_F = I_R = 10mA, R_L=100Ω, Irr=0.1 X I_R	T_{RR}		4	nS

Note: 1.Short duration pulse test used to minimize self-heating effect.

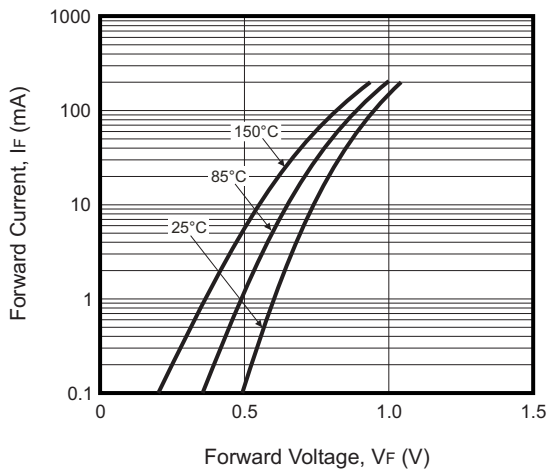## Typical Characteristics (ACDSW4448-HF)

Fig.1 - Typical Forward Characteristics
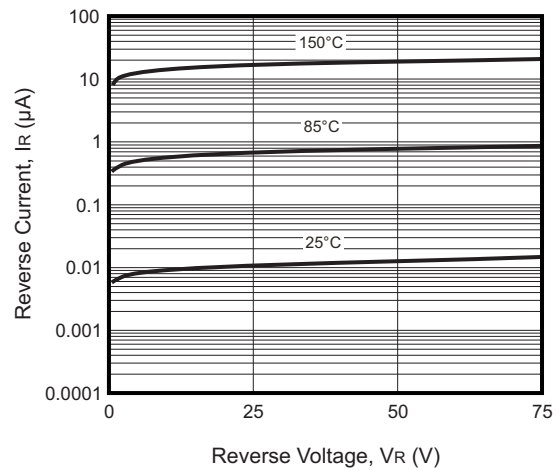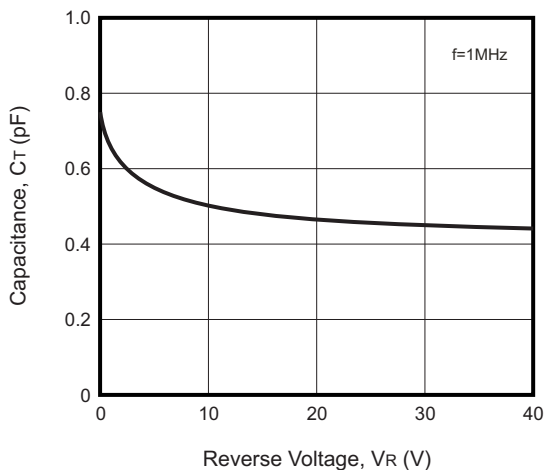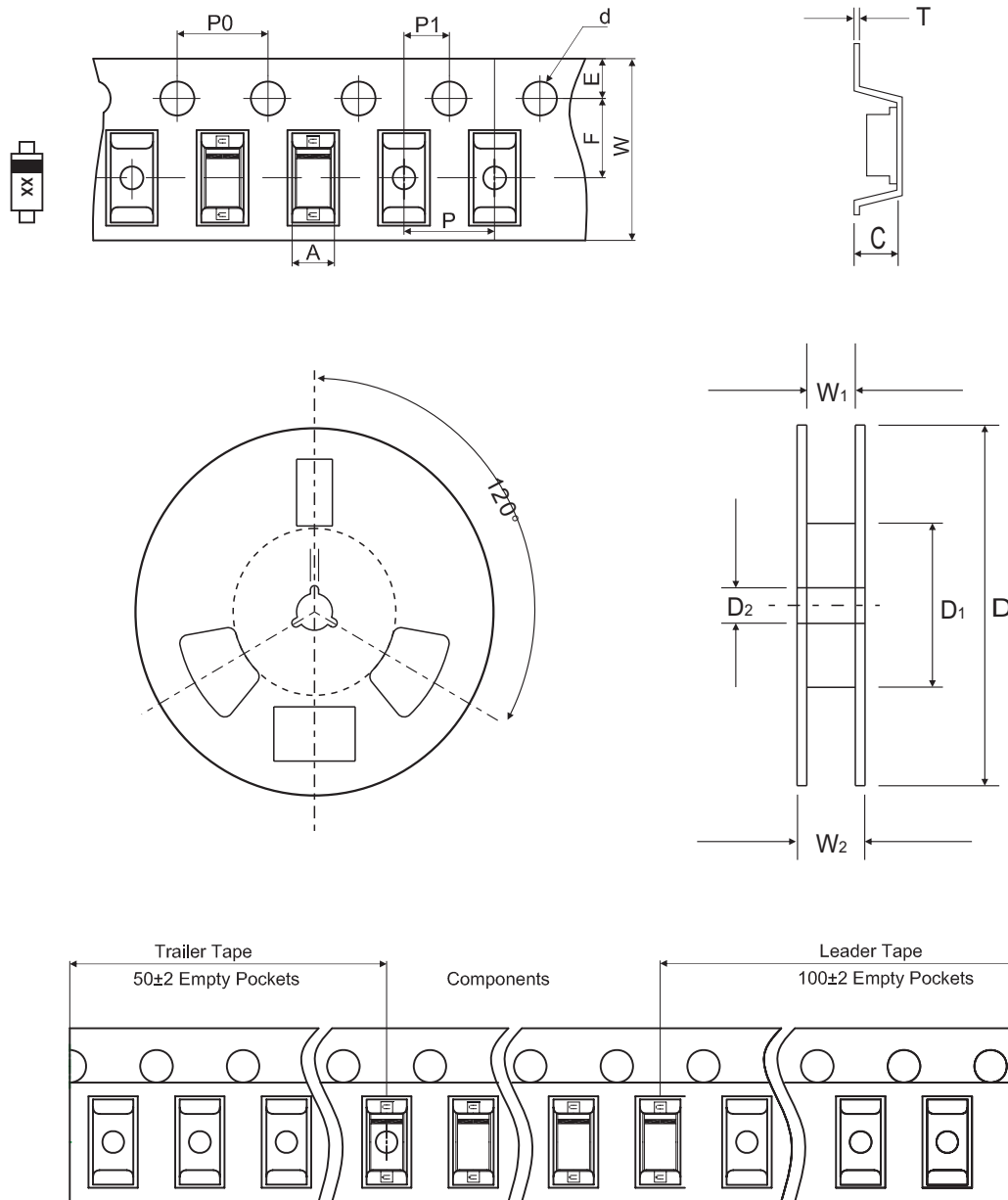

Fig.2 - Typical Reverse Characteristics

Fig.3 - Typical Capacitance Characteristics

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Reel Taping Specification

	SYMBOL	A	B	C	d	T	D	D₁	D₂
SOD-123	(mm)		See Note 1		1.55 ± 0.05	0.60 Max.	178.00 Max.	50.00 Min.	13.00 ± 0.50
	(inch)				0.061 ± 0.002	0.024 Max.	7.000 Max.	1.969 Min.	0.512 ± 0.020

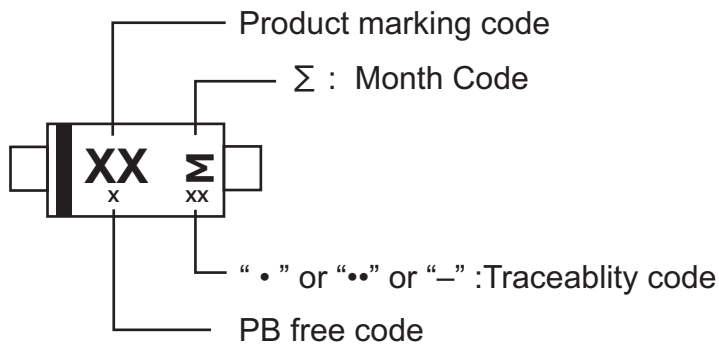|	SYMBOL	E	F	P	P₀	P₁	W	W₁	W₂
SOD-123	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.30 Max.	8.40 +1.50 -0.00	10.90 Max.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.327 Max.	0.331 +0.059 -0.000	0.429 Max.

Notes: 1. A, B, and C are determined by component size. The clearance between
the components and the cavity must be within 0.05mm min. to 0.50mm max.

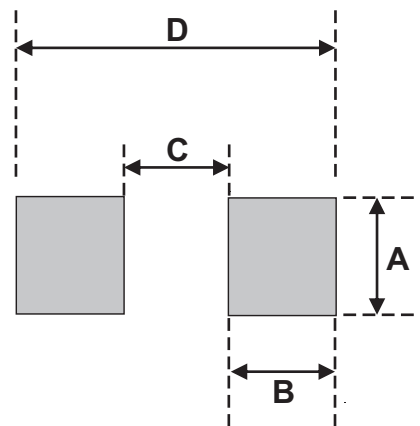Company reserves the right to improve product design , functions and reliability without notice. REV: A

SMD Switching Diode

Marking Code

Part Number	Marking Code
ACDSW4448-HF	T4

Product marking code

Σ : Month Code

" • " or "••" or "–" :Traceablity code

PB free code

Month	Odd Year (per A.D.)	Even Year (per A.D.)
Jan	1	E
Feb	2	F
Mar	3	H
Apr	4	J
May	5	K
Jun	6	L
Jul	7	N
Aug	8	P
Sep	9	U
Oct	T	X
Nov	V	Y
Dec	C	Z

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.22	0.048
B	0.91	0.036
C	2.36	0.093
D	4.19	0.165

Note:

1.The pad layout is for reference purposes only.

Standard Packaging

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

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REV: A

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