

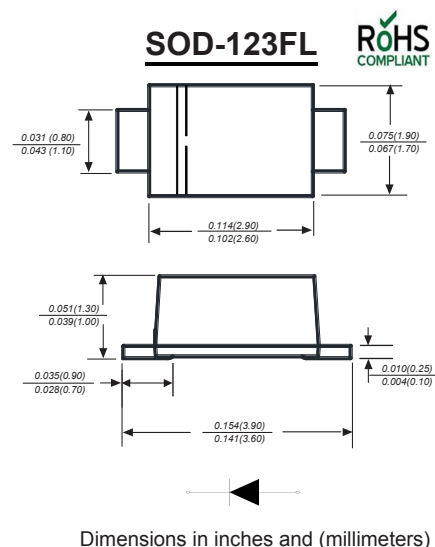
FAST SWITCHING DIODES

Features

- ◆ For surface mounted applications
- ◆ Glass Passivated Chip Junction
- ◆ Fast reverse recovery time
- ◆ Ideal for automated placement
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

Case: JEDEC SOD-123FL molded plastic body
 Terminals: Solderable per MIL-STD-750, Method 2026
 Polarity: Color band denotes cathode end Mounting
 Position: Any
 Weight: 0.0007 ounce, 0.02 grams



Absolute Maximum Ratings at 25 °C

Parameter	Symbols	1N4148W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	75	V
Continuous Forward Current	I_F	300	mA
Non-repetitive Peak Forward Surge Current at 1ms	I_{FSM}	2	A
Total Power Dissipation	P_{tot}	400	mW
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	450	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

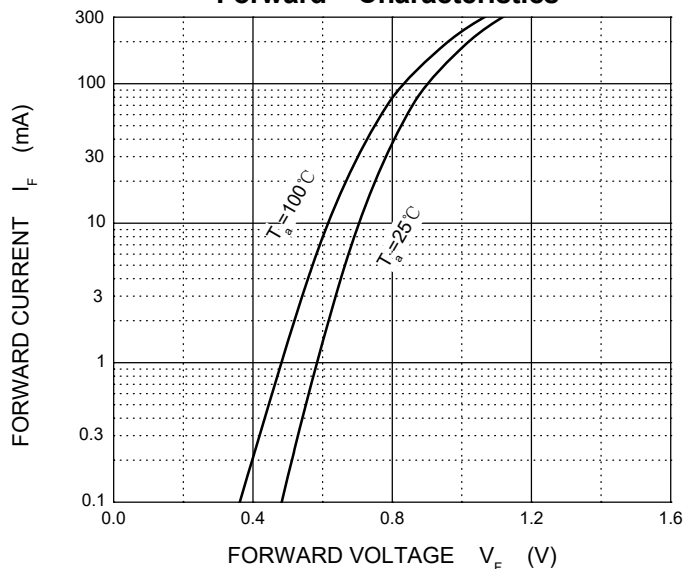
(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Characteristics at Ta= 25 °C

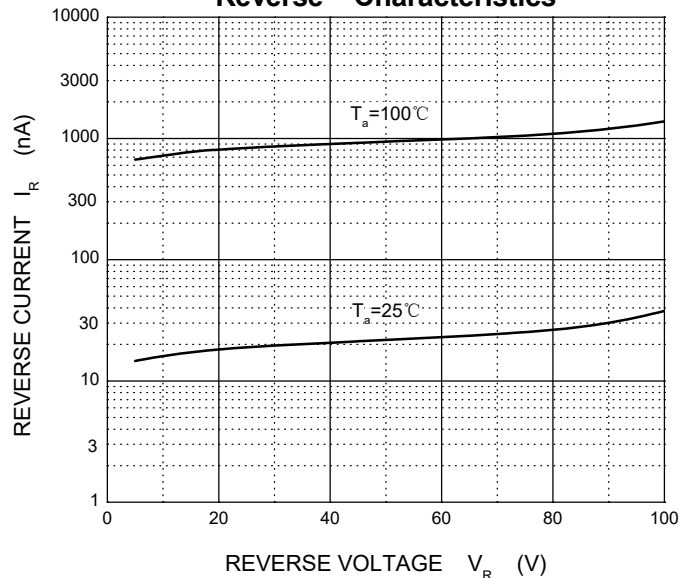
Parameter	Symbols	1N4148W	Units
Reverse Breakdown Voltage at $I_R=1\mu A$	$V_{(BR)R}$	75	V
Maximum Forward Voltage at 1 mA at 10 mA at 50 mA at 150 mA at 300 mA	V_F	0.715 0.855 1.00 1.25 1.5	V
Peak Reverse Current at $V_R=20V$ $T_j=25^\circ C$ at $V_R=75V$ $T_j=25^\circ C$ at $V_R=25V$ $T_j=150^\circ C$ at $V_R=75V$ $T_j=150^\circ C$	I_R	0.025 1 30 50	μA
Typical Junction Capacitance	C_j	5	pF
Maximum Reverse Recovery Time	t_{rr} Typical	8	ns

Typical Characteristics

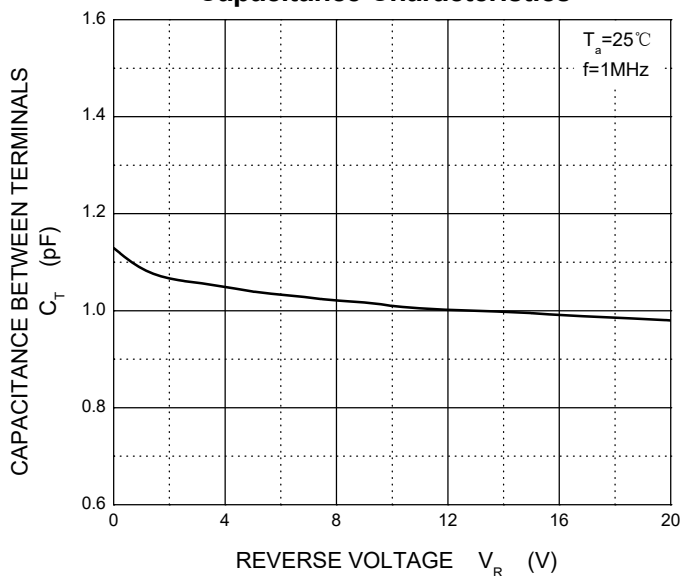
Forward Characteristics



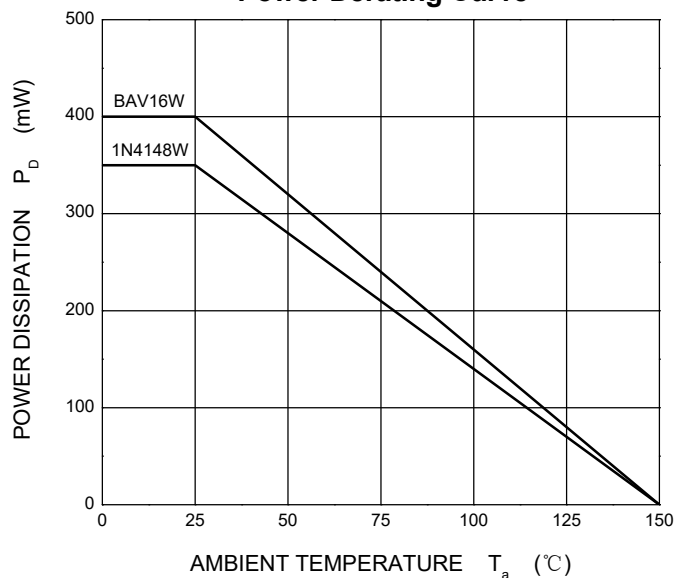
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



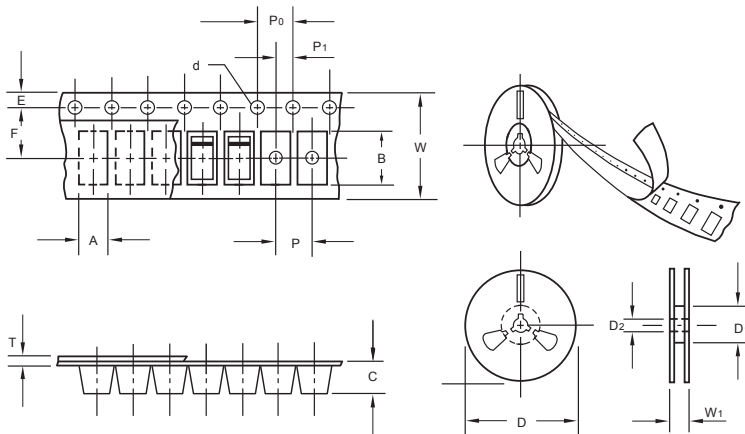
The curve above is for reference only.



1N4148W

Reverse Voltage 100 Volts Forward Current - 0.3 Ampere

Packing information



unit:mm

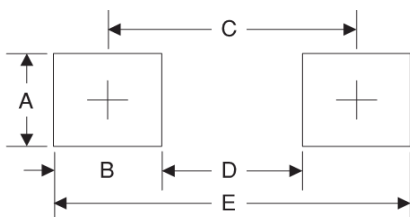
Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	50.0
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.5

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

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)	APPROX. GROSS WEIGHT (kg)
SOD-123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173