D1P6

1.0 AMP. SNUBBER DAMPING RECTIFIERS

FEATURES

- High current capability.
- Smoothly soft reverse recovery time
- Ideal for surface mouthed applications
- Low reverse leakage
- High temperature soldering guaranteed: 250°C /10 seconds at terminals.

MECHANICAL DATA

- Case: JEDEC SOD-123FL,molded plastic over passivated chip
- Terminals:Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

SOD-123FL



MAXIMUM RATINGS AND ELECTRONICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz,resistive or inductive load.
For capacitive load, derate current by 20%.

Type Number		SYMBOL	D1P6	units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	600	V
Maximum RMS Voltage		V_{RMS}	420	V
Maximum DC Blocking Voltage		V_{DC}	600	V
Maximum Average Forward rectified Current at T_C =45°C (Note 1)		$I_{F(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)		I_{FSM}	8	A
Maximum Instantaneous forward Voltage at	100m A DC	V_F	0.95	V
	500m A DC		1.2	
Maximum DC Reverse Current @T_A =25°C at rated DC blocking voltage @T_A =125°C		I_R	0.1	μA
			10.0	
Maximum Reverse Recovery Time (Note 2)		t_{rr}	1000	nS
Typical Junction Capacitance (Note 3)		C_J	6	pF
Typical thermal resistance (Note 4)		$R_{(JA)}$	200	°C /W
Storage Temperature Range		T_{STG}	-55 to +150	°C
Operation Temperature Range		T_J	-55 to +150	°C

Note: 1. Averaged over any 20 ms period.
2.Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. Measured at 1MHz and applied reverse voltage of 4.0 volts d.c.
4. Measured on P.C.Board with 0.6×0.6”(15.0×15.0mm)Copper Pad Areas

RATING AND CHARACTERISTIC CURVES (D1P6)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

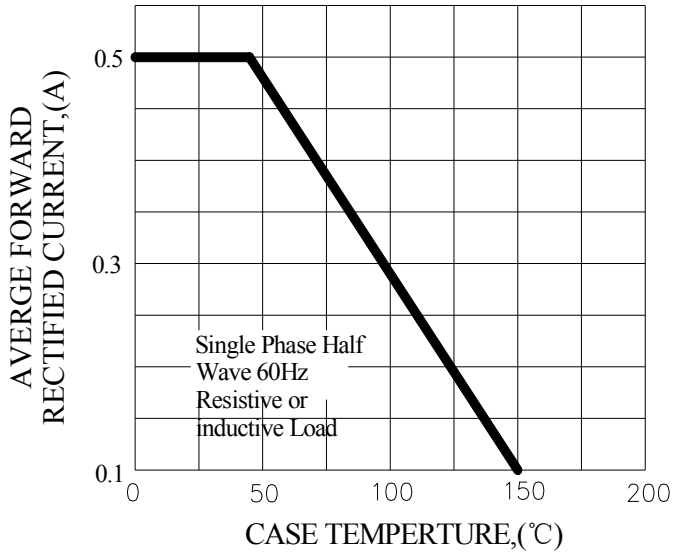


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

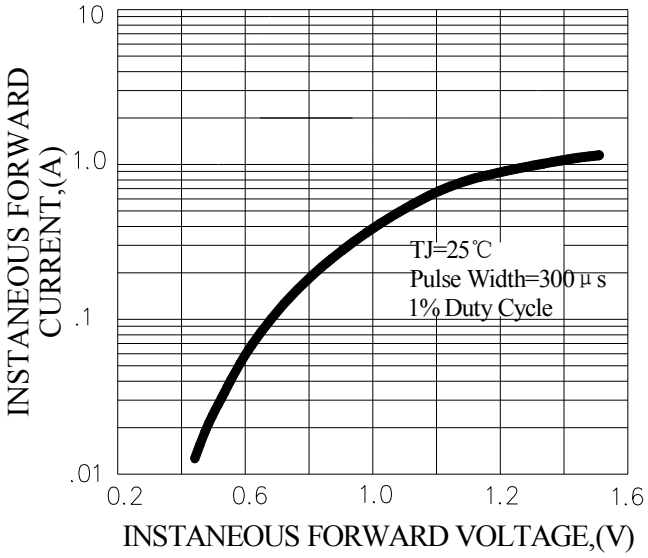


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

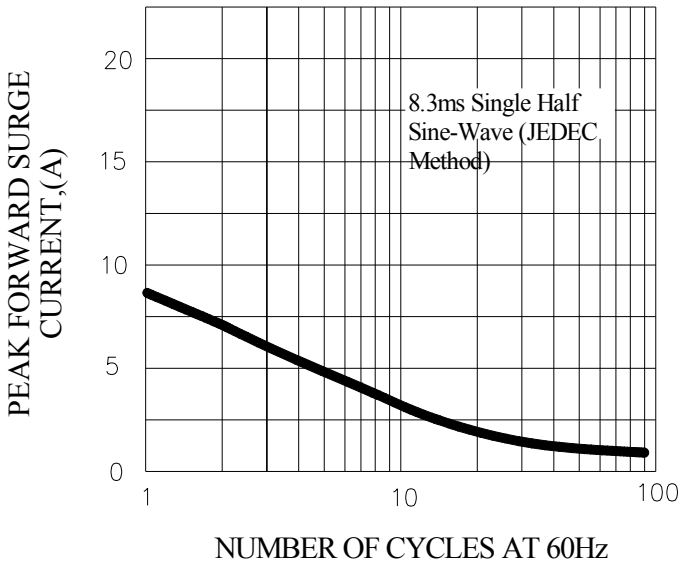


FIG.4-TYPICAL REVERSE CHARACTERISTICS

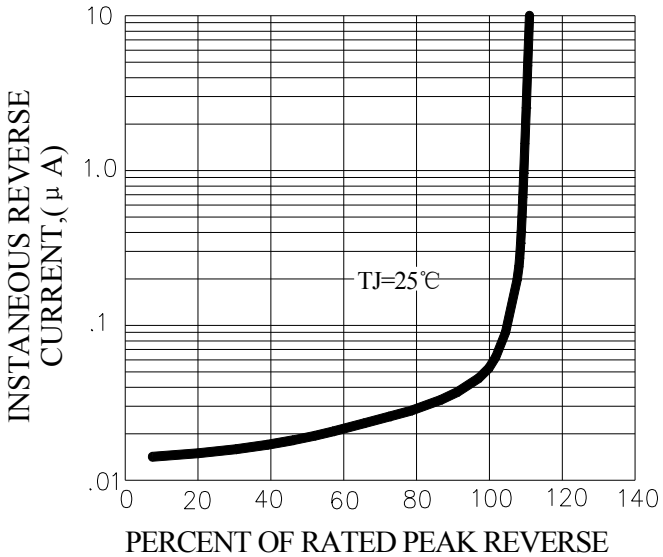
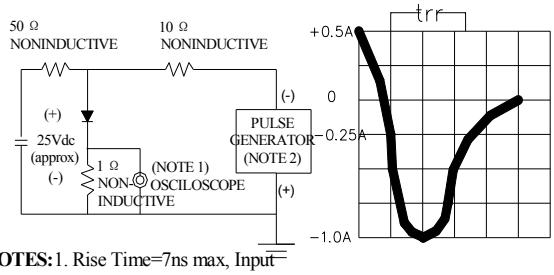


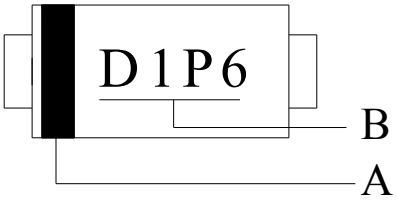
FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERSITIC



NOTES: 1. Rise Time=7ns max, Input Impedance= 1 megohm.22pF.
2. Rise Time=10ns max, Souce Impedance= 50 ohms.

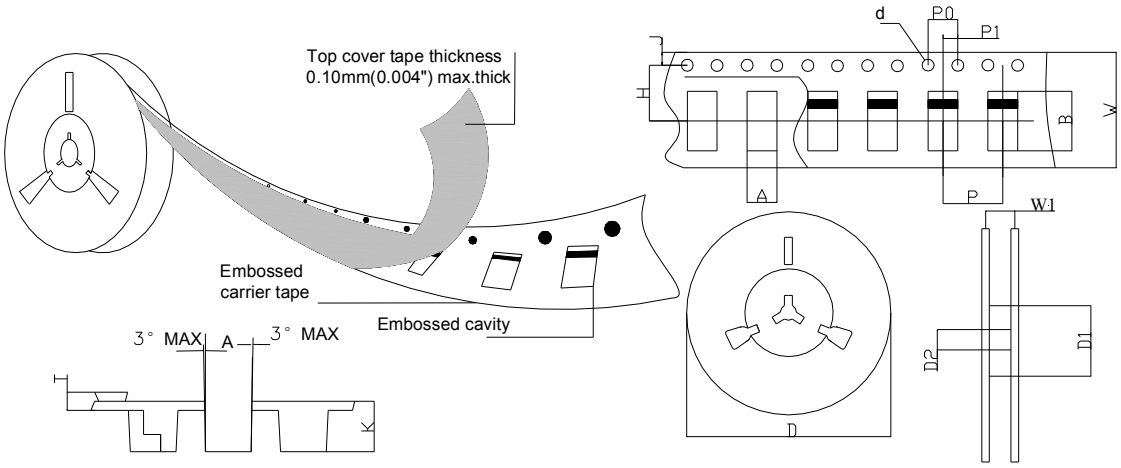
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product Name

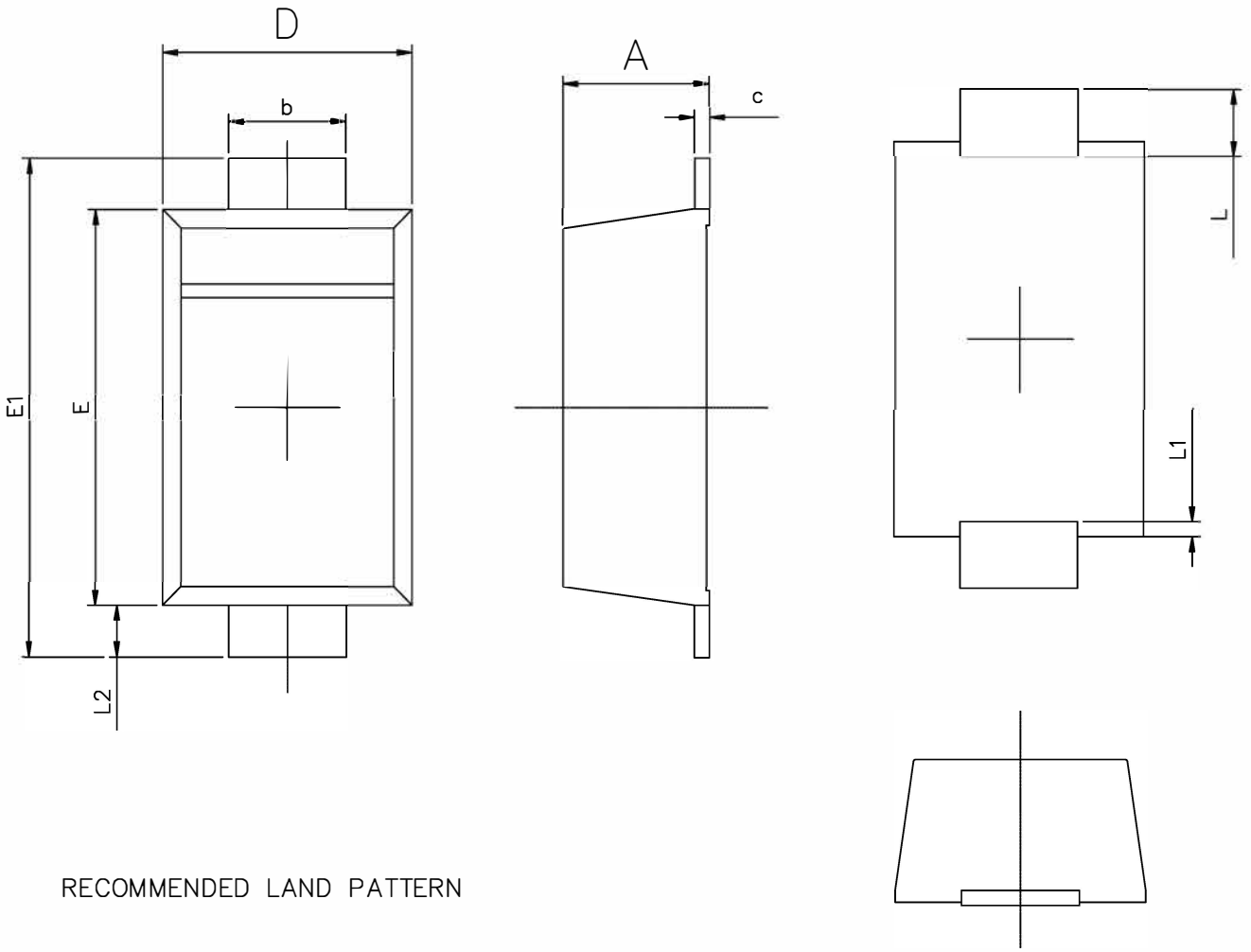
2、Packaging



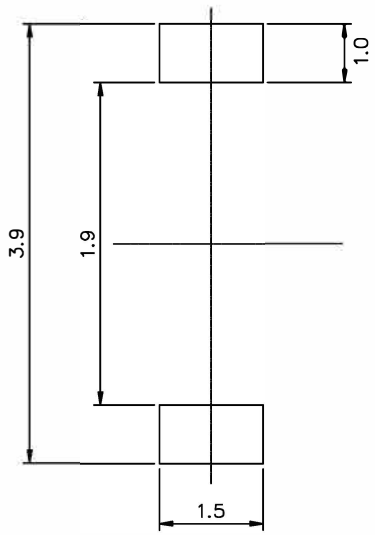
SPECIFICATIONS mm(inch)		PACKAGE
SYMBOL / ITEM		SOD-123FL
Carrier width	A	2.1(0.083)Max
Carrier length	B	4.0(0.157)Max
Sprocket hole	d	ø1.55(0.061)Typ
Reel outer diameter	D	177.8(7)Typ
Reel inner diameter	D1	50.0(1.969)Min
Feed hole diameter	D2	13.0(0.512)Typ
Sprocket hole position	J	1.75(0.069)Typ
Punch hole position	H	3.50(0.138)Typ
Carrier depth	K	1.60(0.063)Typ
Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole pitch	P0	4.00(0.157)Typ
Embossment center	P1	2.00(0.079)Typ
Overall tape thickness	T	0.25(0.098)Typ
Tape width	W	8.15(0.321)Typ
Reel width	W1	10.5(0.413)Min

重庆平伟半导体股份有限公司
CHONGQING PINGWEI SEMICONDUCTOR CO., LTD.

SOD123FL PACKAGE OUTLINE



RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAX
A	0.80	1.00	1.15
b	0.65	0.80	0.95
c	0.07	0.15	0.25
D	1.60	1.70	1.90
E	2.60	2.70	2.80
E1	3.35	3.50	3.65
L	0.35	0.50	0.65
L1	0.00	0.10	0.15
L2	0.30	0.40	0.50

Revision History

Revison	Date	Major changes
1.0	2017/6/8	Release of Formal Version.
2.0	2026/4/8	Appearance update.
2.1	2026/11/4	Revision of dimensional measurements.

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