SINGLE PHASE 1.0AMP SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

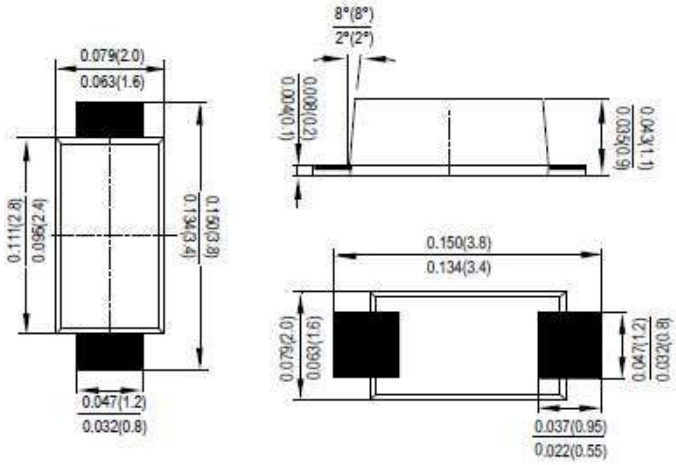
Features:

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 260 ℃/10 seconds,0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension
- Plastic material-UL flammability 94V-0

Applications:

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

SOD-123FL



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL Code	ES1AS E1A S1	ES1BS E1B S2	ES1DS E1D S4	ES1GS E1G S6	ES1JS E1J S8	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	50	100	200	400	600	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	V
Average Rectified Output Current @T_L =90℃	$I_{F(AV)}$	1.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	3.735					A^2s
Forward Voltage per element @IF=1.0A	V_{FM}	0.95			1.25	1.7	V
Peak Reverse Current @T_A =25℃ At Rated DC Blocking Voltage @T_A =125 ℃	I_R	5.0 100					uA
Maximum reverse recovery time (NOTE 1)	trr	35					ns
Typical junction capacitance (NOTE 2)	C_J	10					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	90					℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55to+150					℃

Note:1. Measured with IF=0.5A, IR=1A, Irr=0.25A.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length,P.C.B. mounted

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

FIG. 1- FORWARD CURRENT DERATING CURVE

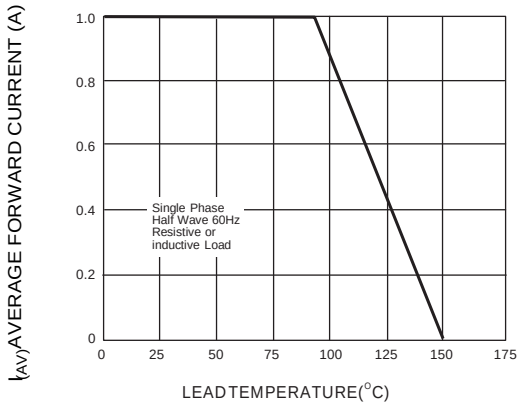


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

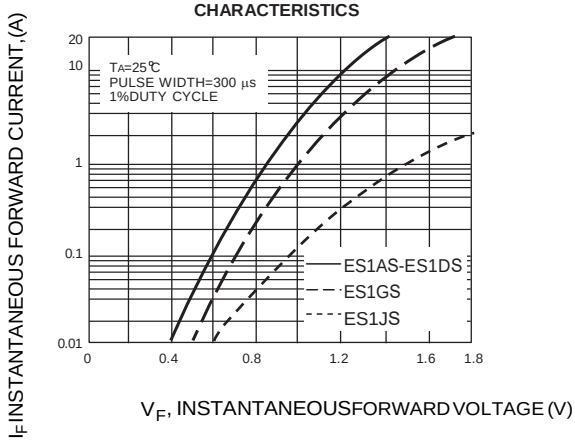


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

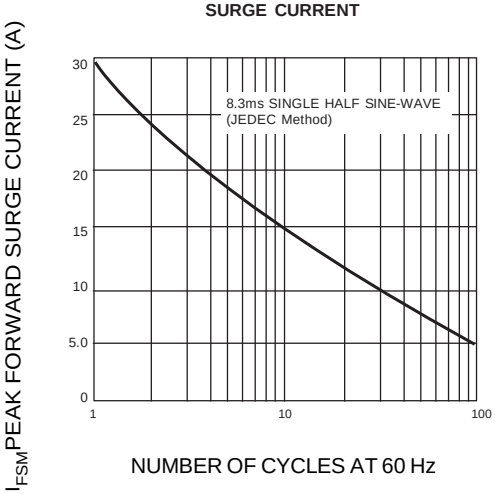


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

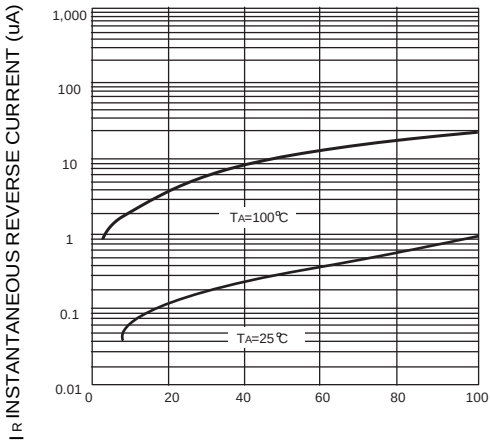
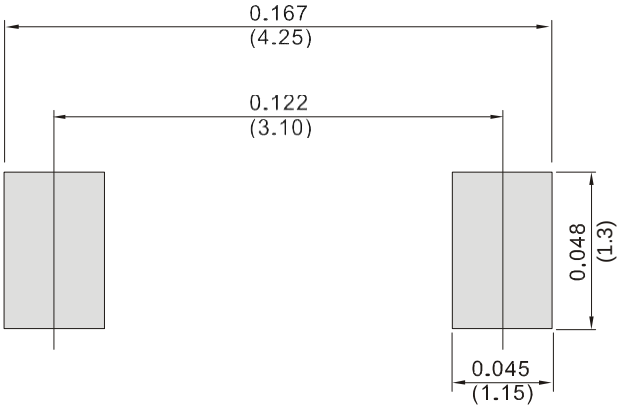
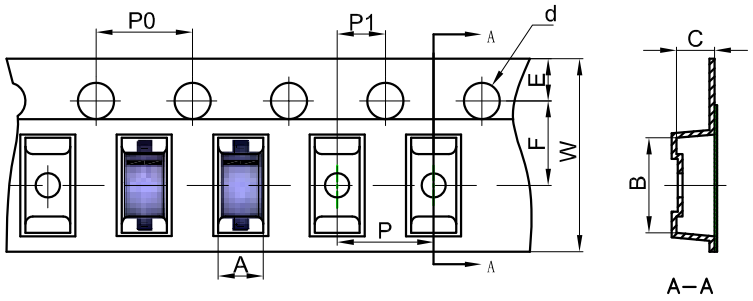


Fig.5 TYPICAL CAPACITANCE



SOD-123 Tape and Reel

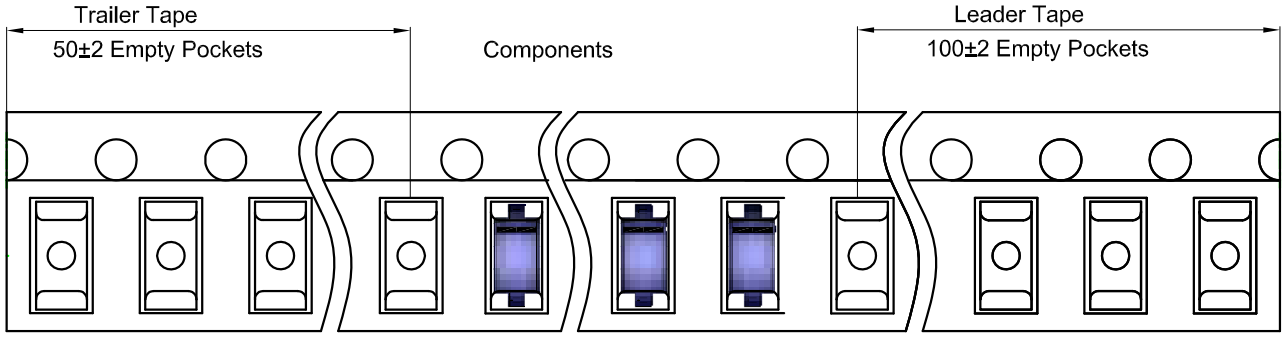
SOD-123 Embossed Carrier Tape



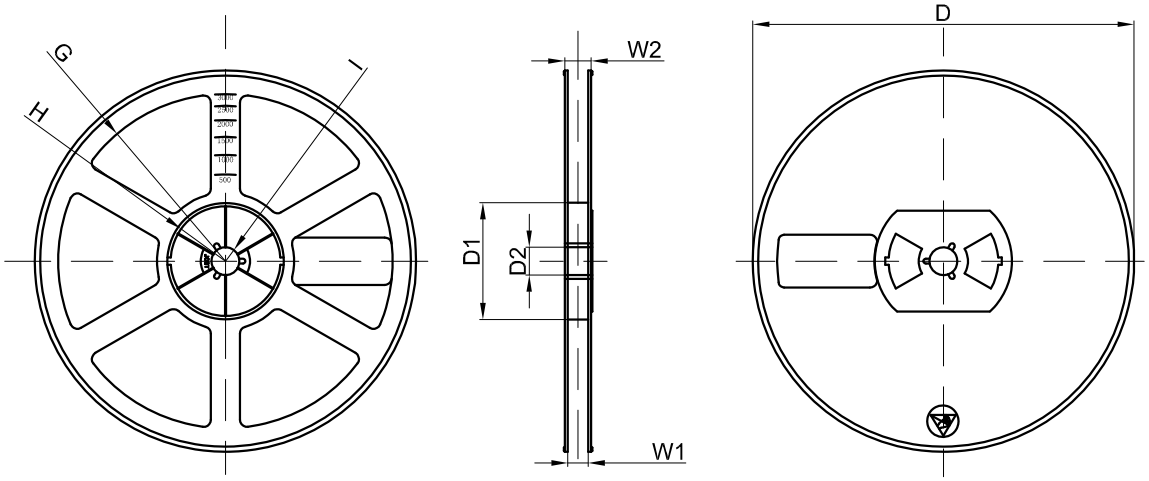
Packaging Description:
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	