HIGH DIODE

ES1JW

RoHS COMPLIANT

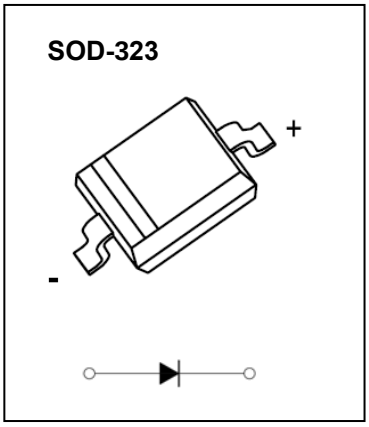
HALOGEN FREE

SOD-323 Plastic-Encapsulate Diodes

SUPER FAST RECOVER RECTIFIER

Features

- I_O 0.8A
- VRRM 600V
- Ultrafast 40ns Recovery Times
- High surge current capability



Marking

- ES1JW

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	600	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	420	V
I_O	Average rectified output current	0.8	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	15	A
$R_{\Theta JL}$	Thermal resistance from junction to lead	15	℃/W
$R_{\Theta JA}$	Thermal resistance from junction to ambient	300	℃/W
T_j	Junction temperature	150	℃
T_{stg}	Storage temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=0.1mA		600			V
Reverse current	I_R	V_R=600V	Tj =25℃			1	uA
			Tj =125℃			50	uA
Forward voltage	V_F	I_F=0.8A	Tj =25℃			1.7	V
			Tj =125℃		1.04		V
Juction Capacitance	Cj	f=1MHz,VR=4V			5.3		pF
Reverse recovery time	t_{rr}	I_F= 0.5A, I_R=1A,I_{rr}=0.25A				40	ns

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on 1" x 1"(25.4mm x 25.4mm) FR4 PCB,double sided copper, with minimum pad layout

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

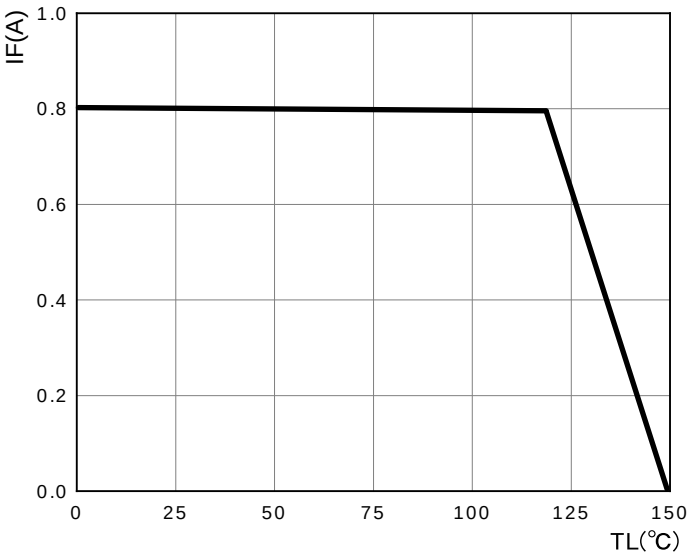


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

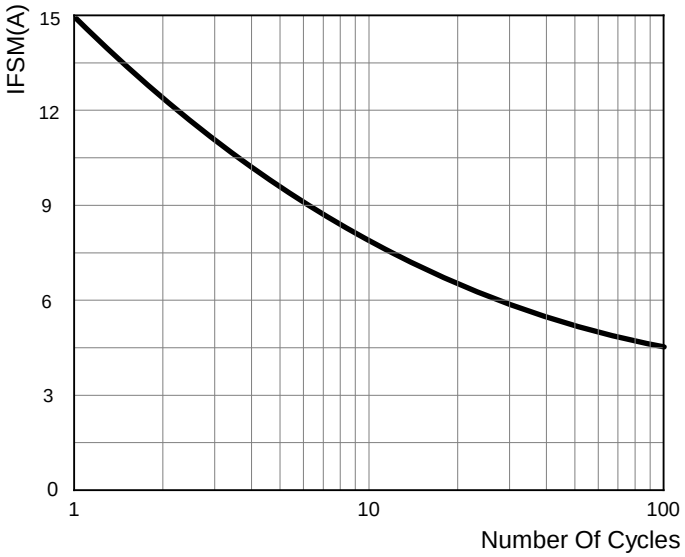


FIG.3 : TYPICAL FORWARD CHARACTERISTICS

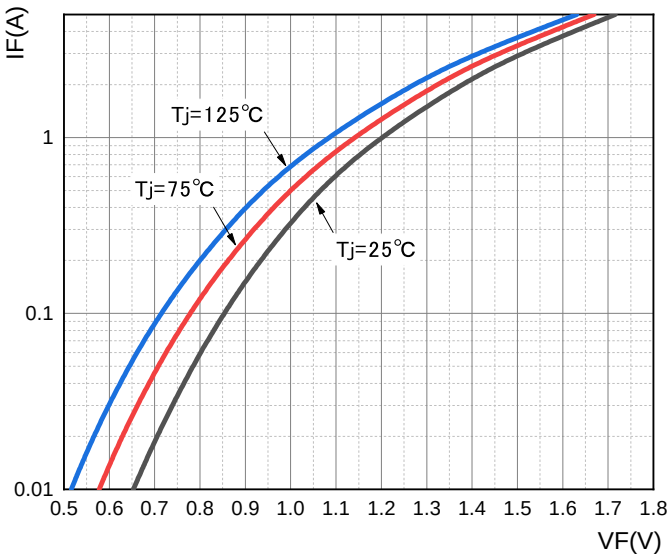
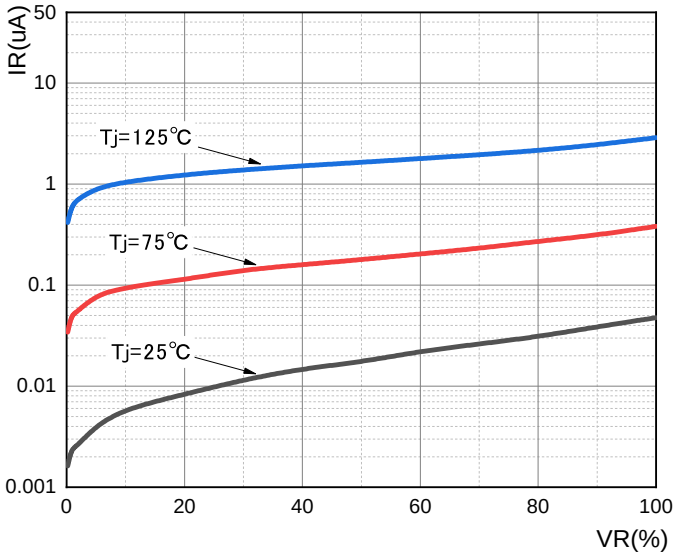
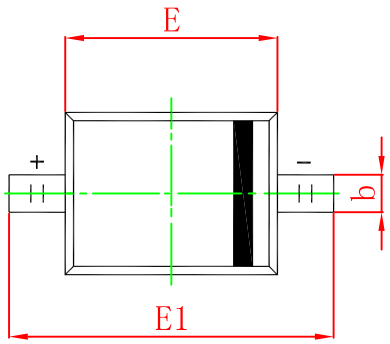
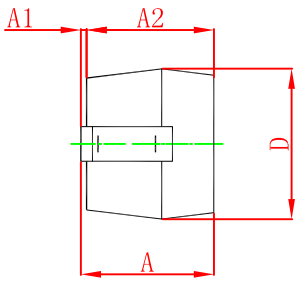


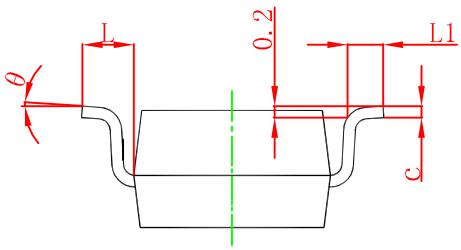
FIG.4 TYPCAL REVERSE CHARACTERISTICS



SOD-323 Package Outline Dimensions

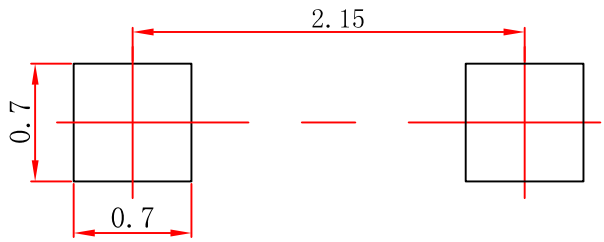






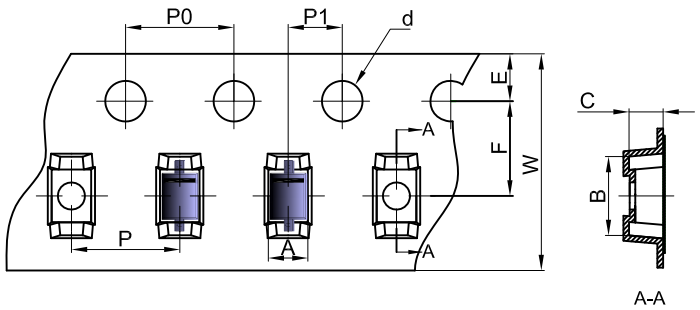
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

SOD-323 Embossed Carrier Tape

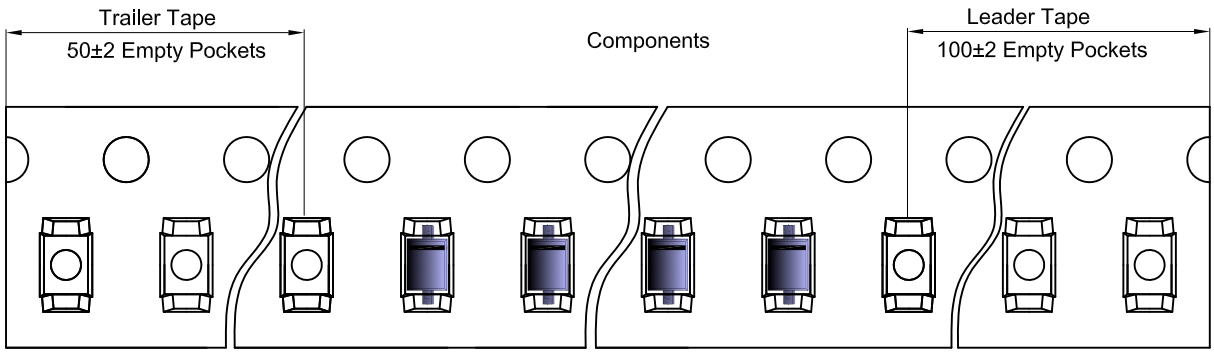


Packaging Description:

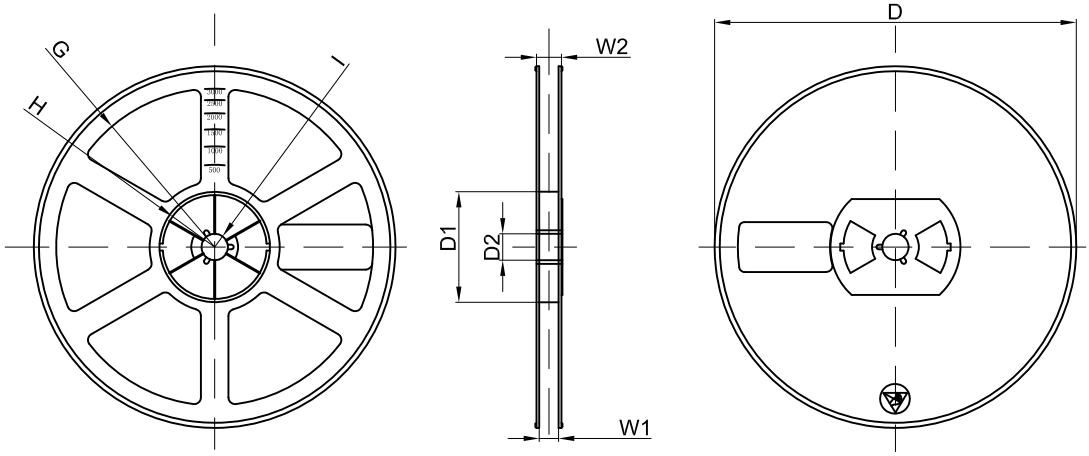
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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-323	1.48	3.3	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOD-323 Tape Leader and Trailer



SOD-323 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	