

SOD-523 Plastic-Encapsulate Diodes

BAP51-02 GENERAL PURPOSE PIN DIODES

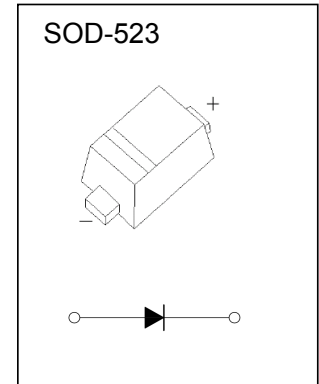
FEATURES

- Low diode capacitance
- Low diode forward resistance

MARKING: A5



The marking bar indicates the cathode



Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

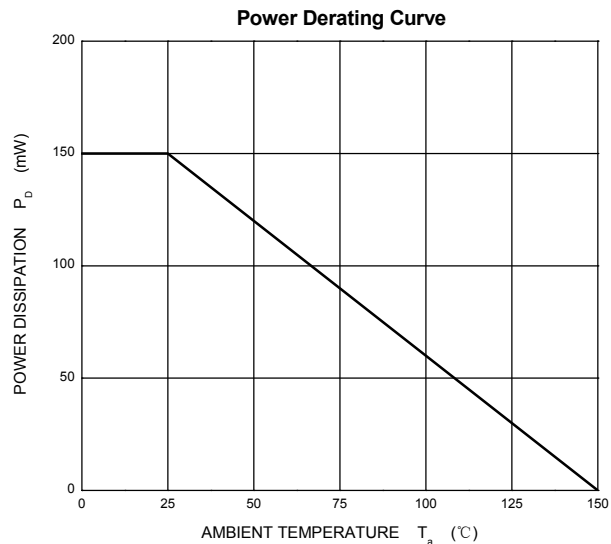
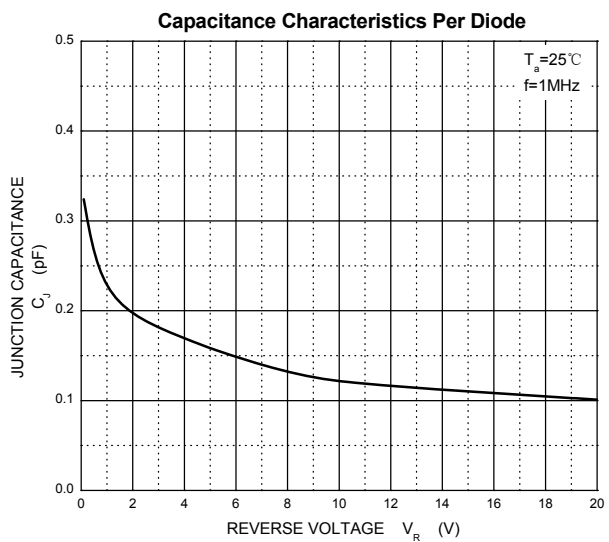
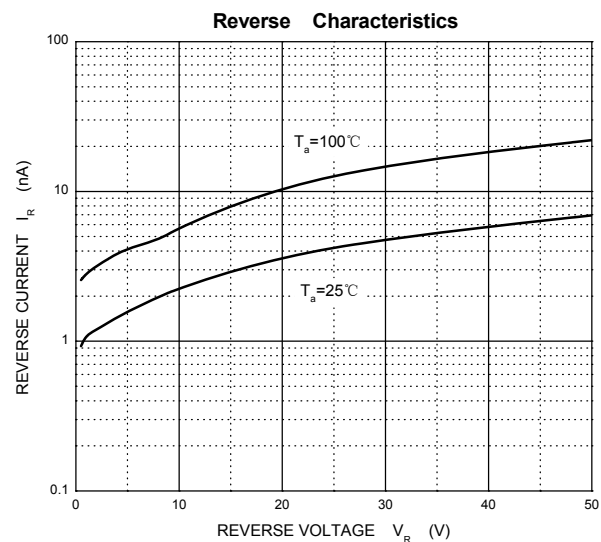
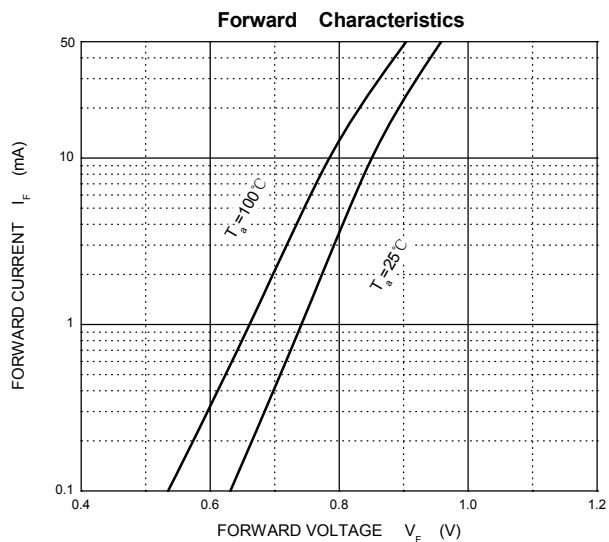
Parameter	Symbol	Limit	Unit
Continuous Reverse Voltage	V_R	60	V
Continuous Forward Current	I_F	50	mA
Power Dissipation	P_D	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	°C/W
Junction Temperature	T_J	-55~+150	°C
Storage Temperature	T_{STG}	-55~+150	°C

Electrical Ratings @Ta=25°C

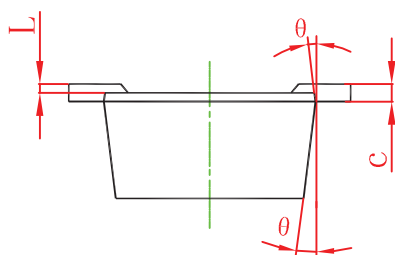
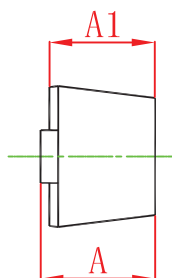
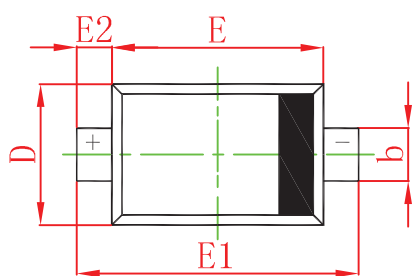
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Continuous reverse voltage	V_R	50			V	$I_R=10\mu A$
Forward voltage	V_F			1.1	V	$I_F=50mA$
Reverse current	I_R			100	nA	$V_R=50V$
Diode capacitance	C_{d1}		0.4*		pF	$V_R=0V, f=1MHz$
	C_{d2}			0.55	pF	$V_R=1V, f=1MHz$
	C_{d3}			0.35	pF	$V_R=5V, f=1MHz$
Diode forward resistance	r_D			9	Ω	$I_F=0.5mA, f=100MHz; note1$
	r_D			6.5	Ω	$I_F=1mA, f=100MHz; note1$
	r_D			2.5	Ω	$I_F=10mA, f=100MHz; note1$

Note 1. Guaranteed on AQL basis: inspection level S4,AQL 1.0.

Typical Characteristics

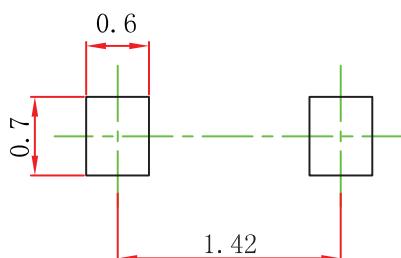


SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layout



Note:

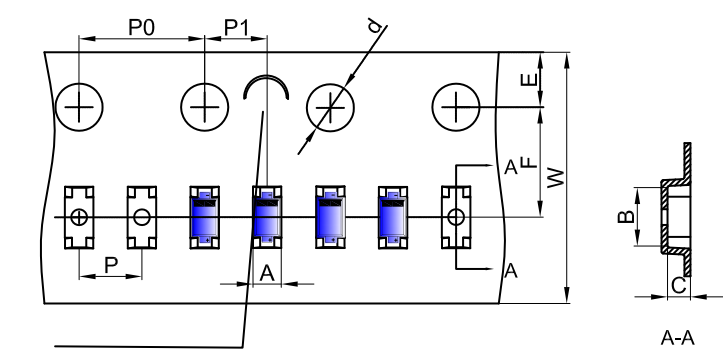
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOD-523 Tape and Reel

SOD-523 Embossed Carrier Tape



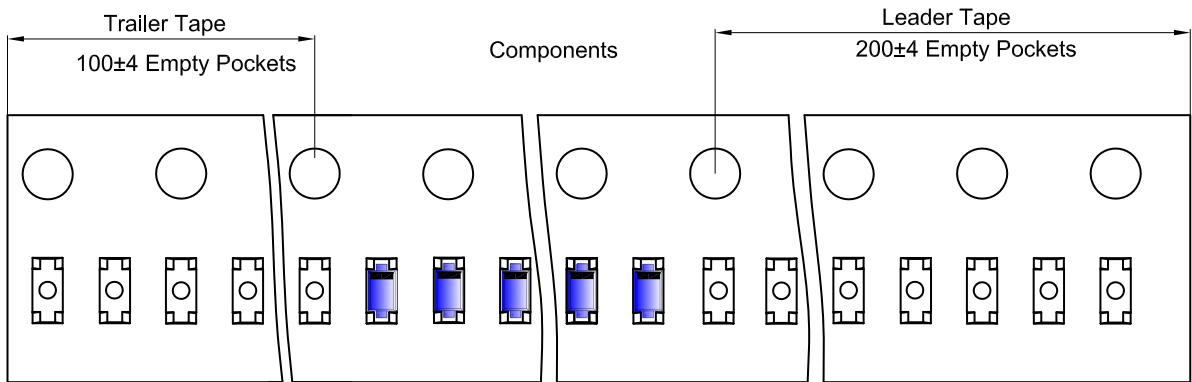
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

Packaging Description:

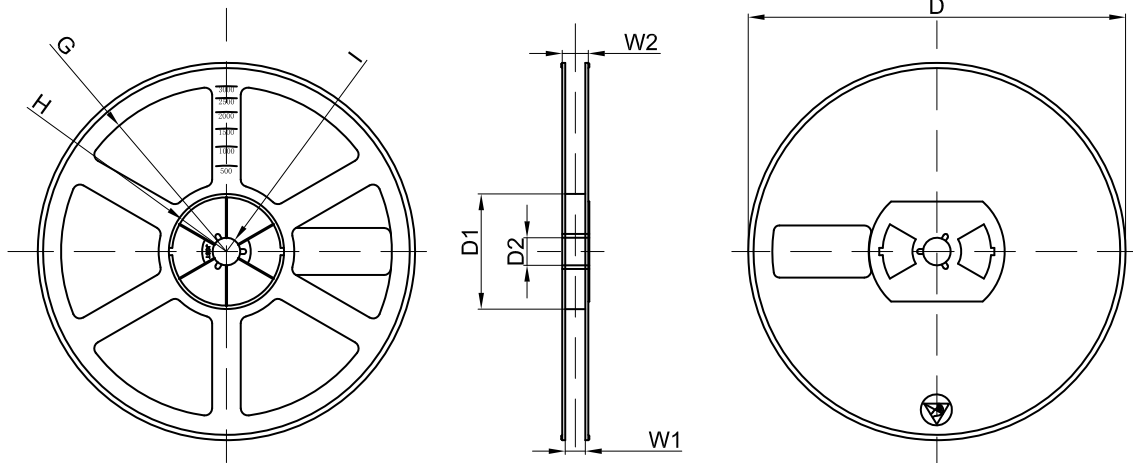
SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 8,000 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-523	0.9	1.94	0.73	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

SOD-523 Tape Leader and Trailer



SOD-523 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)
8000 pcs	7 inch	120,000 pcs	203×203×195	480,000 pcs	438×438×220	