

FEATURES

Ultra small mold type
Low V_F
High reliability

VOLTAGE RANGE

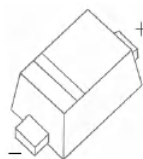
40 Volts

CURRENT

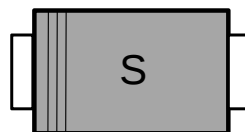
200mA

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any



SOD-523



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

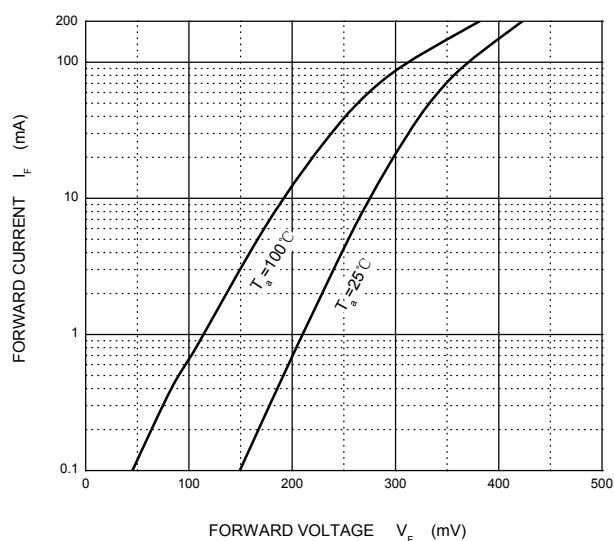
Symbol	Parameter	Value	Unit
V_{RM}	Non-repetitive peak reverse voltage	45	V
V_{RRM}	Peak repetitive reverse voltage	40	V
V_{RWM}	Working peak reverse voltage		
$V_{R(RMS)}$	RMS reverse voltage	28	V
I_O	Average rectified output current	200	mA
I_{FSM}	Non-repetitive peak forward surge current @ $t=8.3ms$	1	A
P_D	Power dissipation	150	mW
$R_{\theta JA}$	Thermal resistance from junction to ambient	667	°C/W
T_J	Operating Junction Temperature Range	-40~+125	°C
T_{stg}	Storage Temperature Range	-55~+150	°C

Characteristics at Ta = 25°C

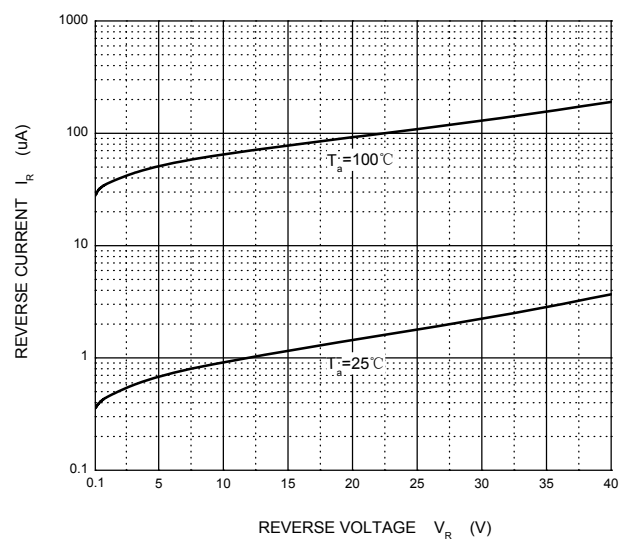
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	40			V
Reverse current	I_R	$V_R=10V$			20	μA
		$V_R=40V$			90	
Forward voltage	V_F	$I_F=10mA$	0.16		0.3	V
		$I_F=100mA$	0.31		0.45	
		$I_F=200mA$	0.41		0.54	

RATING AND CHARACTERISTIC CURVES

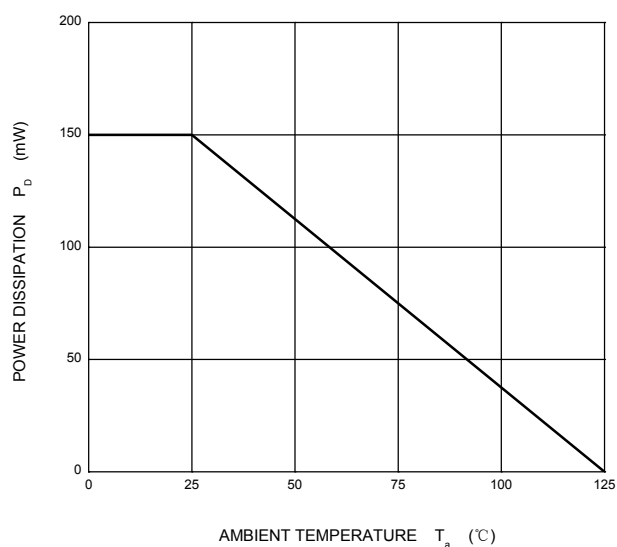
Forward Characteristics



Reverse Characteristics

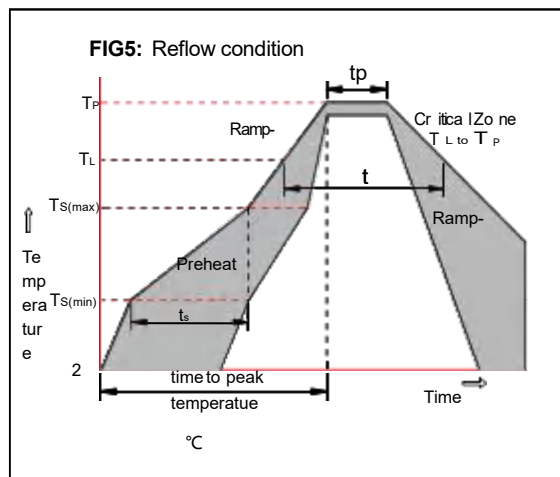


Power Derating Curve



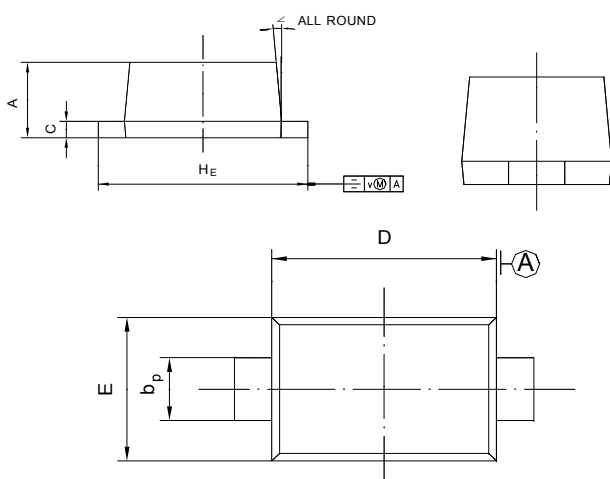
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

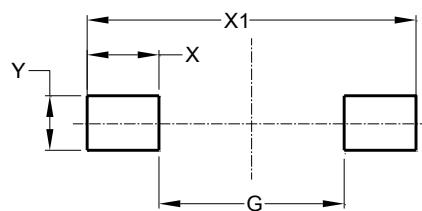


Package Dimensions & Suggested Pad Layout

SOD523



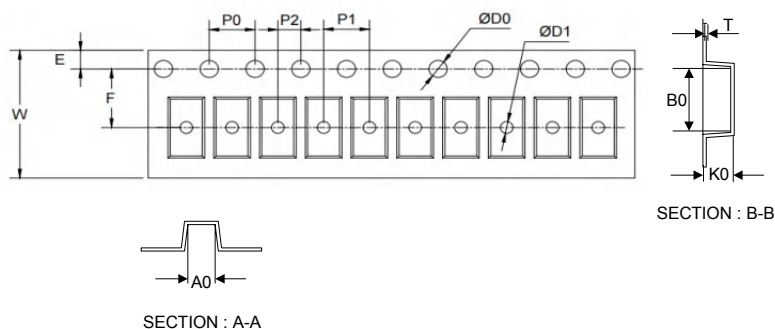
UNIT	A	b _p	C	D	E	H _E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°



Dimensions	Value (in mm)
G	0.85
X	0.70
X1	2.25
Y	0.80

Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	2.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	0.50±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	1.30±0.20
B0	2.35±0.20
K0	0.95±0.20
T	0.20±0.20
D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0
Quantity: 3000PCS	

7" Reel

