

Features

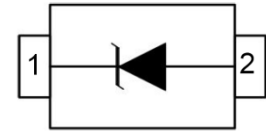
80Watts peak pulse power ($t_p = 8/20\mu s$)
 Bidirectional configurations
 Solid-state silicon-avalanche technology
 Low clamping voltage
 Low leakage current
 IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
 IEC 61000-4-4 (EFT) 40A (5/50ns)
 IEC 61000-4-5 (Lightning) 8A (8/20 μs)

Mechanical Data

SOD523 package
 Molding compound flammability rating: UL 94V-0
 Packaging: Tape and Reel
 RoHS/WEEE Compliant

Applications

Microprocessor based equipment
 Personal Digital Assistants (PDA's)
 Notebooks, Desktops, and Servers
 Portable Instrumentation
 Pagers Peripherals



SOD-523
Schematic & PIN Configuration

Absolute Maximum Rating

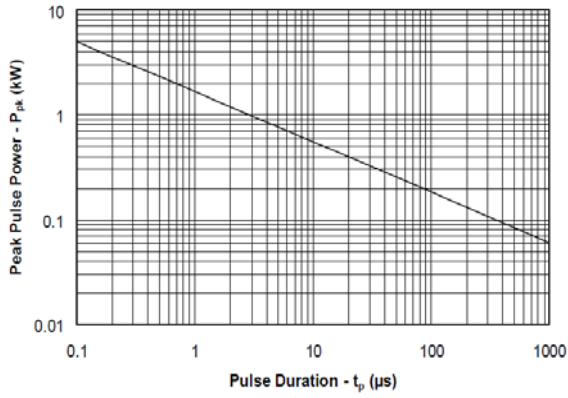
Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power ($t_p = 8/20\mu s$)	150	Watts
T_L	Lead Soldering Temperature	260(10sec)	$^{\circ}C$
T_J	Operating Temperature	-55 to +125	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

Electrical Characteristics

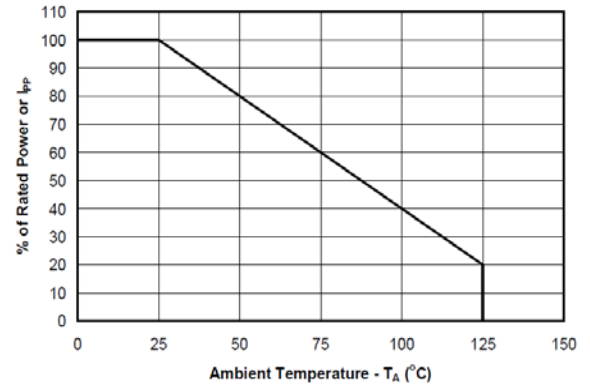
Parameter	Marking	VRWM @IR		VBR@ImA	VC@1A	VC@IPP		CJ
		V	μA	V	V	V	A	pF
			MAX	MIN	MAX	MAX		MAX
ESD5Z3.3T1G	ZE	3	1	4.8	8.8	14.5	12	120
ESD5Z5.0T1G	ZF	5	1	6.2	9.8	15.6	10	100
ESD5Z7.0T1G	ZH	7	1	8.2	13	19.6	8	80
ESD5Z12T1G	ZM	12	1	13.3	19	32.8	6	60

RATING AND CHARACTERISTIC CURVES

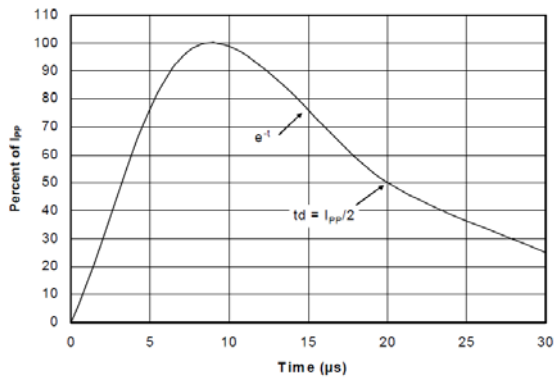
Non-Repetitive Peak Pulse Power vs. Pulse Time



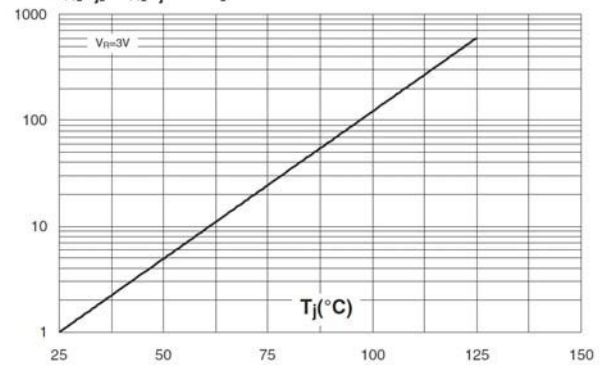
Power Derating Curve



Pulse Waveform



$I_R[T_J] / I_R[T_J=25^{\circ}\text{C}]$



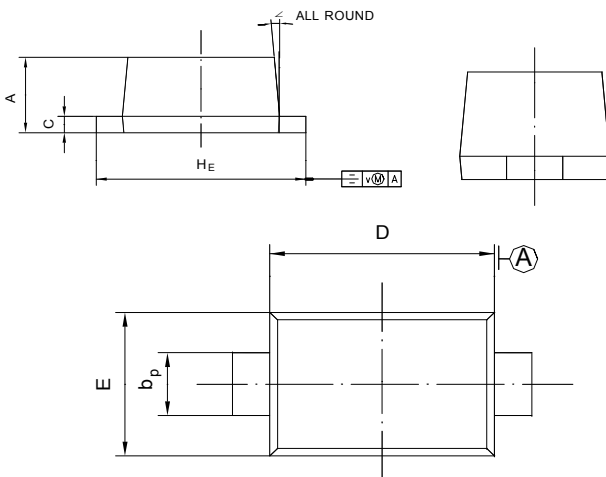
Soldering parameters

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

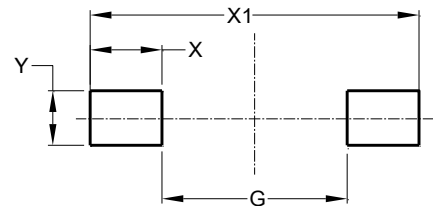


Package Dimensions & Suggested Pad Layout

SOD523



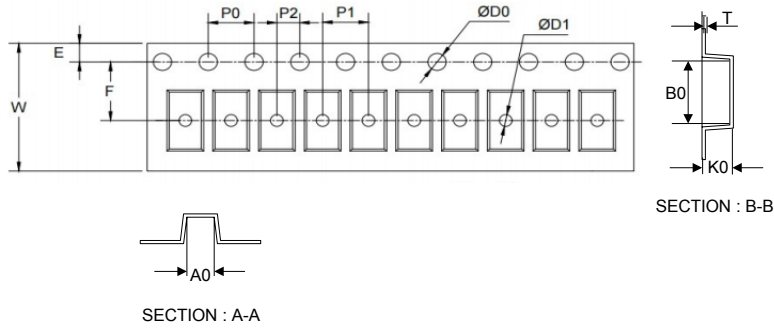
UNIT	A	b_P	C	D	E	H_E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°



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

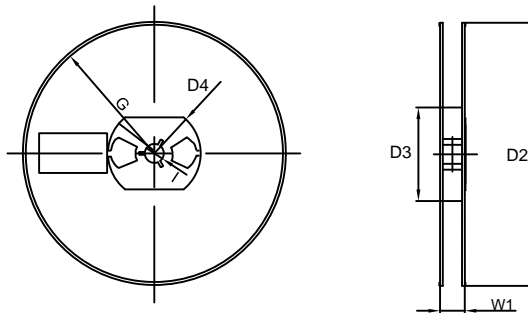
Tape & reel specification

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

7" Reel



Quantity: 3000PCS