

Features

100 W (8/20 μ s) Peak Pulse Power

Low Capacitance ESD Protection

SOD - 723 Package

RoHS Compliant

Matte Tin Lead finish (Pb-Free)

Protect One High Speed Data Line

Meet IEC61000-4-2 Level 4:

Contact Discharge > 30kV Air

Discharge > 30kV

Applications

Communication System

Portable Instrumentation

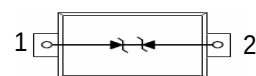
Audio and Video Equipment

Computers and Peripherals

USB 1.1, USB 1.0 Ports



SOD-723



Circuit Diagram

Absolute Maximum Rating

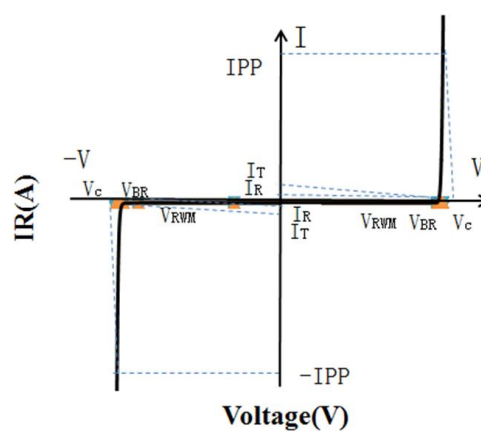
Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	100	W
IPP	Peak Pulse Current	7	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	30	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	30	kV
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C

Electrical Characteristics

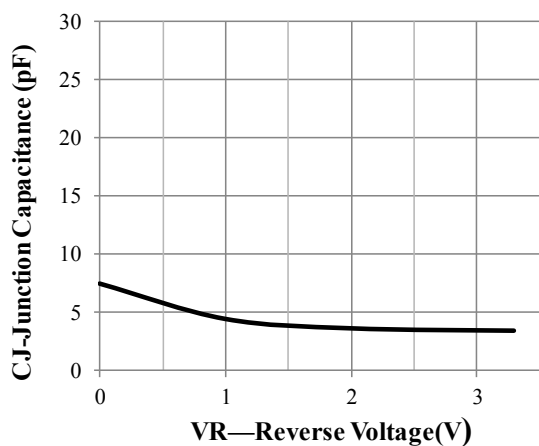
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6		9	V
IR	Reverse Leakage Current	$VRWM = 5\text{V}$			0.1	μA
VC	Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20 μs)			10	V
VC	Clamping Voltage	$I_{PP} = 7\text{A}$ (8/20 μs)		9	15	V
CJ	Capacitance	$VR = 0\text{V}$, $f = 1\text{MHz}$		8	15	pF

ElectricalParameter

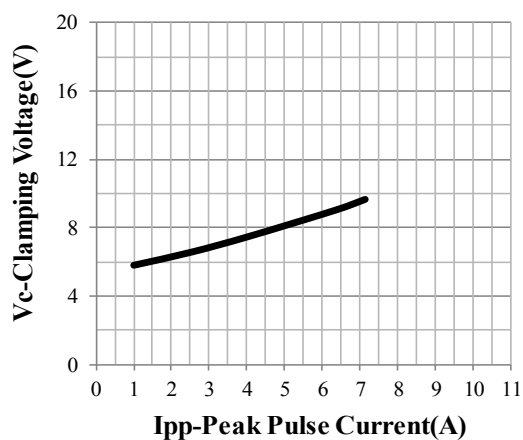
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_c	Clamping Voltage @ I_c



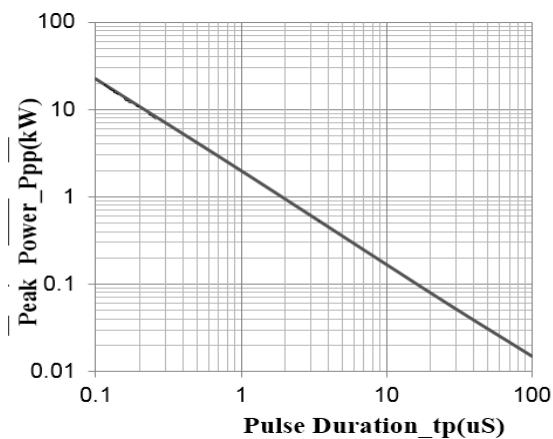
RATING AND CHARACTERISTIC CURVES



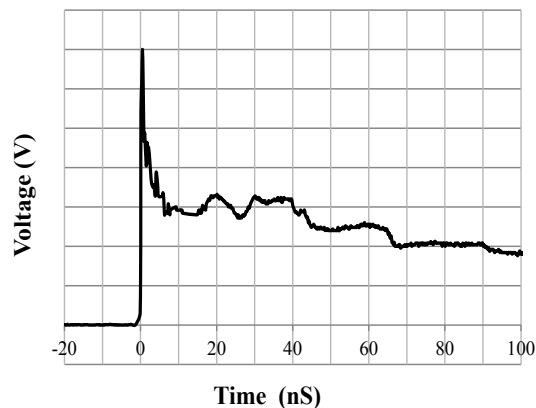
Junction Capacitance vs. Reverse Voltage



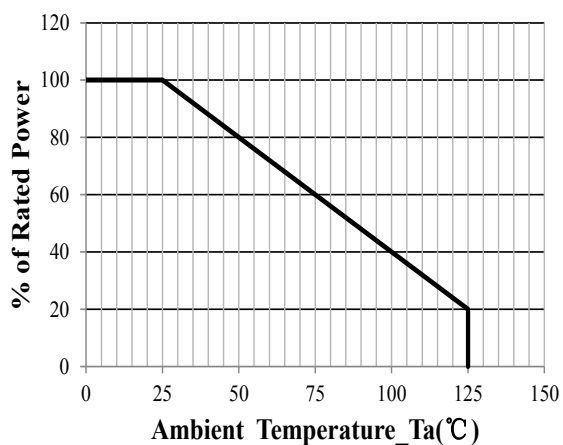
Clamping Voltage vs. Peak Pulse Current



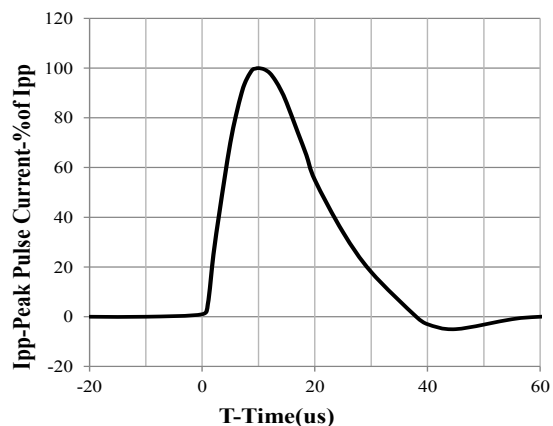
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



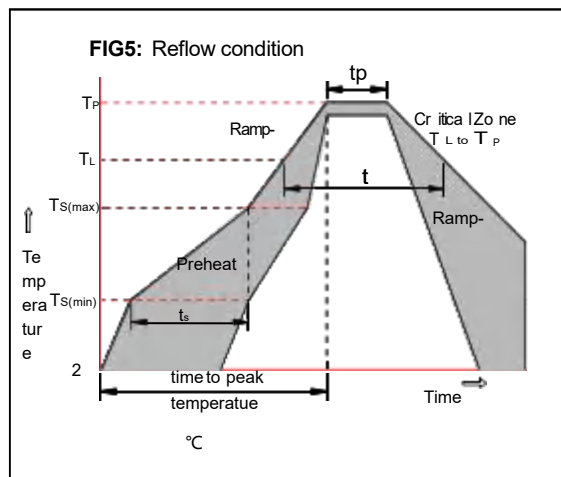
Power Derating Curve



8 X 20us Pulse Waveform

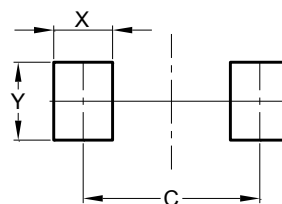
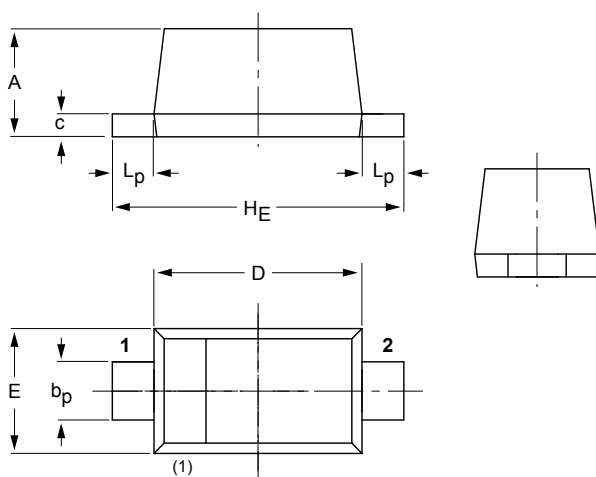
Soldering parameters

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

SOD-723

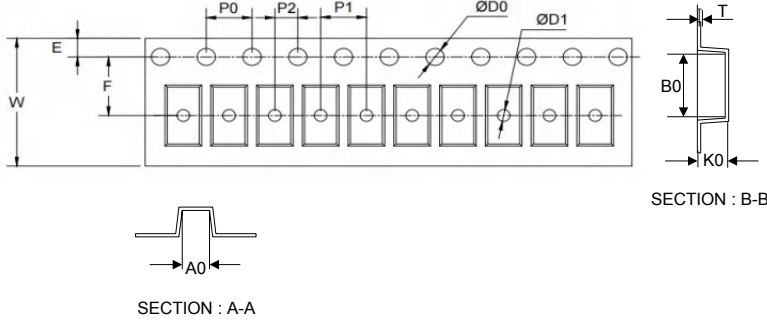
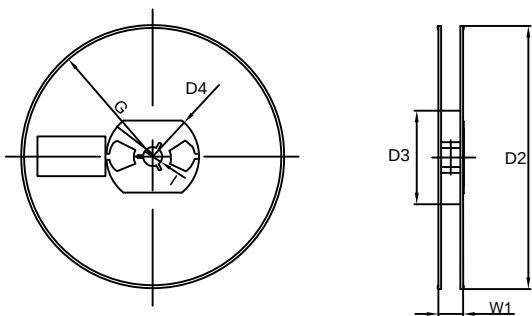
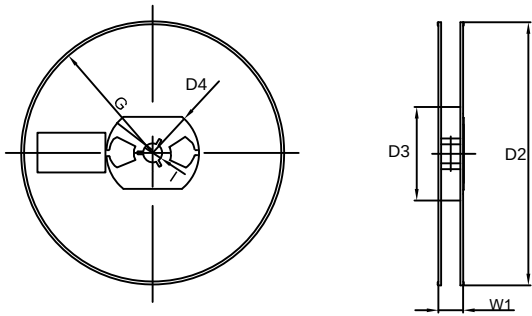


Dimensions	Value (in mm)
C	1.20
X	0.60
Y	0.70

DIMENSIONS (mm are the original dimensions)

UNIT	A	b _P	c	D	E	H _E	L _P
mm	0.55 0.49	0.32 0.25	0.15 0.08	1.05 0.95	0.65 0.55	1.45 1.35	0.27 0.13

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	1.00±0.20
		B0	1.85±0.20
		K0	0.90±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
7" Reel		D4	24.6±2.0
		G	82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 5000PCS	
7" Reel		D2	177.0±5.0
		D3	55Min.
		D4	24.6±2.0
		G	82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 8000PCS	