

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

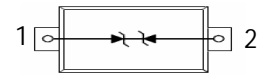


Applications

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

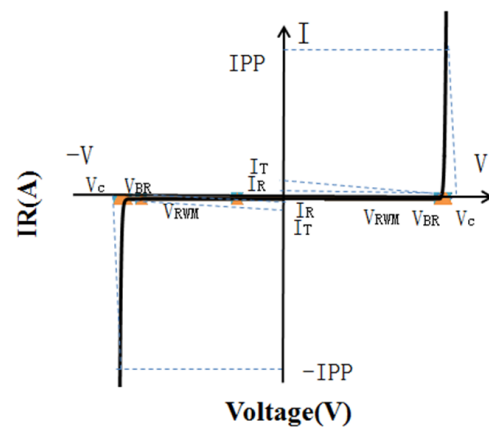
Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	100	W
IPP	Peak Pulse Current	7	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	30	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	30	kV
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C

Electrical Characteristics

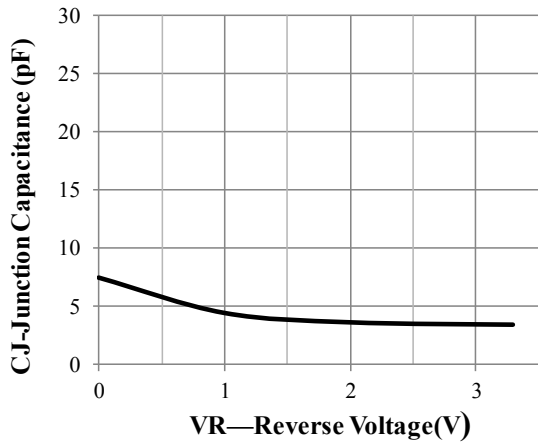
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6		9	V
IR	Reverse Leakage Current	VRWM = 5V			0.1	μA
VC	Clamping Voltage	IPP = 1A (8/20 μs)			10	V
VC	Clamping Voltage	IPP = 7A (8/20 μs)		9	15	V
CJ	Capacitance	VR =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

ElectricalParameter

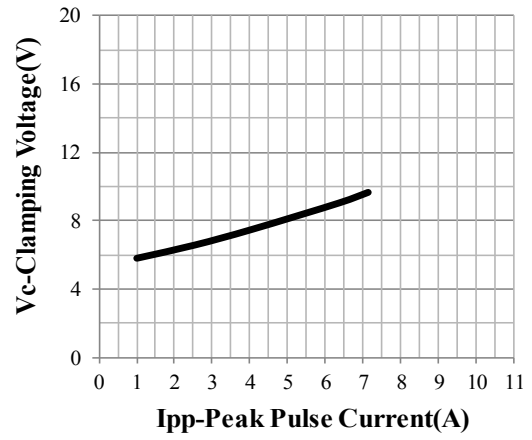
Symbol	Parameter
I_T	Test Current
IPP	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @Ic



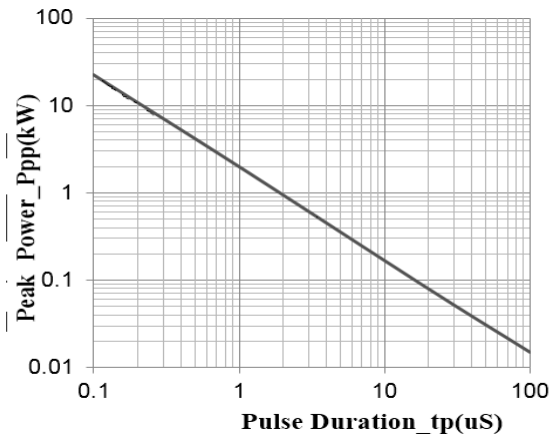
RATING AND CHARACTERISTIC CURVES



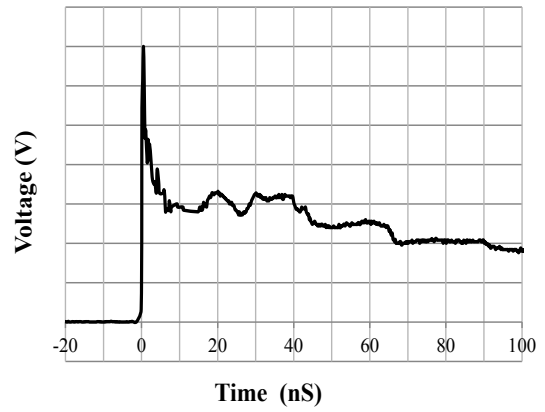
Junction Capacitance vs. Reverse Voltage



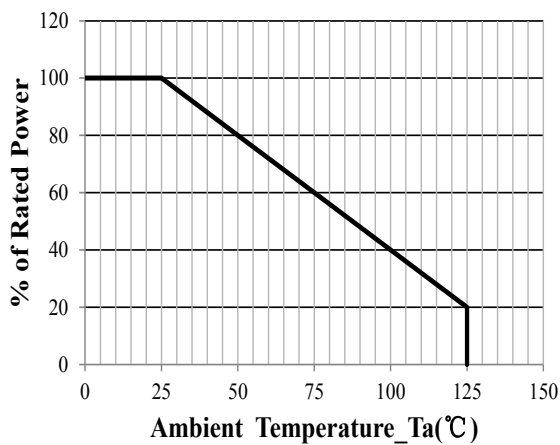
Clamping Voltage vs. Peak Pulse Current



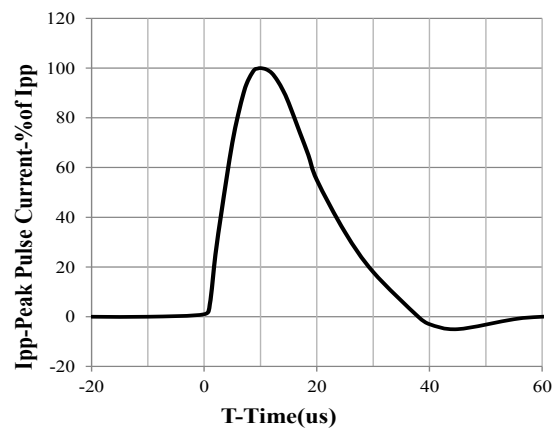
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20us Pulse Waveform

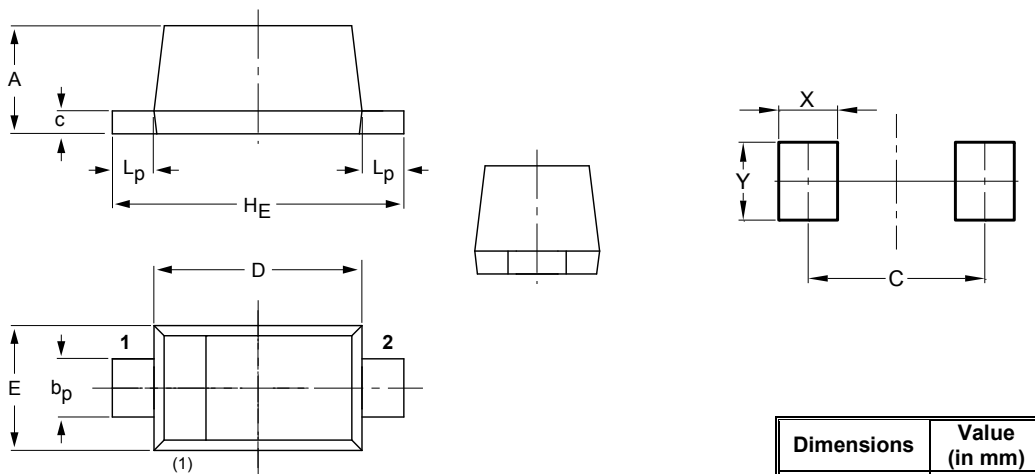
Soldering parameters

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

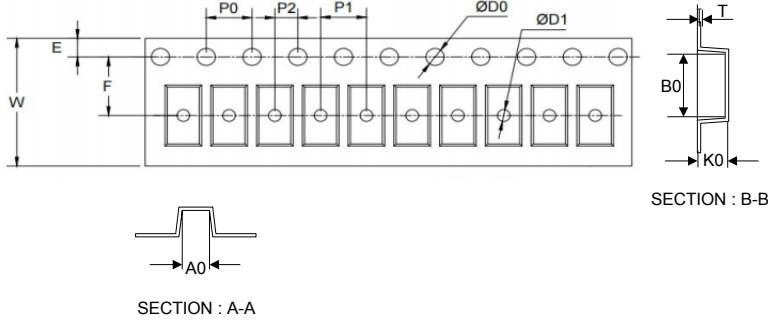
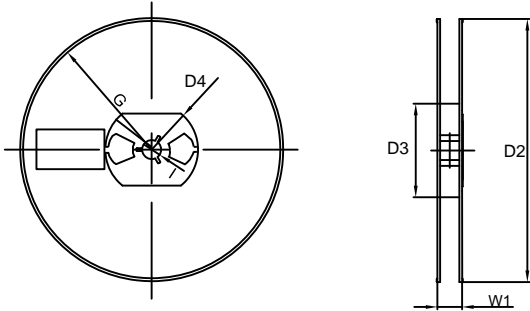
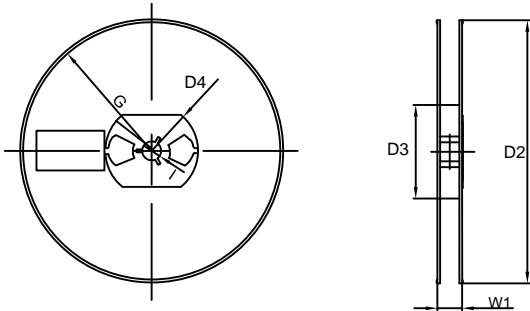


DIMENSIONS (mm are the original dimensions)

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

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

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	
	<p>7" Reel</p> 	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: 5000PCS			
<p>7" Reel</p> 	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: 8000PCS		