

SOD-323 Plastic-Encapsulate ESD Protection Diodes

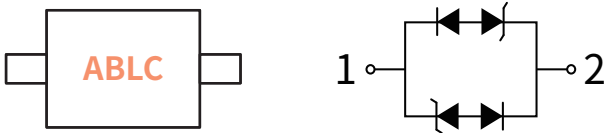
Features

- Low leakage current
- SOD-323 surface mount package
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 20A

Applications

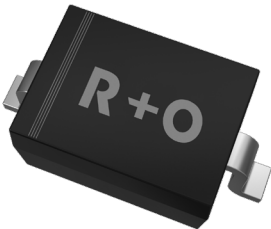
- LED Lighting Modules
- RS232/RS485
- CAN and LIN Bus
- Portable Instrumentation
- General Purpose I/O

Function Diagram



Reverse Working Voltage
12V Max.
Small capacitance
1.5pF(Max.)

SOD-323

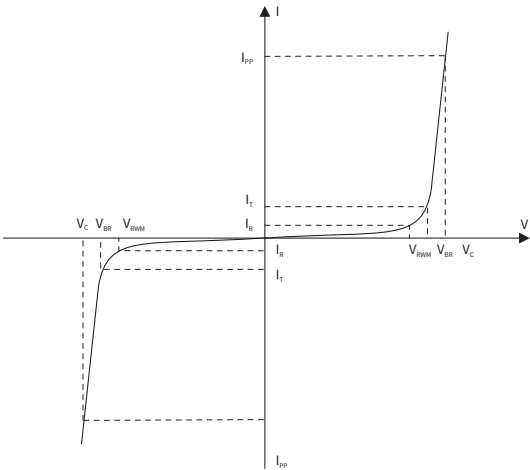


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
VESD	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	±30	KV
		ESD per IEC 61000-4-2(Contact)	±30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	640	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	20	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

Electrical Parameter

SYMBOL	PARAMETER
V _C	Clamping Voltage @ I _{PP}
V _{BR}	Breakdown Voltage @ I _T
I _{PP}	Peak Pulse Current
I _T	Test Current
I _R	Reverse Leakage Current @ VRWM
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
C _J	Junction Capacitance @ V _R =0V,f=1MHz
I _F	Forward Current
V _F	Forward Voltage @I _F



● Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^{\circ}C$	—	—	12	V
Breakdown Voltage	V_{BR}	$I_R=1mA, T_a=25^{\circ}C$	13.3	—	16.5	V
Reverse Leakage Current	I_R	$V_R=12V, T_a=25^{\circ}C$	—	—	1.0	μA
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$	—	—	20	V
		$I_{PP}=15A, t_p=8/20\mu s$	—	—	28	
		$I_{PP}=20A, t_p=8/20\mu s$	—	—	32	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	—	—	1.5	pF

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

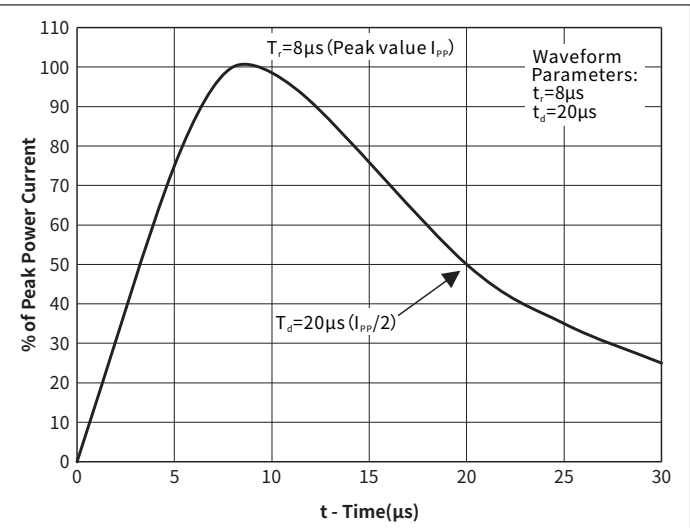


Fig.1 Pulse Waveform

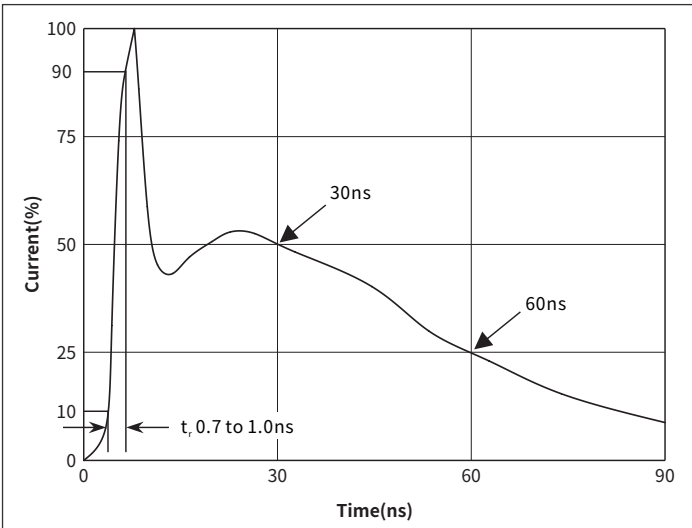


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)



Fig.3 Peak Pulse Power vs. Pulse Time

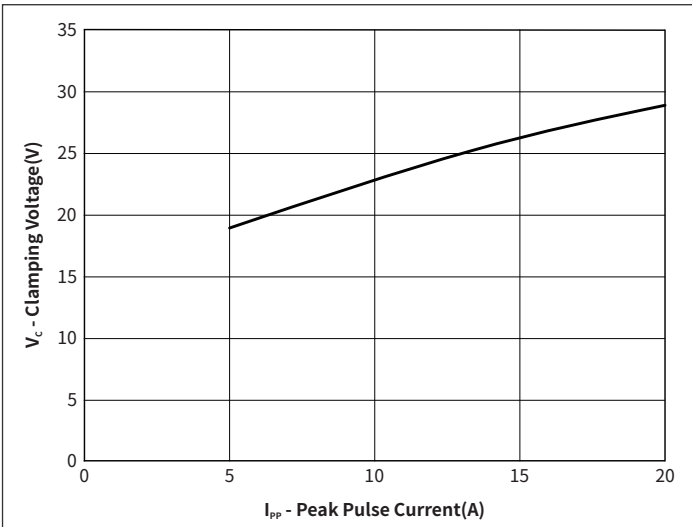
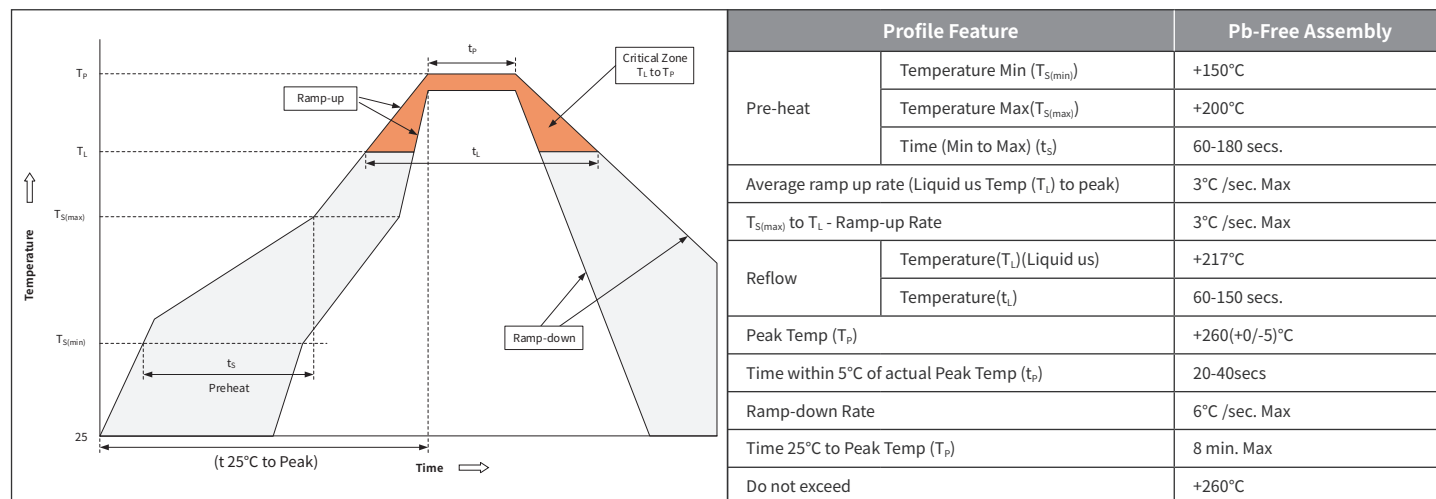


Fig.4 Clamping Voltage vs. Peak Pulse Current

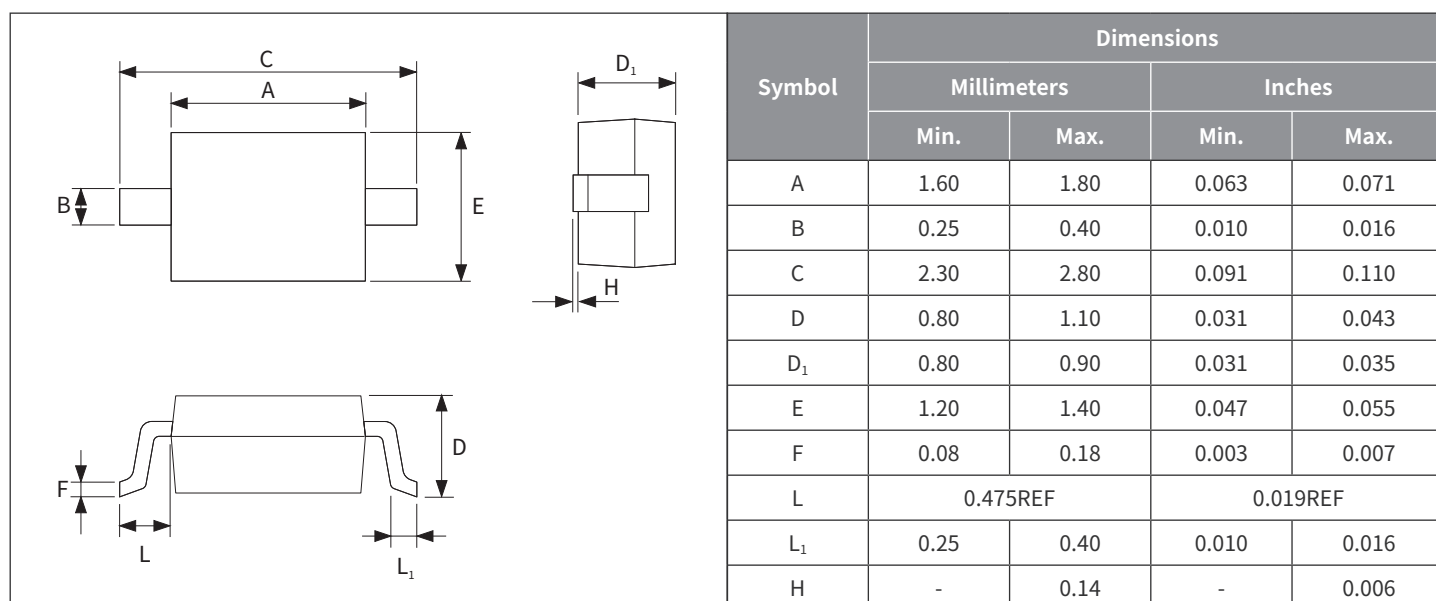
Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	45000	180000	7"

Recommended Soldering Conditions



Package Outline Dimensions (SOD-323)



Suggested Pad Layout

