

SD32303 THRU SD32324 TVS ARRAY



Features

- Protects 3.3,5,12,15,24V Components
- Unidirectional
- 300 W @8/20 us
- Protects 1 Lines
- SOD-323 Packaging
- This is a Pb-free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Description

The SD323XX series of TVS array have been designed to provide unidirectional protection for sensitive electronics from damage due to voltage transients caused by electrostatic discharge (ESD), electrical fast transients(EFT), Lightning and other voltage-induced transient events. The device can be used protect combinations of four unidirectional lines.

Application

- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants(PDA's)
- Portable instrumentation
- Pagers peripherals

Schematic & Pin Configuration



Mechanical Characteristics

- SOD-323, Surface Mount Package
- Packaging: Tape & Reel per EIA 481

Maximum Ratings@T_A=25° C unless otherwise specified

Parameter	Symbol	Value	Units
Peak Pulse Power (tp=8/20 μ s)	P _{pp}	300	W
Operating Temperature	T _J	-55 to 125	° C
Storage Temperature	T _{STG}	-55 to 150	° C
Lead Soldering Temperature	T _L	260(10 sec)	° C

Electrical Characteristics@T_A=25°C unless otherwise specified

Part Name	Marking Code	Stand-off Voltage V _{WM} (V) Max	Breakdown Voltage V _{BR} @1mA (V) Min	Clamping Voltage V _C @ 1 A (V) Max	Leakage Current I _r @V _{WM} (uA) Max	Capacitance (f=1MHz) @0V (pF) Max	Temperature Coefficient Of V _{BR} A(V _{BR}) Mv/° C Max
SD32303	S03	3.3	4	7	200	800	-3
SD32305	S05	5.0	6	9.8	20	600	3
SD32312	S12	12.0	13.3	19	1	185	10
SD32315	S15	15.0	16.7	24	1	140	13
SD32324	S24	24.0	26.7	43	1	90	30

Ratings and Characteristics Curves

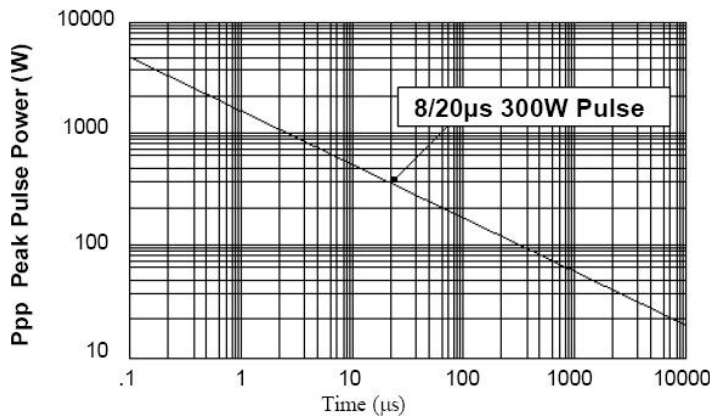


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

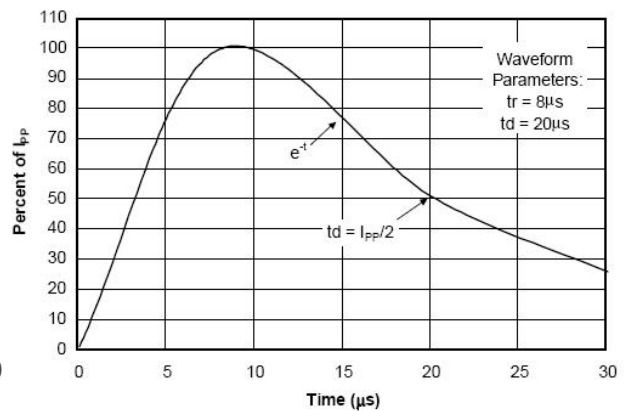


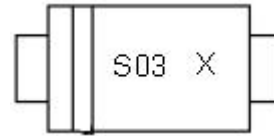
Figure 2. Pulse Wave Form

Ordering Information

Device	Package	Shipping
SD32303 THRU SD32324	SOD-323 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

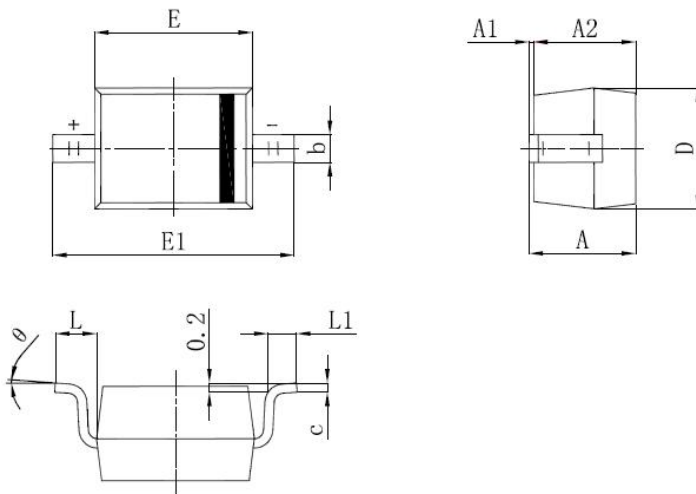
Marking Diagram



S03 = Marking Code

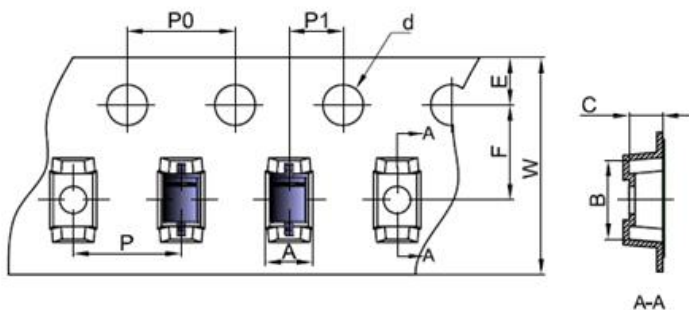
X = Data Code

Mechanical Dimensions SOD-323



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.700	0.098	0.106
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Carrier Tape Specification SOD-323



SYMBOL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..