THE DATASHEET OF

S23LC15

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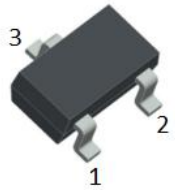
Technical Data
Data Sheet N0292, Rev. A

S23LC03 THRU S23LC24 TVS ARRAY

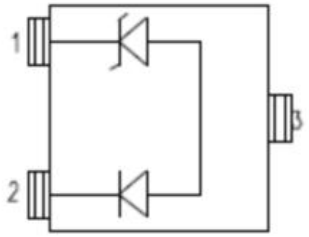


SOT-23

Description

The S23LCXX 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), secondary lightning and other voltage-induced transient events. The device can be used to protect 1 unidirectional or interface line.

Schematic & Pin Configuration



Features

- Protects 3.3,5,12,15,24 V Components
- Unidirectional
- Ultra Low Capacitance 3 pF
- Low Leakage
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 1 Line
- SOT-23 Packaging
- "-A" is an AEC-Q101 qualified device
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Characteristics

- SOT-23 Surface Mount Package
- Approximate Weight: 0.015 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tape and Reel Per EIA 481

Application

- RS-232, RS-422 & RS-423
- Cellular Handsets & Accessories
- Universal Serial Bus (USB) Port Protection
- Portable Electronics
- LAN/WAN Equipment
- Wireless Bus Protection

Maximum Ratings@T_A=25°C unless otherwise specified

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 µs Wave shape	P	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

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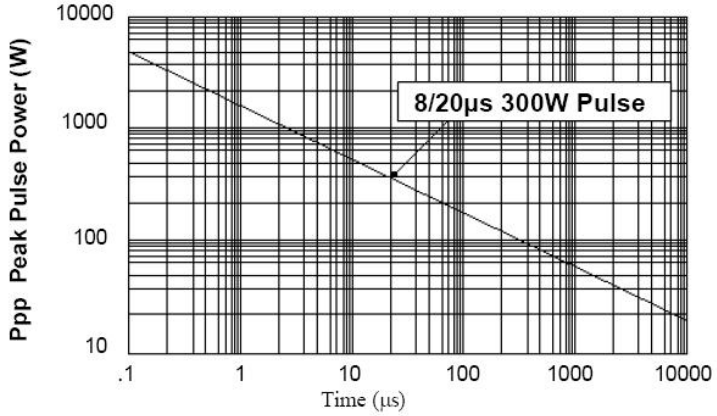
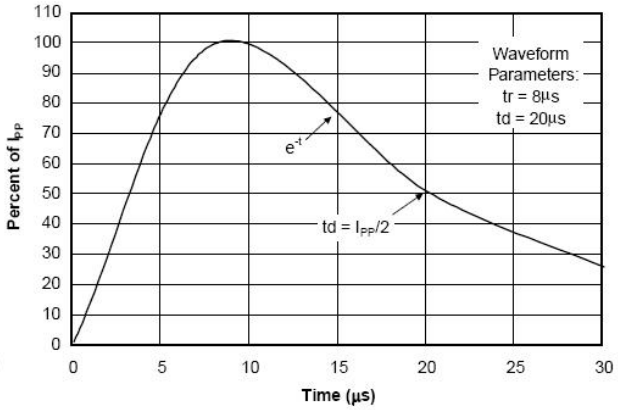
Electrical Characteristics@T_A=25°C unless otherwise specified

Part Number	Device Code	Stand-off Voltage Vwm (V) Max	Breakdown Voltage V_{BR} @1mA (V) Min	Clamping Voltage Vc @ 1 A (V) Max	Leakage Current I_R @ Vwm (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V_{BR} a(V_{BR}) mv/°C Max
S23LC03	03L	3.3	4	8	200	3	-5
S23LC05	05L	5.0	6	10.8	20	3	3
S23LC12	12L	12.0	13.3	19	1	3	10
S23LC15	15L	15.0	16.7	25	1	3	13
S23LC24	24L	24.0	26.7	44	1	3	30

* Pulse width < 300 µs, duty cycle < 2%

Ratings and Characteristics Curves



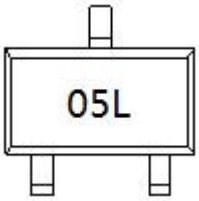


Ordering Information

Device	Package	Shipping
S23LC03 THRU S23LC36	SOT-23 (Pb-Free)	3000pcs / reel
S23LC03TR THRU S23LC36TR	SOT-23 (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



05L = Device Code

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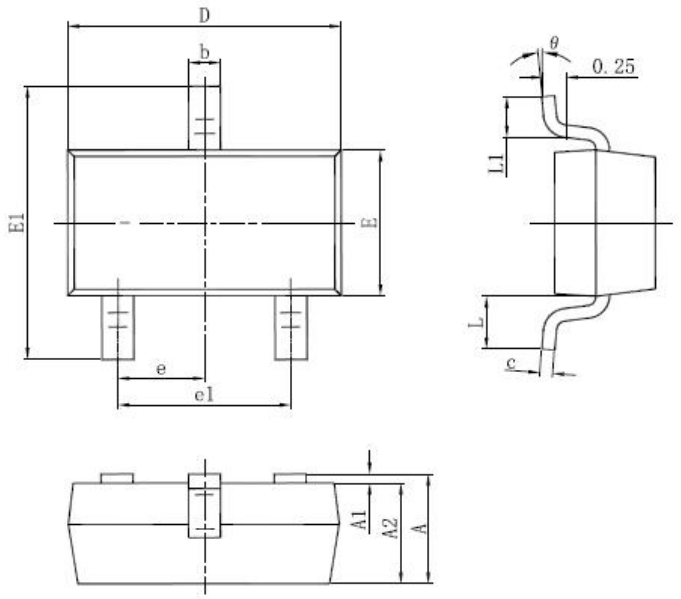
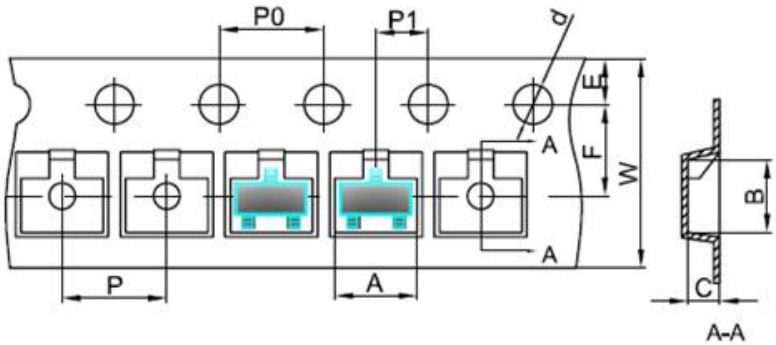
Mechanical Dimensions SOT-23



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Carrier Tape Specification SOT-23



SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
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

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