

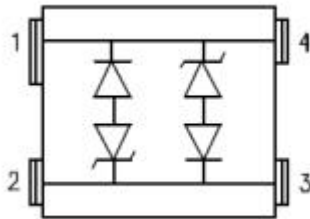
## S43LCC0403 THRU S43LCC0424 TVS ARRAY



### Description

The S43LCCXX series of TVS array have been designed to provide bidirectional 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 bidirectional or interface line.

### Schematic & Pin Configuration



### Features

- Protects 3.3,5,12,15,24 V Components
- Bidirectional
- Ultra Low Capacitance 15 pF
- Ultra Low Leakage
- Provides Electrically Isolated Protection
- 500 W @ 8/20 us
- Protects 1 Line
- “-A” is an AEC-Q101 qualified device
- SOT-143 Packaging
- 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-143 Surface Mount Package
- Approximate Weight: 0.03 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tape and Reel Per EIA 481

### Application

- LAN/WAN Equipment
- Cellular Phone
- Notebooks, Desktops, & Servers
- Audio/Video Inputs
- Handheld Electronics
- Fire Wire, SCSI & USB interfaces

### Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 $\mu\text{s}$ Wave shape	P	500	W
Operating Temperature	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Lead Soldering Temperature	$T_L$	260 (10 Sec.)	$^\circ\text{C}$

**Electrical Characteristics@T<sub>A</sub>=25°C unless otherwise specified**

Part Number	Device Code	Stand-off Voltage V <sub>wm</sub> (V) Max	Breakdown Voltage V <sub>BR</sub> @1mA (V) Min	Clamping Voltage V <sub>c</sub> @ 1 A (V) Max	Leakage Current I <sub>R</sub> @ V <sub>wm</sub> (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V <sub>BR</sub> a(V <sub>BR</sub> ) mv/°C Max
S43LCC0403	L03	3.3	4	8	200	15	-5
S43LCC0405	L05	5.0	6	10.8	40	15	1
S43LCC0412	L12	12.0	13.3	19	1	15	8
S43LCC0415	L15	15.0	16.7	24	1	15	11
S43LCC0424	L24	24.0	26.7	43	1	15	28

**Ratings and Characteristics Curves**

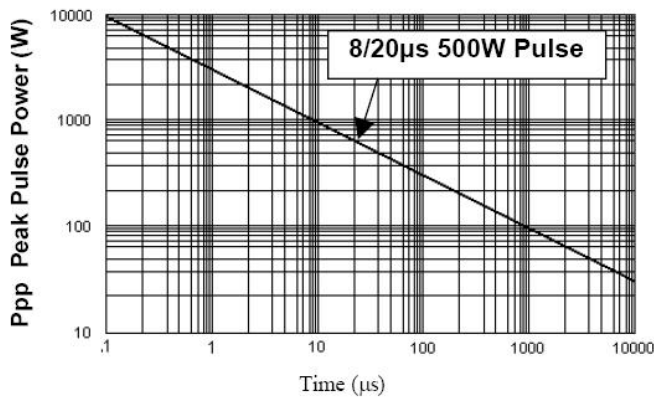


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

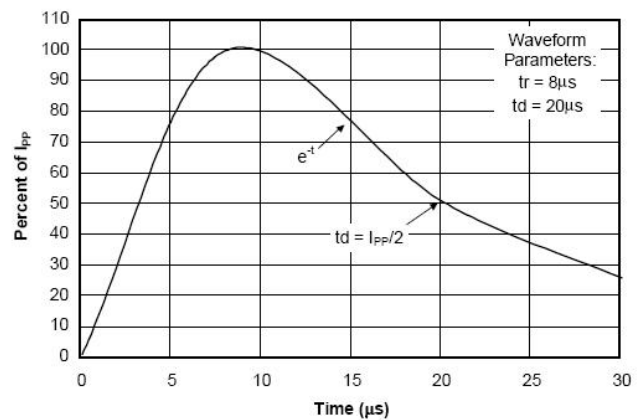
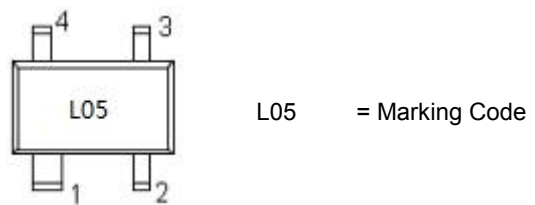


Figure 2. Pulse Wave Form

**Ordering Information**

Device	Package	Shipping
S43LCC0403 THRU S43LCC0424	SOT-143 (Pb-Free)	3000pcs / reel
S43LCC0403TR THRU S43LCC0424TR	SOT-143 (Pb-Free)	3000pcs / reel

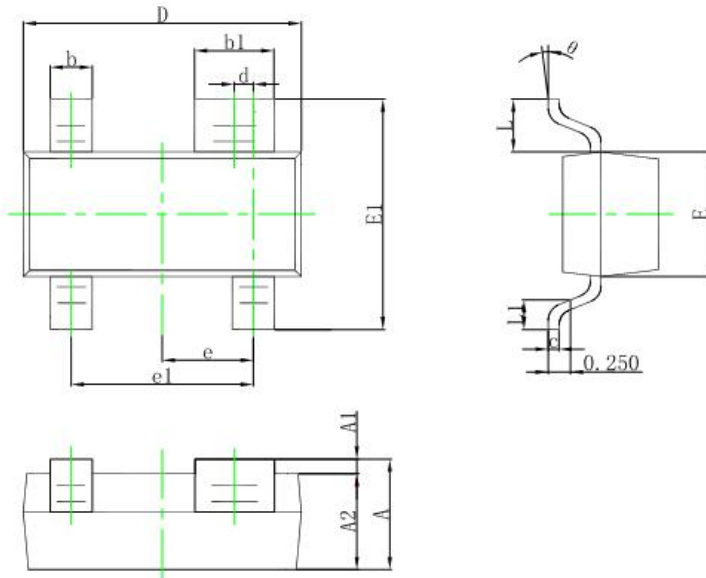
**Marking Diagram**



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

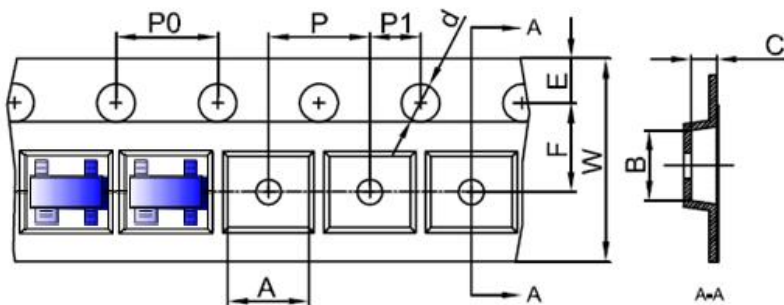
- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Mechanical Dimensions SOT-143**



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-143**



SYMBOL	Millimeters	
	Min.	Max.
A	3.09	3.29
B	2.70	2.90
C	1.21	1.41
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	8.10

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