# SANGDEST

### **MICROELECTRONICS**

# **Technical Data**

## Data Sheet N0303, Rev. -

### FEATURES

- Protects 3.3, 5, 12, 15, 24 V Components
- ~ Bidirectional
- Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20 μs
- ✓ Protects 4 Lines
- ✓ SO-8 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 SMDAXXC 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), lightning and other voltage-induced transient events. The device can be used to protect combinations of four bidirectional lines.

### SCHEMATIC & PIN CONFIGURATION

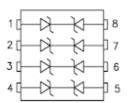
MECHANICAL CHARACTERISTICS

SO-8 Surface Mount Package

Approximate Weight: 0.1 grams

PIN #1 Indicator: DOT on top of package

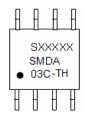
Packaging: Tubes or Tape & Reel per EIA



### APPLICATION

- RS-232 & RS-422 Data Lines
- Microprocessor Based Equipment
- Notebooks, Desktops, & Servers
- ✓ LAN/WAN Equipment
- Serial and Parallel Port ~
- Peripherals

## **MARKING DIAGRAM**



Cautions: Molding resin Epoxy resin UL:94V-0 Where XXXXX is YYWWL

SMDA03C-TH	H = Part Name
S	= S
YY	= Year
WW	= Week
L	= Lot Number

# TVS ARRAY SERIES

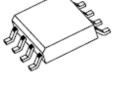
SO-8



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✓

Standard 481





# SMDA03C-TH THRU SMDA24C-TH

Technical Data Data Sheet N0303, Rev. -

## **Green Products**

# **Ordering Information:**

Device	Package	Shipping
SMDA03C-TH THRU SMDA24C-TH	SO-8 (Pb-Free)	2500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

ABSOLUTE MAXIMUM RATINGS					
Symbol	Parameter	Value	Unit		
Р	Peak Pulse Power, 8/20 μs Waveshape	300	W		
TJ	Operating Temperature	-55 to +125	°C		
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C		
TL	Lead Soldering Temperature	260 (10 Sec.)	°C		

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## SANGDEST MICROELECTRONICS

# SMDA03C-TH THRU SMDA24C-TH

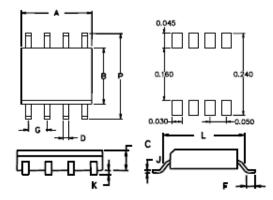
**Green Products** 

Technical Data Data Sheet N0303, Rev. -

## ELECTRICAL CHARACTERISTICS @ 25 °C

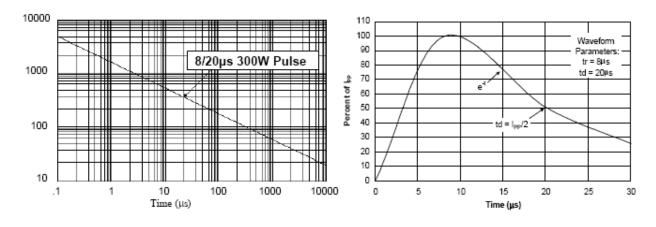
Part Number	Stand-off	Breakdown	Clamping	Leakage	Capacitance	Temperature
	Voltage	Voltage	Voltage	Current	(f = 1MHz)	Coefficient
		VBR	Vc	I <sub>R</sub>	С	of V <sub>BR</sub>
	Vwm	@1mA	@1A	@ V <sub>wm</sub>	@ 0V	a(V <sub>BR</sub> )
	(v)	(V)	(V)	(μA)	(pF)	mv/°C
	Max	Min	Max	Max	Max	Max
SMDA03C-TH	3.3	4	7	100	400	-5
SMDA05C-TH	5.0	6	9.8	20	300	1
SMDA12C-TH	12.0	13.3	19	0.5	94	8
SMDA15C-TH	15.0	16.7	24	0.5	70	11
SMDA24C-TH	24.0	26.7	43	0.5	45	28

### PACKAGE OUTLINES & DEMENSIONS



	INCHES		MILLIM	ETERS
DIM	MIN.	MAX	MIN.	MAX.
A	0.189	0.196	4.8	5.0
В	0.150	0.157	3.8	4.0
С	0.053	0.069	1.35	1.75
D	0.011	0.021	0.28	0.53
F	0.016	0.050	0.41	1.27
G	0.050 BSC		1.27 BSC	
J	0.006	0.010	0.15	0.25
K	0.004	0.008	0.10	0.20
L	0.189	0.206	4.80	5.23
Р	0.228	0.244	5.79	6.19

## TYPICAL CHARACTERISTICS



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

Figure 2. Pulse Wave Form

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### **Green Products**

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