

## SANGDEST MICROELECTRONICS

# SMDA03C THRU SMDA24C

# Technical Data

# Data Sheet N0297, 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

Standard 481

Approximate Weight: 0.1 grams

PIN #1 Indicator: DOT on top of package

Packaging: Tubes or Tape & Reel per EIA

SO-8



## APPLICATION

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

Cautions: Molding resin

# MARKING DIAGRAM



Epoxy resin UL:94V-0

Where XXXXX is YYWWL

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

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# Green Products

# TVS ARRAY SERIES



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#### **Green Products**

# **Ordering Information:**

Device	Package	Shipping
SMDA03C THRU SMDA24C	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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### **Green Products**

ELECTRICAL CHARACTERISTICS @ 25 °C						
Part Number	Stand-off	Breakdown	Clamping	Leakage	Capacitance	Temperature
	Voltage	Voltage	Voltage	Current	(f = 1MHz)	Coefficient
		VBR	Vc	l <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	3.3	4	7	200	400	-5
SMDA05C	5.0	6	9.8	40	300	1
SMDA12C	12.0	13.3	19	1	94	8
SMDA15C	15.0	16.7	24	1	70	11
SMDA24C	24.0	26.7	43	1	45	28

#### PACKAGE OUTLINES & DEMENSIONS



	INCHES		MILLIM	METERS	
DIM	MIN.	MAX	MIN.	MAX.	
Α	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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