SANGDEST
MICROELECTRONICS

S2303
THRU
S2336

Technical Data
Data Sheet N0291, Rev. -

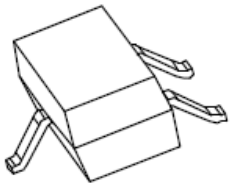
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TVS ARRAY SERIES

FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 , 36V Components
- ✓ Unidirectional or Bidirectional
- ✓ Low Leakage
- ✓ Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20 μs
- ✓ Protects 1 or 2 Lines
- ✓ SOT-23 Packaging
- ✓ This is a Pb - Free Device
- ✓ All SMC parts are traceable to the wafer lot
- ✓ Additional testing can be offered upon request

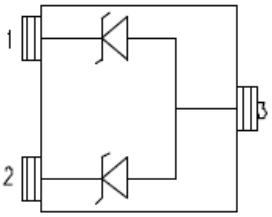
SOT-23



DESCRIPTION

The S23XX series of TVS array have been designed to provide unidirectional or 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 2 unidirectional or 1 bidirectional data line or interface line.

SCHEMATIC & PIN CONFIGURATION



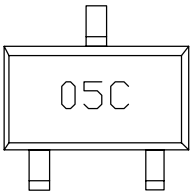
APPLICATION

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

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

MARKING DIAGRAM



Where 05C is S2305

05C = Part Name

Cautions: Molding resin
Epoxy resin UL:94V-0

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Ordering Information:

Device	Package	Shipping
S2303 THRU S2336	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.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
P	Peak Pulse Power, 8/20 μs Waveshape	300	W
T_J	Operating Temperature	-55 to +125	°C
T_{STG}	Storage Temperature	-55 to +150	°C
T_L	Lead Soldering Temperature	260 (10 Sec.)	°C

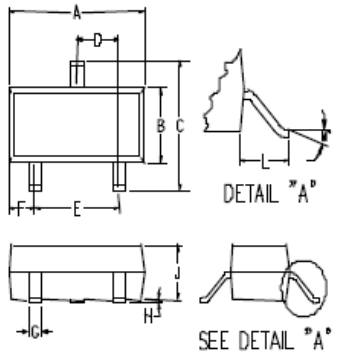
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ELECTRICAL CHARACTERISTICS @ 25 °C

Part Number	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} (μA) Max	Capacitance C @ 0V 1MHz (pF) Pin 1-3 or 2-3 Max	Capacitance C @ 0V 1MHz (pF) Pin 1- 2 Max
S2303	3.3	4	8	200	600	300
S2305	5.0	6	10.8	20	400	200
S2312	12.0	13.3	19	0.1	160	80
S2315	15.0	16.7	25	0.1	130	65
S2324	24.0	26.7	44	0.1	80	40
S2336	36.0	40.0	60	0.1	50	28

PACKAGE OUTLINES & DEMENSIONS



	INCHES		MILLIMETERS	
DIM	MIN.	MAX	MIN.	MAX.
A	0.110	0.119	2.794	3.023
B	0.047	0.055	1.194	1.397
C	0.083	0.104	2.108	2.642
D	0.035	0.040	0.889	1.016
E	0.070	0.081	1.778	2.057
F	0.017	0.024	0.432	0.610
G	0.014	0.020	0.356	0.508
H	0.005	0.004	0.013	0.102
J	0.034	0.040	0.864	1.016
K	0.003	0.007	0.076	0.178
L	-	0.022	-	0.559
M	-	8°	-	8°

TYPICAL CHARACTERISTICS

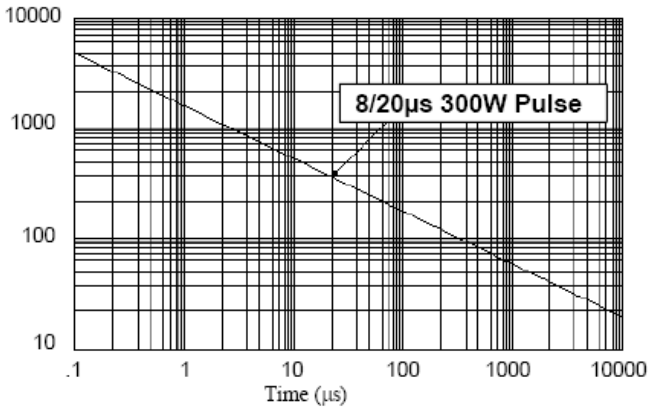


Figure 1. Peak Pulse Power Vs Pulse Time (μs)

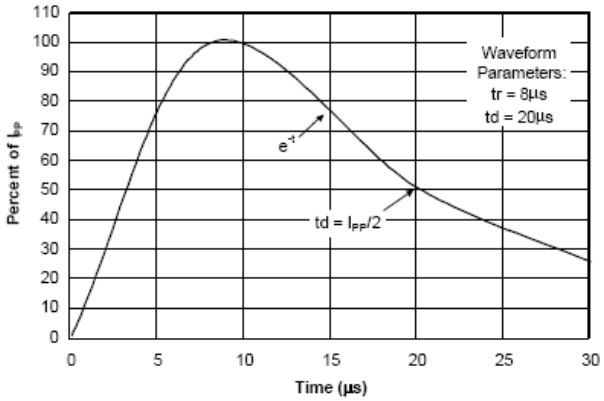


Figure 2. Pulse Wave Form

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