SENSITRON
SEMICONDUCTOR

S1603-8 thru S1624-8

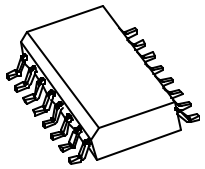
TECHNICAL DATA
DATA SHEET 1916, REV. -

TVS ARRAY SERIES

FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Unidirectional
- ✓ Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20 μs
- ✓ Protects 8 Lines
- ✓ SO-16 Packaging

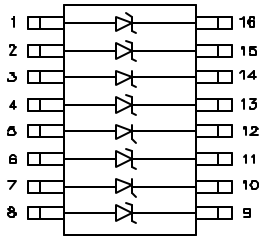
SO-16



DESCRIPTION

The S16XX-8 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), lightning and other voltage-induced transient events. The device can be used to protect combinations of 8 unidirectional lines up to 24 volts.

SCHEMATIC & PIN CONFIGURATION



APPLICATION

- ✓ RS-232, RS-422, & RS-449 Interfaces
- ✓ WAN/LAN Equipment
- ✓ Wireless Communication Circuits
- ✓ Ethernet – 10/100 Base T

MECHANICAL CHARACTERISTICS

- ✓ SO-16 Surface Mount Package
- ✓ Approximate Weight: 0.13 grams
- ✓ Marking: Device number, Date code, & Logo
- ✓ PIN #1 Indicator: DOT on top of package
- ✓ Packaging: Tubes or Tape & Reel per EIA Standard 481

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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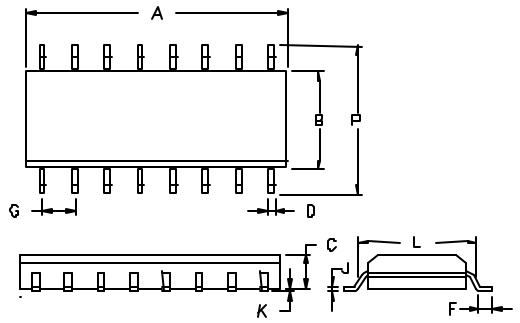
ELECTRICAL CHARACTERISTICS @ 25 °C

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 (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V_{BR} a(V_{BR}) mv/°C Max
S1603-8	3.3	4	7	200	800	-3
S1605-8	5.0	6	9.8	20	600	3
S1612-8	12.0	13.3	19	1	185	10
S1615-8	15.0	16.7	24	1	140	13
S1624-8	24.0	26.7	43	1	90	30

PACKAGE OUTLINES & DEMENSIONS



	INCHES		MILLIMETERS	
DIM	MIN.	MAX	MIN.	MAX.
A	0.358	0.398	9.09	10.10
B	0.150	0.157	3.8	4.0
C	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
P	0.228	0.244	5.79	6.19

TYPICAL CHARACTERISTICS

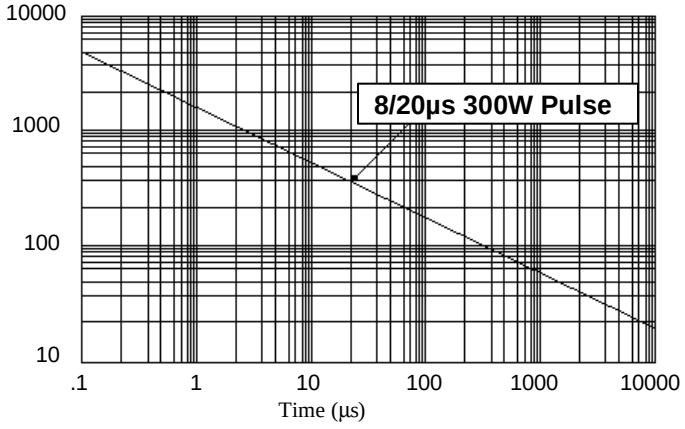


Figure 1. Peak Pulse Power Vs Pulse Time (ms)

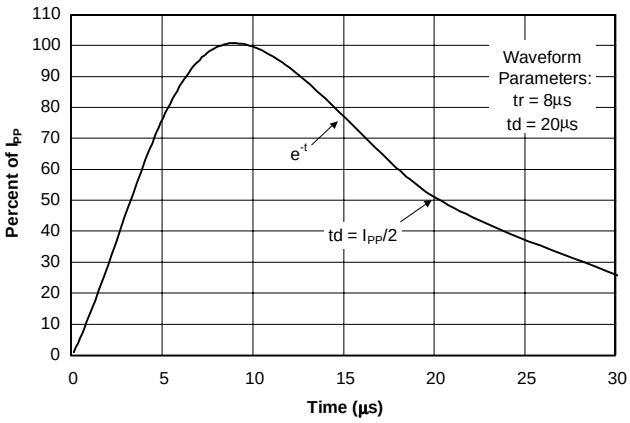


Figure 2. Pulse Wave Form

TECHNICAL DATA

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