

**TVS ARRAY SERIES**

**FEATURES**

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Unidirectional
- ✓ Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20  $\mu$ s
- ✓ Protects 8 Lines
- ✓ SO-16 Packaging
- ✓ This is a Pb - Free Device
- ✓ All SMC parts are traceable to the wafer lot
- ✓ Additional testing can be offered upon request

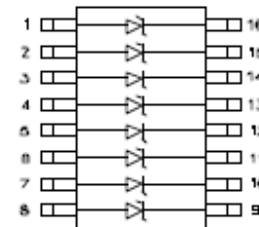
**SO-16**



**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**



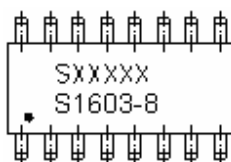
**APPLICATION**

- ✓ 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
- ✓ PIN #1 Indicator: DOT on top of package
- ✓ Packaging: Tubes or Tape & Reel per EIA Standard 481

**MARKING DIAGRAM**



Where XXXXX is YYWWL

- S1603-8 = Part Name
- S = S
- YY = Year
- WW = Week
- L = Lot Number

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



**Ordering Information:**

Device	Package	Shipping
S1603-8 THRU S1624-8	SO-16 (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.

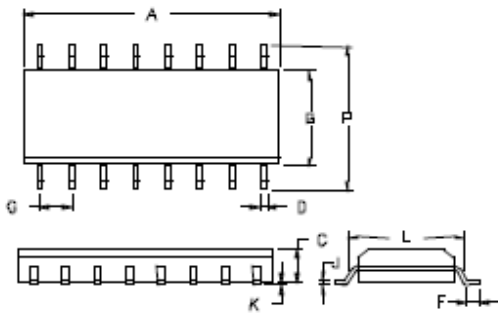
**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
P	Peak Pulse Power, 8/20 $\mu$ s Waveshape	300	W
T <sub>J</sub>	Operating Temperature	-55 to +125	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C
T <sub>L</sub>	Lead Soldering Temperature	260 (10 Sec.)	°C

**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 $I_R$ @ $V_{wm}$ ( $\mu$ A) 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 & DIMENSIONS**



DIM	INCHES		MILLIMETERS	
	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**

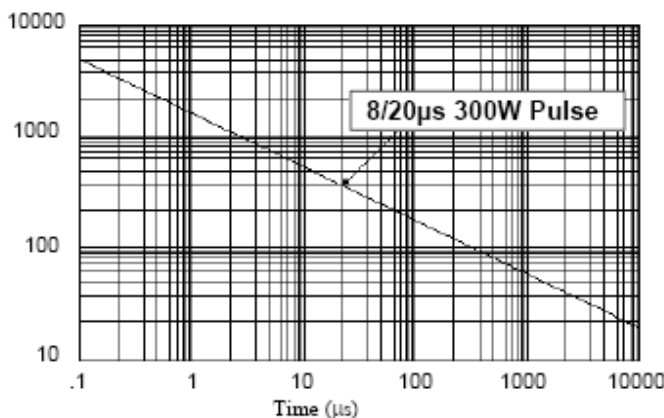


Figure 1. Peak Pulse Power Vs Pulse Time ( $\mu$ s)

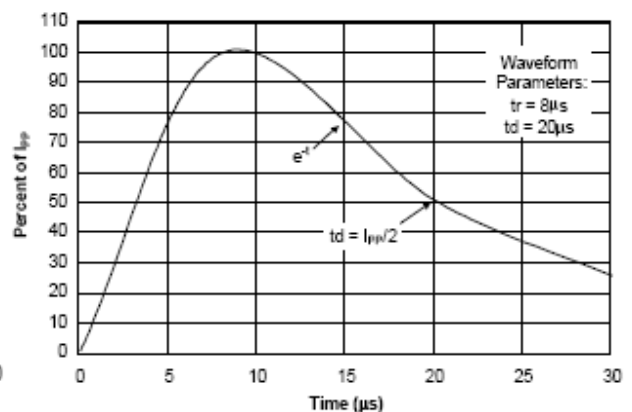


Figure 2. Pulse Wave Form

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