

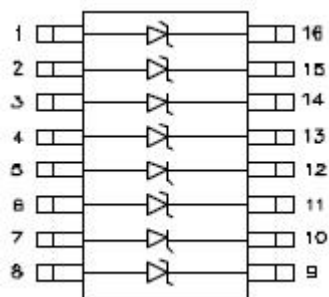
S1603-8 THRU S1624-8 TVS ARRAY SERIES



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



Features

- Protects 3.3, 5, 12, 15, 24 V Components
- Unidirectional
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 8 Lines
- SO-16 Packaging
- “-A” is an AEC-Q101 qualified device
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Characteristics

- SO-16 Surface Mount Package
- Approximate Weight: 0.13 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tape and Reel Per EIA Standard 481

Application

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

Absolute Maximum Ratings:

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 μ s Wave shape	P	300	W
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{stg}	-55 to +150	°C
Lead Soldering Temperature	T _L	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} (uA) 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

Ratings and Characteristics Curves

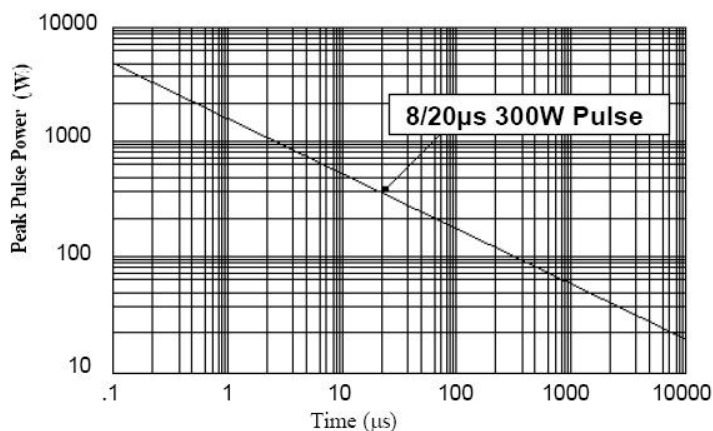


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

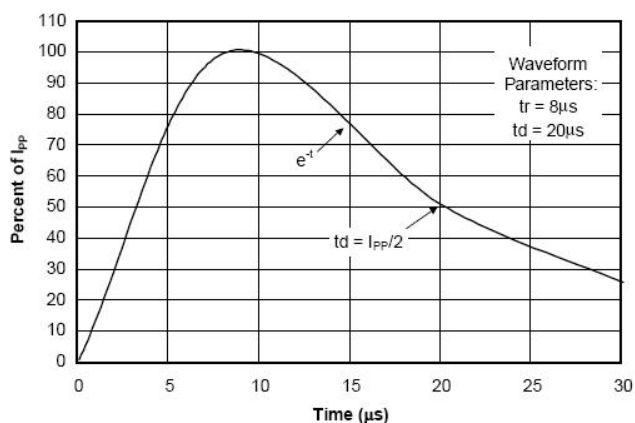


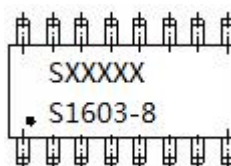
Figure 2. Pulse Wave Form

Ordering Information

Device	Package	Shipping
S1603-8 THRU S1624-8	SO-16 (Pb-Free)	2500pcs / reel
S1603-8TR THRU S1624-8TR	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.

Marking Diagram



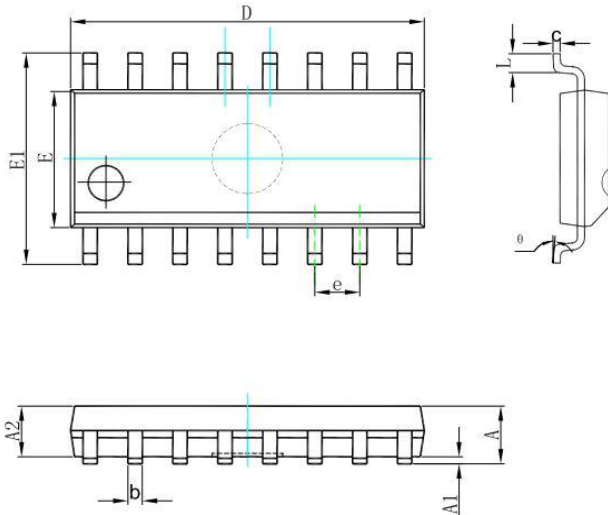
Where XXXXX is YYWWL

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

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

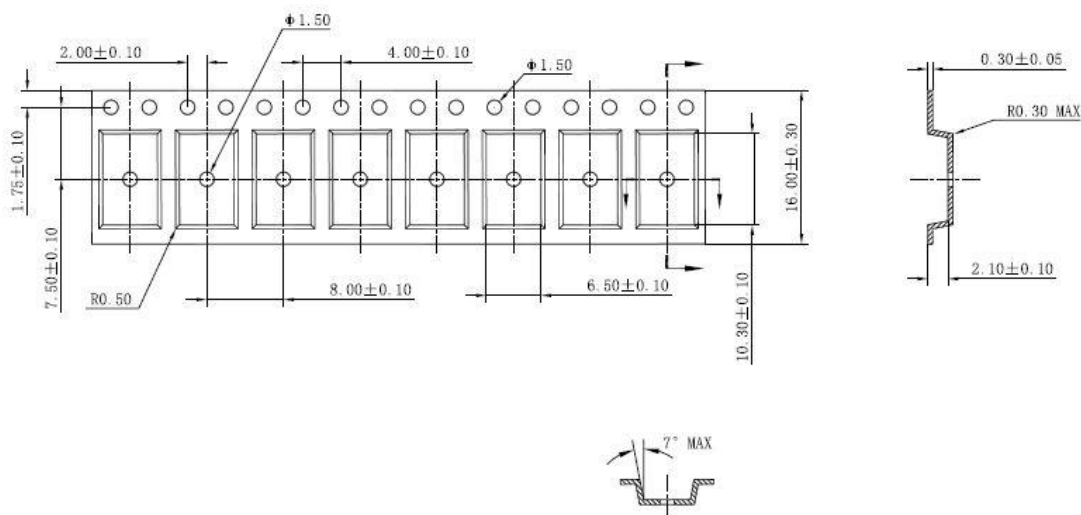
- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Mechanical Dimensions SO-16



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.350	1.800	0.053	0.708
A1	0.050	0.250	0.002	0.010
A2	1.350	1.650	0.053	0.065
b	0.330	0.510	0.013	0.020
c	0.153	0.250	0.006	0.010
D	9.700	10.200	0.382	0.402
E	3.800	4.150	0.150	0.163
E1	5.700	6.300	0.224	0.248
e	1.14	1.40	0.045	0.055
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

Carrier Tape Specification SO-16





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