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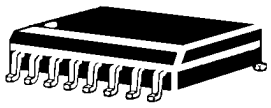
SM16LC03C
thru
SM16LC24C

TVSarrayÔ Series



DESCRIPTION (300 watt)

This 16 pin 8 line Low Capacitance Bidirectional array is designed for use in applications where protection is required at the board level from voltage transients caused by electrostatic discharge (ESD) as defined in IEC 1000-4-2, electrical fast transients (EFT) per IEC 1000-4-4 and effects of secondary lighting.

These TRANSIENT VOLTAGE SUPPRESSOR (TVS) Diode Arrays have a peak power of 300 watts for an 8/20 µsec pulse and are designed to protect 3.0/3.3 volt components such as DRAM's, SRAM's, CMOS, HCMOS, HSIC, and low voltage interfaces up to 24 volts.

FEATURES

- Protects 3.0/3.3 up through 24V Components
- Protects 8 lines Bidirectional
- Provides electrically isolated protection
- SO-16 Packaging

MECHANICAL

- Molded SO-16 Surface Mount
- Weight: 0.128 grams (approximate)
- Body Marked with Logo, and device number
- Pin #1 defined by DOT on top of package
- Encapsulation meets UL 94V-0

MAXIMUM RATINGS

- Operating Temperatures: -55^{0}C to +150^{0}C
- Storage Temperature: -55^{0}C to +150^{0}C
- Peak Pulse Power: 300 Watts (8/20 µsec, Figure 1)
- Pulse Repetition Rate: <.01%

PACKAGING

- Tape & Reel EIA Standard 481-1-A
- 13 inch reel 2,500 pieces (OPTIONAL)
- Carrier tubes 48 pcs per (STANDARD)

ELECTRICAL CHARACTERISTICS PER LINE @ 25^{0}C Unless otherwise specified

PART NUMBER	DEVICE MARKING	STAND OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE V_{BR} @1 mA VOLTS	CLAMPING VOLTAGE V_C @ 1 Amp (FIGURE 2) VOLTS	CLAMPING VOLTAGE V_C @ 5 Amp (FIGURE 2) VOLTS	LEAKAGE CURRENT I_D @ V_{WM} µA	CAPACITANCE (f=1 MHz) @0V C pF	TEMPERATURE COEFFICIENT OF V_{BR} áV_{BR} mV/°C
		MAX	MIN	MAX	MAX	MAX	TYP	MAX
SM16LC03C	MAA	3.3	4	7.0	9.0	200	25	-5
SM16LC05C	MAB	5.0	6	9.8	11	20	25	1
SM16LC08C	MAF	8.0	8.5	13.4	16.6	1	25	5
SM16LC12C	MAC	12	13.3	19	24	1	25	8
SM16LC15C	MAD	15	16.7	24	30	1	25	11
SM16LC24C	MAE	24	26.7	43	55	1	25	28

Part numbers with a "C" suffix are bidirectional devices

NOTE: Transient Voltage Suppression (TVS) product is normally selected based on its stand off voltage V_{WM}. Product selected voltage should be equal to or greater than the continuous peak operating voltage of the circuit to be protected.

Application: The SM16CXXC product is designed for transient voltage suppression protection of components at the board level. It is an ideal product to be used for protection of I/O Transceivers.

WAVE FORMS

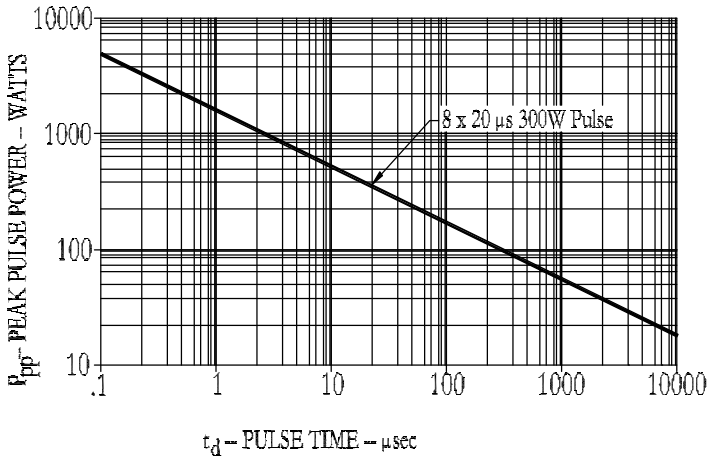


FIGURE 1
Peak Pulse Power Vs Pulse Time

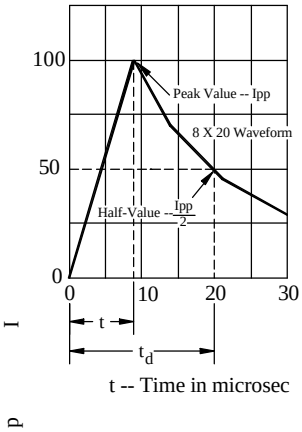
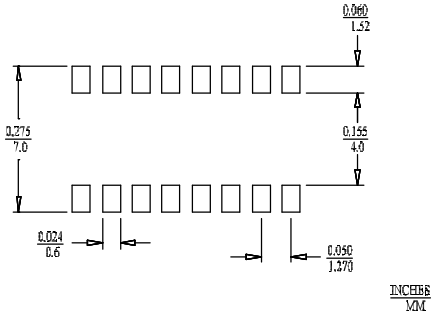
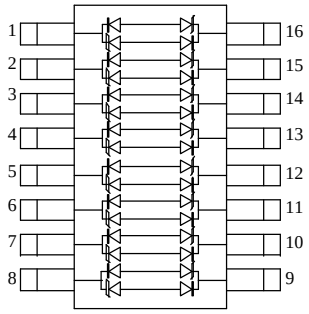


FIGURE 2
Pulse Wave Form

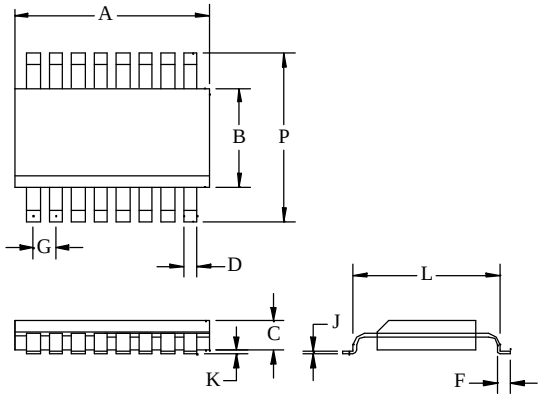
MOUNTING PAD SO-16



CIRCUIT DIAGRAM



SO-16 PACKAGE



	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.358	0.398	9.09	10.10
B	0.150	0.158	3.81	4.01
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