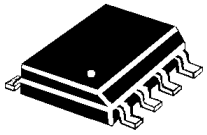
8700 E. Thomas Road
Scottsdale, AZ 85251
Tel: (480) 941-6300
Fax: (480) 947-1503

SM8LC03
thru
SM8LC24

TVSarray™ Series



DESCRIPTION (500 watt)

This TRANSIENT VOLTAGE SUPPRESSOR (TVS) array is packaged in an SO-8 configuration giving protection to 2 Bidirectional data or interface lines. It 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 TVS arrays have a peak power rating of 500 watts for an 8/20µsec pulse. This array is suitable for protection of sensitive circuitry consisting of TTL, CMOS DRAM's, SRAM's, HCMOS, HSIC microprocessors, and I/O transceivers. The SM8LCXX product provides board level protection from static electricity and other induced voltage surges that can damage sensitive circuitry.

FEATURES

- Protects up to 2 Bidirectional lines
- Surge protection Per IEC 1000-4-2, IEC 1000-4-4
- Provides electrically isolated protection
- SO-8 Packaging
- Low capacitance of 25 Pf per line pair

MECHANICAL

- Molded SO-8 Surface Mount
- Weight: 0.066 grams (approximate)
- Marking: Logo, device number, date code
- Pin #1 defined by DOT on top of package

MAXIMUM RATINGS

- Operating Temperatures: -55^{0}C to +150^{0}C
- Storage Temperature: -55^{0}C to +150^{0}C
- Peak Pulse Power: 500 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 95 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} á$_{VBR}$ mV/°C
		MAX	MIN	MAX	MAX	MAX	TYP	MAX
SM8LC03	PGF	3.3	4	7	9	200	25	-5
SM8LC05	PGA	5.0	6.0	9.8	11	40	25	1
SM8LC12	PGB	12.0	13.3	19	24	1	25	8
SM8LC15	PGC	15.0	16.7	24	30	1	25	11
SM8LC24	PGD	24.0	26.7	43	55	1	25	28

NOTE: 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 SM8LCXX product is designed for transient voltage suppression protection of ESD sensitive components at the board level. It is an ideal product to be used for protection of I/O Transceivers.

WAVE FORMS

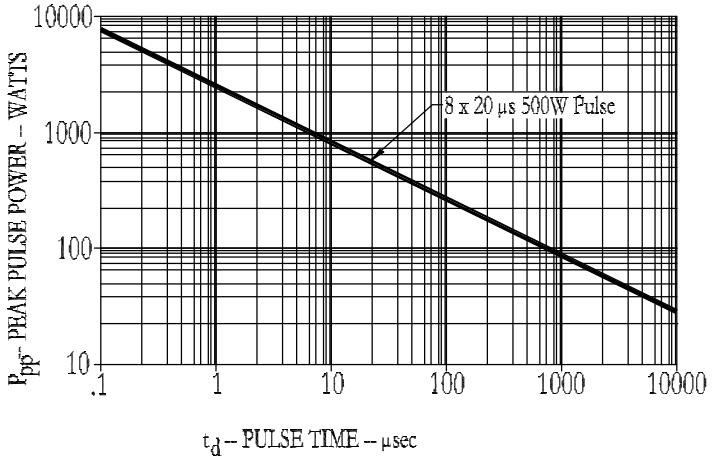


FIGURE 1
Peak Pulse Power Vs Pulse Time

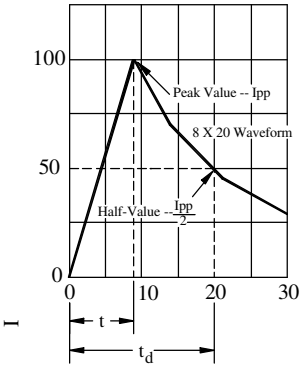
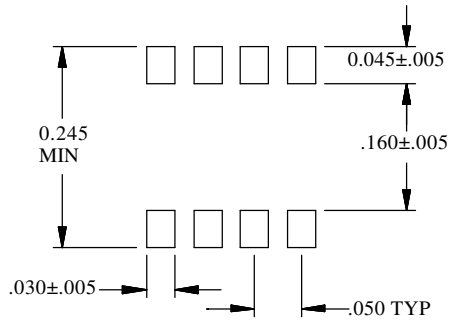
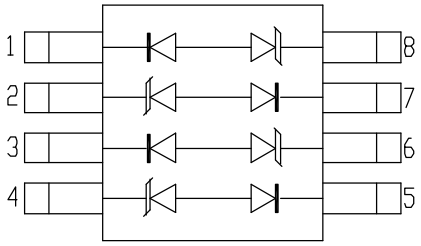


FIGURE 2
Pulse Wave Form

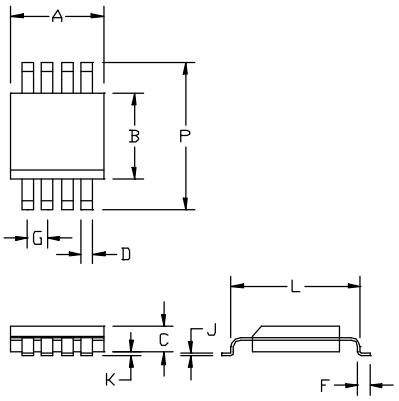
MOUNTING PAD SO-8



CIRCUIT DIAGRAM



SO-8 PACKAGE



	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.188	0.197	4.77	5.00
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