

SMDAXXC-8 Series

ROHS

Transient Voltage Suppressors for ESD Protection

Description

The SMDAxxC-8 series of transient voltage suppressors are designed to protect components which are connected to data and transmission lines from voltage surges caused by electrostatic discharge (ESD), electrical fast transients (EFT), and lightning.

Features

- ◆ 312~400 Watts Peak Pulse Power per Line (tp=8/20µs)
- ◆ Protects Seven Data lines
- ◆ Low Capacitance
- ◆ Working Voltage; 5~24V
- ◆ Low leakage current
- ◆ IEC61000-4-2(ESD) ±20kV (air),±15kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Applications

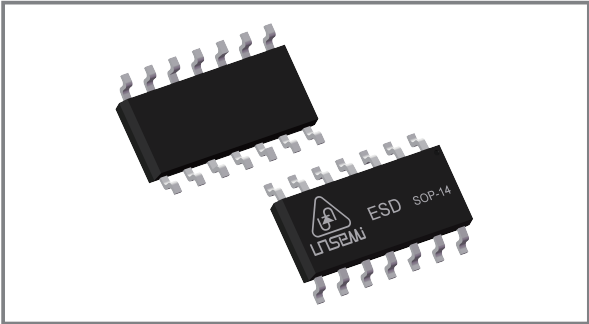
- ◆ Microprocessor Based Equipment
- ◆ RS-232 and RS-422 Data Lines
- ◆ LAN/WAN Equipment
- ◆ Notebooks, Desktops and Servers
- ◆ Instrumentation
- ◆ Set Top Box
- ◆ Serial and Parallel Ports
- ◆ Peripherals

Mechanical Characteristics

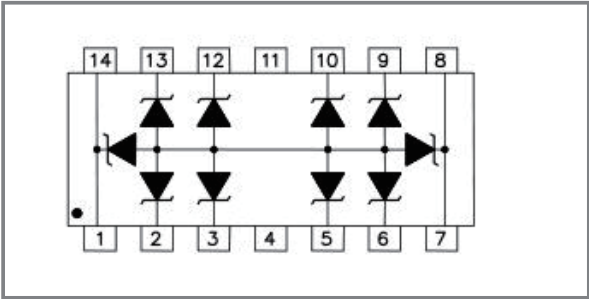
Parameter	Symbol	Value	Units
Peak Pulse Power (Tp=8/20µs waveform)	PPP	312-400	Watts
Lead Soldering Temperature	TL	260 (10 sec.)	°C
Storage Temperature Range	TSTG	-55 to +150	°C
Operating Junction Temperature Range	TJ	-40 to +125	°C



www.unsemi.com.tw



Functional Diagram



Mechanical Data

- ◆ JEDEC SOP-14 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 70 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Electrical Characteristics @ 25°C Unless Otherwise Specified)

Part Number	Device Marking	Stand-Off Voltage V_{RWM} (V)	Breakdown Voltage V_{BR} (Min.) (V)	Test Current I_T (mA)	V_C @1A (Max.)	V_C		Maximum Reverse Leakage I_R @ V_{RWM} (uA)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
SMDA05C-8	SMDA05C-8	5	6	1.0	9.8	20	20	1	150
SMDA12C-8	SMDA12C-8	12	13.3	1.0	19	30	11	1	120
SMDA15C-8	SMDA15C-8	15	16.7	1.0	24	35	9	1	75
SMDA24C-8	SMDA24C-8	24	26.7	1.0	43	52	6	1	50

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

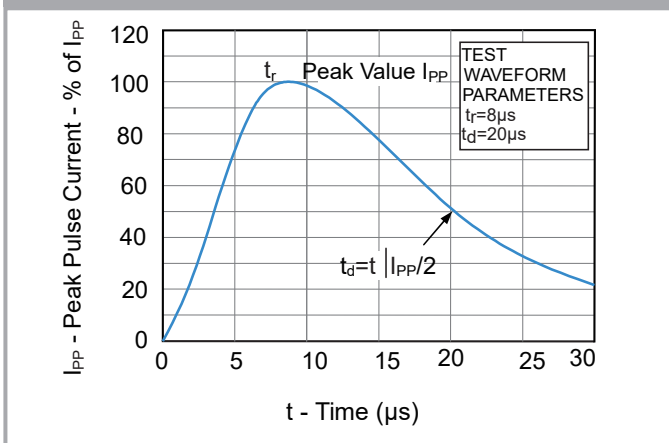


Fig2. Power Rating Derating Curve

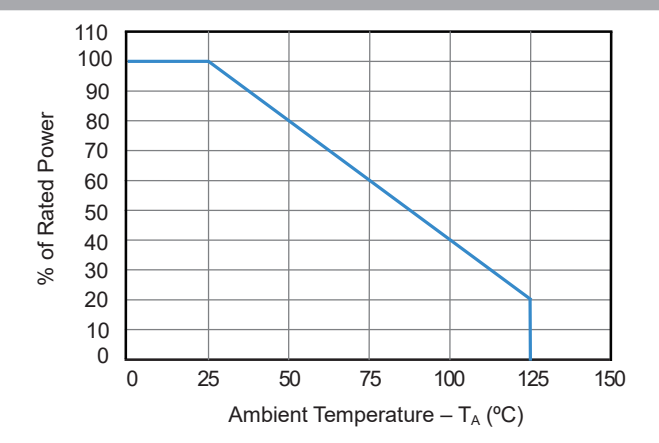
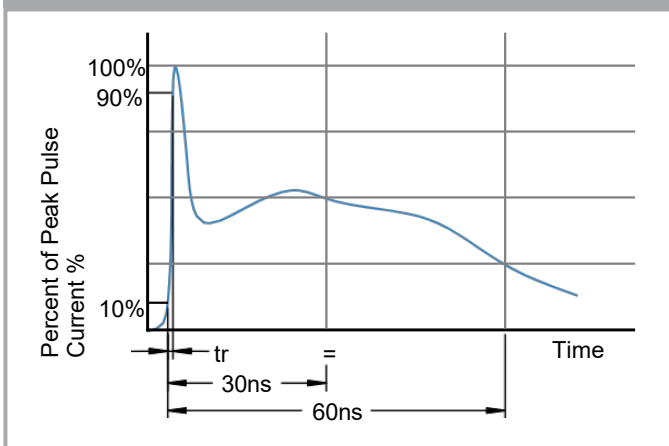
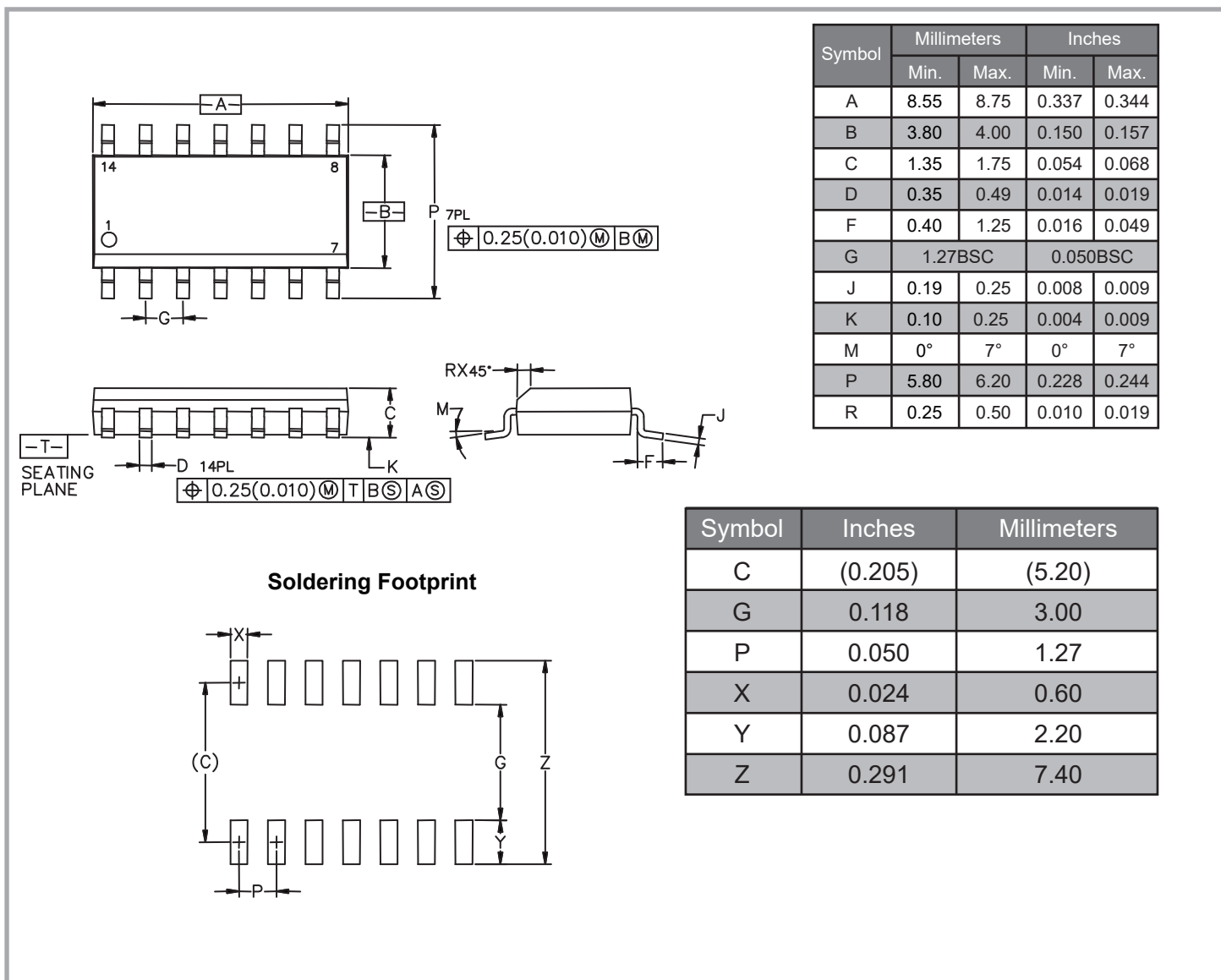


Fig3. ESD Pulse Waveform(according to IEC61000-4-2)



SOP-14 Package Outline & Dimensions



Ordering Information

Device	Package	Quantity	Reel Size
SMDAXXC-8 Series	SOP-14	500pcs/Reel	7 inch

Disclaimer

UNSEMI RESERVES THE RIGHT TO MAKE CHANGE ON OUR PRODUCTS , PRODUCTS SPECIFICATION AND DATA WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

UN SEMICONDUCTOR LIMITED its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "UNSEMI") does not give any representations or warranties for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

In no event shall UNSEMI be liable for any indirect, incidental, punitive, special or consequential damages (including any and all implied warranties, warranties of fitness for particular purpose, non-infringement and merchantability.) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Statements regarding the suitability of products for certain types of applications are based on UNSEMI knowledge of typical requirements that are often placed on UNSEMI products in generic applications. Such statements are not binding, statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify UNSEMI's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Unless otherwise agreed in writing, UNSEMI product is not designed, authorized or warranted to be suitable for use in medical life-saving, or life-sustaining application , nor in applications where failure or malfunction of a UNSEMI product can reasonably be expected to result in personal injury, death or severe property or environmental damage. UNSEMI and its suppliers accept no liability for inclusion or use of UNSEMI products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

All referenced brands, product names, service names and trademarks are the property of their respective owners.