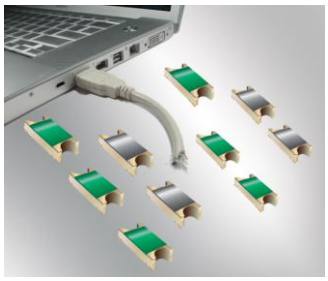
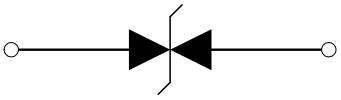
WPESD1-0603-24

Features



- Ideal ESD protection for high frequency, high speed applications.
- Ultra-low capacitance.
- Fast response time (<1ns, 0.5ns typical).
- Very low leakage current, reduces power consumption.
- Bi-directional device for placement flexibility.
- 0603 surface mount design for board space savings.
- Compatible with standard reflow installation procedures.



Main Application

WAYON's Polymer ESD Suppressors (PulseClamp™) help protect sensitive electronic equipment against electrostatic discharge (ESD). These devices are best suited for high-speed, high-frequency applications where low capacitance is important. The suppressors use polymer composite materials to suppress fast-rising ESD transients (as specified in IEC 61000-4-2 and MIL-STD-883C), Assist equipment to pass these standards, while adding virtually no capacitance to the circuit. Typical application including:

- High Speed Data Ports, DiiVA, HDMI1.3/1.4, USB2.0/3.0, DisplayPort1.0/1.1, e-SATA, IEEE1394.
- Antennas (Cell phone, Satellite Radio, GPS…), Blue Tooth, LED lighting Protection.
- Portable devices, Cellular phone, PDA's, Digital Cameras, Digital Camcorders.
- High Speed Ethernet, DSL Modems, Computers & Peripherals, Printer ports.
- HDTV, Set Top Boxes, DVD Players, A/V Equipment, Multimedia Players.

Electrical Parameters (T_{amb}=25℃)

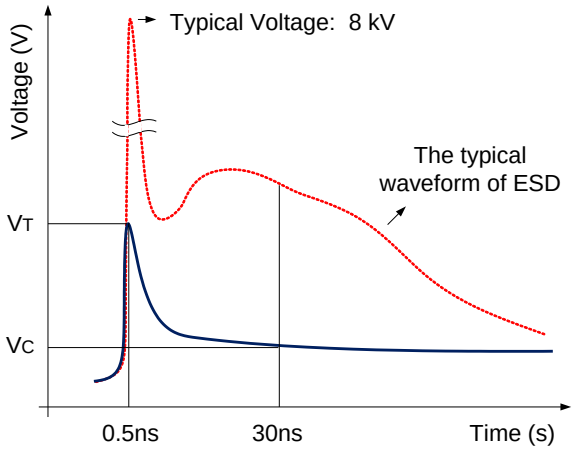
Part Number	Rated Voltage	Trigger Voltage	Clamping Voltage	Leakage Current	Capacitance
	V_R	V_T	V_C	I_L	C_P
	Max.	Typ.	Typ.	Typ.	Typ.
	V	V	V	nA	pF
WPESD1-0603-24	24	350	45	1	0.1

*Trigger and clamping voltage measured per IEC61000-4-2, level 4, 8kV contact test method.

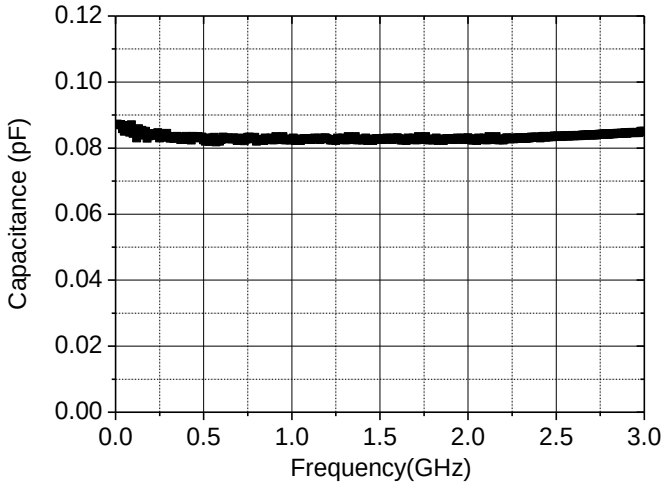
*Capacitance measured at 1MHz~3GHz, 1Vrms.

*Leakage current measured at $24V_{DC}$.

General Characteristics



Normalized Capacitance versus Frequency



Operating & Storage Temperature Range:	-55°C to +110°C
ESD Capability: IEC61000-4-2 Contact Discharge IEC61000-4-2 Air Discharge	 8kV typical 15kV typical
ESD Pulse Withstand*	>2000 typical

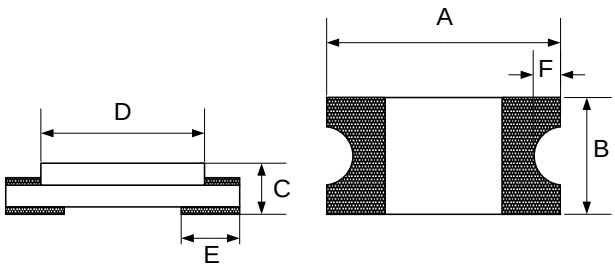
* Pulse Withstand- some shifting in characteristics may occur when tested over multiple pulses at a very rapid rate.

Environmental Specifications

- Moisture Resistance: 40°C, 95% RH, 1000 hours.
- Thermal Shock: MIL-STD-202, Method 107, -65°C to 125°C, 30 min. cycle,10 cycles.
- Vibration: MIL-STD-202, Method 201, (10 to 55 to 10 Hz, 1 min. cycle, 2 hrs each in X-Y-Z).
- Chemical Resistance: MIL-STD-202, Method 215.
- Solder Leach Resistance and Terminal Adhesion: IPC/EIA J-STD-002.

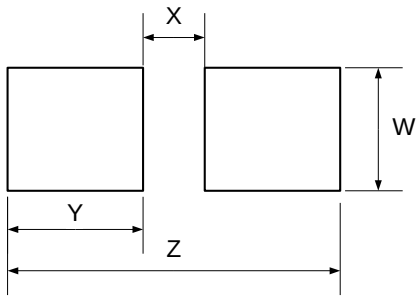
Product Dimensions

Ref.（mm）	Min.	Max.
A	1.50	1.70
B	0.70	0.90
C	0.55	0.65
D	1.00	1.20
E	0.30	0.40
F	0.15	0.25

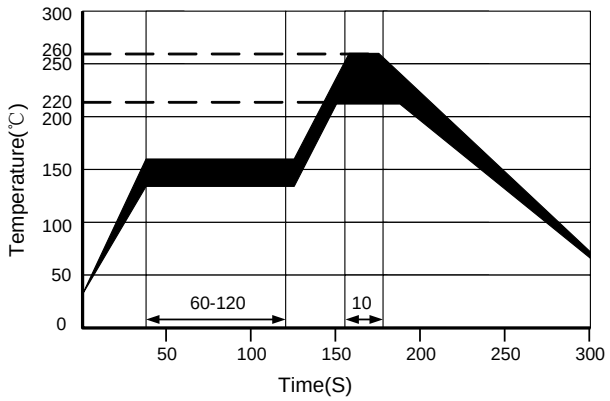


Recommended Land Pattern

Ref.（mm）	Min.	Max.
W	0.9	1.0
X	0.5	0.6
Y	1.0	1.1
Z	2.7	2.8



Solder Reflow Recommendations

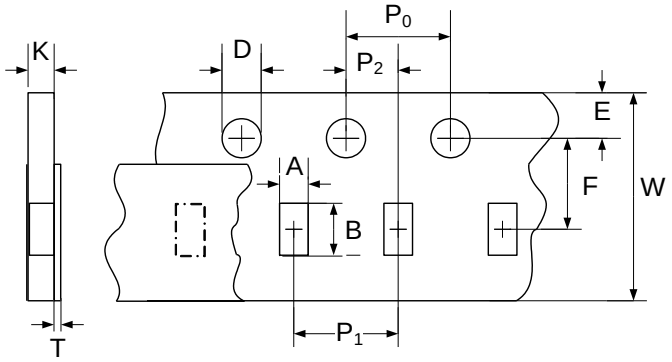


- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.

Notes: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Packaging Specifications

Specification(mm)			
W	8.00±0.30	D	1.55±0.05
P0	4.00±0.10	F	3.50±0.10
P1	4.00±0.10	E	1.75±0.10
P2	2.00±0.10	T	0.05±0.01
A	0.95±0.05	K	0.70±0.10
B	1.75±0.05		



Tape & Reel: 4000pcs per reel.

Part Numbering System

W PESD 1 - 0603 - 24

- 24 — Operating Voltage: $24V_{DC}$
- 0603 — EIA Size
- 1 — Lines Protected
- PESD — Polymer ESD
- W — Wayon

Contact Information

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