

- Features:**
- Very quick response time (< 1nS)
  - Ultra low capacitance (< 0.05pF)
  - Ultra low leakage current (< 1nA)
  - No Signal Distortion
  - RoHS compliant

- Applications:**
- High speed data ports (USB 2.0, IEEE1394)
  - Notebook PC's, cell phones, PDA's
  - Digital cameras, printers, scanners
  - Plasma display panels, LCD TVs, HDTV's



Electrical Specifications									
Type	Package Size	Continuous Operating Voltage (Max)	ESD Capability <sup>1</sup>	Trigger Voltage (Typical) <sup>2</sup>	Clamping Voltage (Typical)	Capacitance <sup>3</sup>	Leakage Current (Typical)	Response Time	ESD Pulse Withstand (Typical) <sup>4</sup>
ESDU02A3V3R17V	0402	3.3 VDC	Direct Discharge: 8kV Air Discharge: 15kV	150 V	17 V	< 0.05 pF	< 1 nA	< 1nS	> 1000 pulses
ESDU03A3V3R17V	0603			250 V	25 V				
ESDU02A3V3R25V	0402			150 V	17 V				
ESDU03A3V3R25V	0603			250 V	25 V				
ESDU02A5V5R17V	0402	5.5 VDC		150 V	17 V				
ESDU03A5V5R17V	0603			250 V	25 V				
ESDU02A5V5R25V	0402			150 V	17 V				
ESDU03A5V5R25V	0603			250 V	25 V				
ESDU02A12VR17V	0402	12 VDC		150 V	17 V				
ESDU03A12VR17V	0603			250 V	25 V				
ESDU02A12VR25V	0402			150 V	17 V				
ESDU03A12VR25V	0603			250 V	25 V				
ESDU02A24VR25V	0402	24 VDC	250 V	25 V					
ESDU03A24VR25V	0603		250 V	25 V					

1. ESD capability meets the requirements of IEC 61000-4-2.
2. Trigger measurement made using Transmission Line Pulse Method.
3. Capacitance measured from 1MHz - 1.8GHz.
4. Under IEC 61000-4-2 level 4 (8kV contact discharge, 15kV air discharge).

Mechanical Specifications						
Type / Code	Body Length	Body Width	Body Height	Top Termination	Bottom Termination	Units
ESDU02 (0402)	0.039 ± 0.004	0.02 + 0.002	0.014 ± 0.002	0.008 ± 0.004	0.010 ± 0.004	inches
	1.00 ± 0.1	0.52 ± 0.05	0.36 ± 0.05	0.2 ± 0.1	0.25 ± 0.1	mm
ESDU03 (0603)	0.063 ± 0.004	0.031 ± 0.004	0.018 ± 0.004	0.012 ± 0.008	0.014 ± 0.008	inches
	1.6 ± 0.1	0.80 ± 0.1	0.45 ± 0.1	0.30 ± 0.2	0.35 ± 0.2	mm

### How to Order

Stackpole Type	Size	Tolerance	Operating Voltage	Packaging	Clamping Voltage	
<b>ESDU</b>	<b>02</b>	<b>A</b>	<b>3V3</b>	<b>R</b>	<b>17V</b>	
Type	Size	Tolerance	Voltage	Size	Clamping	
ESDU - Ultra Low Capacitance	02 = 0402	A: Suitable for IEC 61000-4-2	3V3 = 3.3V	0402	10,000	17V
ESD - Low Capacitance	03 = 0603		5V5 = 5.5V	0603	5,000	25V
			12V			
			24V			

Performance Characteristics		
Test	Test Method	Acceptable Parameter
Load Life	MIL-STD-202G Method 108A Test Condition D	$\Delta R = 2\%$
Temperature Cycle (Thermal Shock)	MIL-STD-202G Method 107G Test Condition A	$\Delta R = 0.02\%$
Resistance to Soldering Heat	IPC/EIA J-STD-002A Paragraph 4.2.4	IPC/EIA J-STD-002A Paragraph 4.2.4.4
Solderability	IPC/EIA J-STD-002A Paragraph 4.2.2	IPC/EIA J-STD-002A Paragraph 4.2.2.4.2
Short Time Overload	MIL-PRF-55342H Pg. 32, Paragraph 4.8.6	MIL-PRF-55342H Pg 11, Paragraph 3.12

Operating Temperature Range: -55°C to +150°C