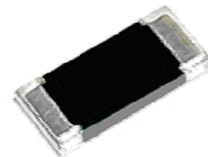


- Features:**
- Very quick response time (< 1nS)
 - ESDU series has ultra-low capacitance < 0.05pF
 - Lower cost ESD series has capacitance <0.2pF
 - Ultra low leakage current (< 1nA)
 - No Signal Distortion
 - RoHS compliant



- 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 ¹	Trigger Voltage (Typical) ²	Clamping Voltage (Typical)	Capacitance ³	Leakage Current (Typical)	Response Time	ESD Pulse Withstand (Typical) ⁴
ESD(U)02A3V3R17V	0402	3.3 VDC	Direct Discharge: 8kV Air Discharge: 15kV	150 V	17 V	ESD Series < 0.2pF	< 1 nA	< 1nS	> 1000 pulses
ESD(U)03A3V3R17V	0603			250 V	25 V				
ESD(U)02A5V5R17V	0402								
ESD(U)03A5V5R17V	0603			250 V	25 V				
ESD(U)02A5V5R25V	0402	12 VDC				250 V			
ESD(U)03A5V5R25V	0603								
ESD(U)02A12VR25V	0402	24 VDC		250 V	25 V				
ESD(U)03A12VR25V	0603								
ESD(U)02A24VR25V	0402	24 VDC		250 V	25 V				
ESD(U)03A24VR25V	0603								

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).

How to Order

Stackpole Type	Size	Tolerance	Operating Voltage	Packaging	Clamping Voltage
ESD	02	A	3V3	R	17V
Type	Size	Tolerance	Voltage	Size	Qty / Reel
ESD = Low Capacitance <0.2pF	02 = 0402	A: Suitable for IEC 61000-4-2	3V3 = 3.3V	0402	10,000
ESDU = Ultra Low Capacitance <0.05pF	03 = 0603		5V5 = 5.5V	0603	5,000
			12V		
			24V		
					Clamping
					17V
					25V

Mechanical Specifications						
Type / Code	Body Length	Body Width	Body Height	Top Termination	Bottom Termination	Units
ESD(U)02 (0402)	0.039 ± 0.004	0.02 ± 0.002	0.014 ± 0.002	0.008 ± 0.004	0.010 ± 0.004	inches mm
	1.00 ± 0.1	0.50 ± 0.05	0.35 ± 0.05	0.2 ± 0.1	0.25 ± 0.1	
ESD(U)03 (0603)	0.061 ± 0.004	0.031 ± 0.004	0.018 ± 0.004	0.012 ± 0.008	0.012 ± 0.008	inches mm
	1.55 ± 0.1	0.80 ± 0.1	0.45 ± 0.1	0.30 ± 0.2	0.30 ± 0.2	

Performance Characteristics		
Test	Test Method	Acceptable Parameter
Operating Temperature	-55C to 125C	Leakage Current < 1uA
Full Load Voltage	1000 hours at 25C	
Bending	3mm deflection	
Resistance to Solder Heat	MIL-STD-202 Method 210 260 ± 5C for 10 ± 1 sec	
Moisture Resistance	MIL-STD-883 Method 1004.7 85% RH, 85C for 1000 hrs	
Thermal Shock	MIL-STD-202 Method 107 5 cycles from -55C to 125C	
Solderability	MIL-STD-202 Method 208 245 ± 5C, 2 ± 0.5sec dwell, Sn96.5/Ag3.0/Cu0.5 solder	95% coverage