



DESCO INDUSTRIES INC

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QUALIFICATION REPORT – ANSI/ESD S20.20

SCS 8200 SERIES DISSIPATIVE VINYL THREE-LAYER MAT

ANSI/ESD S20.20	SCS Test Results	Test Methods
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Resistance (ohms) @ 12% RH, 23°C, 48-72 hours conditioning, N=3 specimens, 100V

Resistance-to-Groundable point	< 1.0 x 10 ⁹	See Table 1	ANSI/ESD STM4.1
Resistance Point-to-Point	< 1.0 x 10 ⁹	See Table 2	ANSI/ESD STM4.1

Resistance (ohms) @ 50% RH, 23°C, 48-72 hours conditioning, N=3 specimens, 100V

Resistance-to-Groundable point	< 1.0 x 10 ⁹	See Table 1	ANSI/ESD STM4.1
Resistance Point-to-Point	< 1.0 x 10 ⁹	See Table 2	ANSI/ESD STM4.1

Testing Equipment (Calibration records and test results are located at our corporate lab (Canton, MA)):

- Environment Chamber with ETS Automatic Humidity Controller (Model 514)
- Desco Electrodes for Surface Resistance (Model 50003)
- Desco Surface Resistance Meter (Model 19291)

Test Data:

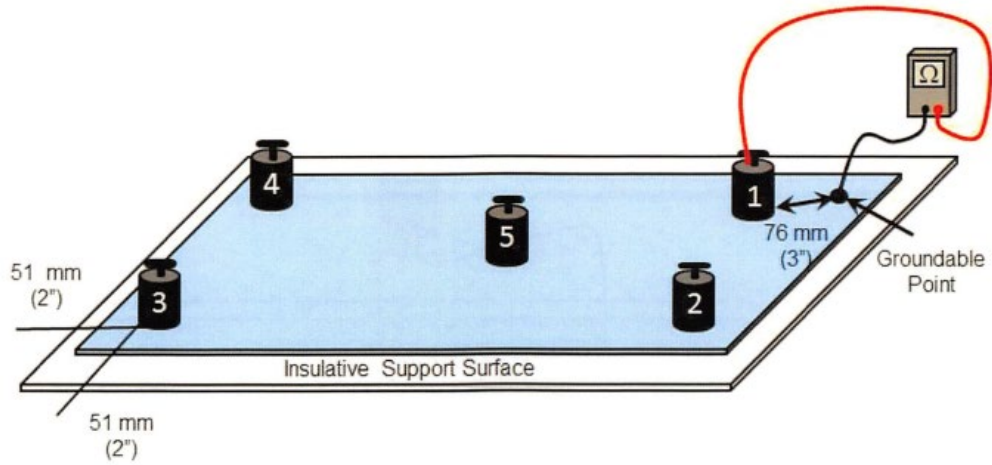
Table 1 - Resistance-to-Groundable point

ANSI/ESD STM4.1 Test Position	RTG (ohms), at 12%RH, 23°C			RTG (ohms), at 50%RH, 23°C		
	Sample #1	Sample #2	Sample #3	Sample #1	Sample #2	Sample #3
Figure 1 – Position 1	2.53 x 10 ⁸	2.52 x 10 ⁸	1.84 x 10 ⁸	1.74 x 10 ⁸	1.78 x 10 ⁸	1.22 x 10 ⁸
Figure 1 – Position 2	2.54 x 10 ⁸	1.90 x 10 ⁸	1.68 x 10 ⁸	1.36 x 10 ⁸	1.29 x 10 ⁸	1.03 x 10 ⁸
Figure 1 – Position 3	1.83 x 10 ⁸	1.94 x 10 ⁸	1.74 x 10 ⁸	1.12 x 10 ⁸	1.01 x 10 ⁸	1.14 x 10 ⁸
Figure 1 – Position 4	1.90 x 10 ⁸	2.02 x 10 ⁸	2.12 x 10 ⁸	1.23 x 10 ⁸	1.25 x 10 ⁸	1.12 x 10 ⁸
Figure 1 – Position 5	1.67 x 10 ⁸	1.40 x 10 ⁸	2.16 x 10 ⁸	9.28 x 10 ⁷	8.66 x 10 ⁷	1.17 x 10 ⁸
Min. =	1.67 x 10 ⁸	1.40 x 10 ⁸	1.68 x 10 ⁸	9.28 x 10 ⁷	8.66 x 10 ⁷	1.03 x 10 ⁸
Mean =	2.09 x 10 ⁸	1.96 x 10 ⁸	1.91 x 10 ⁸	1.28 x 10 ⁸	1.24 x 10 ⁸	1.14 x 10 ⁸
Max. =	2.54 x 10 ⁸	2.52 x 10 ⁸	2.16 x 10 ⁸	1.74 x 10 ⁸	1.78 x 10 ⁸	1.22 x 10 ⁸

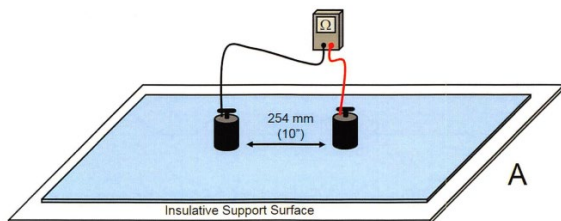
Table 2 - Resistance Point-to-Point

ANSI/ESD STM4.1 Test Position	RTT (ohms), at 12%RH, 23°C			RTT (ohms), at 50%RH, 23°C		
	Sample #1	Sample #2	Sample #3	Sample #1	Sample #2	Sample #3
Figure 2 – Set up A	3.31 x 10 ⁸	3.59 x 10 ⁸	4.69 x 10 ⁸	2.64 x 10 ⁸	2.27 x 10 ⁸	2.92 x 10 ⁸
Figure 2 – Set up B	3.34 x 10 ⁸	3.77 x 10 ⁸	4.34 x 10 ⁸	2.27 x 10 ⁸	2.24 x 10 ⁸	2.53 x 10 ⁸
Figure 2 – Set up C	4.88 x 10 ⁸	4.47 x 10 ⁸	1.27 x 10 ⁸	3.54 x 10 ⁸	3.84 x 10 ⁸	2.26 x 10 ⁸
Figure 2 – Set up D	4.62 x 10 ⁸	4.20 x 10 ⁸	4.00 x 10 ⁸	3.00 x 10 ⁸	2.98 x 10 ⁸	2.71 x 10 ⁸
Min. =	3.31 x 10 ⁸	3.59 x 10 ⁸	1.27 x 10 ⁸	2.27 x 10 ⁸	2.24 x 10 ⁸	2.26 x 10 ⁸
Mean =	4.04 x 10 ⁸	4.01 x 10 ⁸	3.58 x 10 ⁸	2.86 x 10 ⁸	2.84 x 10 ⁸	2.61 x 10 ⁸
Max. =	4.88 x 10 ⁸	4.47 x 10 ⁸	4.69 x 10 ⁸	3.54 x 10 ⁸	3.87 x 10 ⁸	2.92 x 10 ⁸

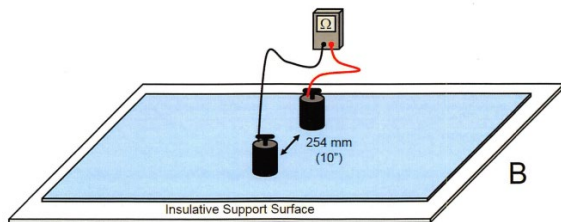
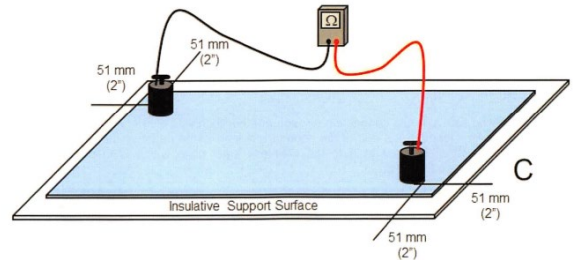
References:



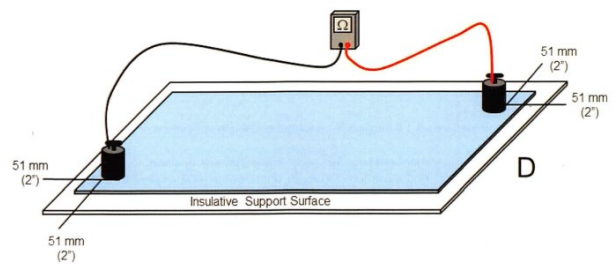
ANSI/ESD STM4.1 – Figure 1: Work-surface – Resistance-to-Groundable Point



NOTE: Locate the geometric center of the sample first.



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ANSI/ESD STM4.1– Figure 2: Work-surface – Resistance Point-to-Point