



Application note: Electrical shielding performance of ITO

Electrical Shielding Performance of ITO

Shielding performance for electrical field in the far field case can be easily calculated. Values for a range of resistances and frequencies are shown below.

Table of calculated far field shielding effectiveness (dB)

| Sheet resistance (ohms/square) | Frequency (Hz) | | | | | |
|-----------------------------------|----------------|-------|--------|------|------|-------|
| | 1MHz | 10MHz | 100MHz | 1GHz | 2GHz | 18GHz |
| 500 | 63 | 43 | 23 | | | |
| 250 | 69 | 49 | 29 | | | |
| 100 | 77 | 57 | 37 | 17 | | |
| 50 | 83 | 63 | 43 | 23 | 17 | |
| 20 | 91 | 71 | 51 | 31 | 25 | |
| 10 | 97 | 77 | 57 | 37 | 31 | |
| 5 | 103 | 83 | 63 | 43 | 37 | 18 |

Once the emitting source and the window are close together we have a near field case. This is much more complicated to calculate and depends on many details. Measured values in one instance are shown below.

