## Quick guide: Evaluating the scan area requirement for planar, cylindrical and spherical measurements

Sampling steps are based on the minimum measured wavelength $\left(\lambda_{\text {min }}\right)$.

FIELD REGIONS


For spherical measurements, the required scan area is calculated according to the following formula:
$D=$ The minimum diameter of the sphere enclosing the antenna
$\mathrm{R}_{\text {min }}=\mathrm{D} / 2$ (radius of the minimum sphere)
$R=$ Measurement distance
$R>D^{2} / 2 \lambda_{\text {min }}$


## Sampling principle:

$\mathrm{D}_{\text {sampling }}=\Delta \Theta=\Delta \Phi=\lambda_{\min } / 2 \mathrm{R}_{\min }$

For planar and cylindrical measurements,
the required scan area is calculated according
to the following formula:
Scan length $=D+2 L \operatorname{tg}(\boldsymbol{\alpha})$

Where: - $\boldsymbol{\alpha}$ is the relevant data angle in far-field

- L, the distance between the probe and the AUT - and $D$, the antenna size.



## Sampling principle:

$\mathrm{D}_{\text {sampling }}=\left(\boldsymbol{\lambda}_{\min } / 2\right)$

