QWED

software tools

QW-3D: a general purpose conformal FDTD 3D EM simulator

QW-V2D and **QWCX**: ultra-fast 2D EM simulators for axisymmetrical structures

Optional modules:
QW-Optimiser
QProny
QW-MultiSim
QW-BHM
QViewer
SConverter

Operating regimes:
links to optimisers
batch operation freeze of state
CAD import / export
multithread versions
Windows / Linux

UNIQUE !

3D analysis with no need for 3D drawing!

conformal FDTD with no time -step reduction!
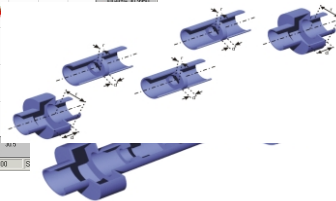
services based on EM software

☞ **design and optimisation of microwave and millimetre-wave passive components and antennas,**

☞ **design and optimisation of microwave power applicators and heating systems,**

☞ *NEW !* **generation of parameterised models for circuit simulators (e.g. ADS™ or Microwave Office ™)**

Cylindrical waveguide filter with frequency-dependent couplings and its response computed by:

▬ QW-V2D

═ circuit simulator with models extracted from EM simulation.

www.qwed.com.pl

Icon catalogue (left column)

Label	Description
cyvao	Part of a vertical cylinder (MP/BP)
cyvor	Rotated vertical cylinder (MP/BP)
el	Full ellipsoid sliced with combined or regular elements (BP)
htapb	Rectangular waveguide horizontal taper (BP)
lic	Horizontal curved cylinder (BP)
lih	Horizontal cylinder (BP)
lirot	Inclined cylinder (BP)
lt	Horizontal taper (BP)
ltrot	Inclined taper (BP)
rounro	Rectangle with rounded corners
solid	Rectangular waveguide (MP/BP)
sp	Full sphere sliced with combined (BP) or regular elements
sph	Half of sphere (BP)
threecl	Example of three elements
torusv	Vertical quarter torus (BP)
torw	Full vertical torus (BP)
tvao	Part of a vertical taper (MP/BP)
tva	Vertical taper (MP/BP)
ct1d	Tee junction of coaxial lines with 1 dielectric (BP)
ct2d	Tee junction of two coaxial lines with 2 dielectrics (BP)
ct3d	Tee junction of coaxial lines with 3 dielectrics (BP)
cx1d	Junction of coaxial lines with 1 dielectric (BP)
cx2d	Junction of coaxial lines with 2 dielectrics (BP)
cx3d	Junction of coaxial lines with 3 dielectrics (BP)
lic1d	Curved coaxial line with 1 dielectric (BP)
lic2d	Curved coaxial line with 2 dielectrics (BP)
lic3d	Curved coaxial line with 3 dielectrics (BP)
lih1d	Coaxial line with 1 dielectric (BP)
lih2d	Coaxial line with 2 dielectrics (BP)
lih3d	Coaxial line with 3 dielectrics (BP)
lith1d	Tapered coaxial line with 1 dielectric (BP)
pcxv1d	Vertical coax with 1 dielectric
pcxv3d	Vertical coax with 3 dielectrics
perfv	Vertical perforated coaxial support
tv1d	Vertical coax taper with 1 dielectric (BP)
tv3d	Vertical coax taper with 3 dielectrics (BP)
bcc1	Convex bi-spherical vertical lens (BP)
bcc2	Bi-convex spherical vertical lens (BP)
bpc1	Plano-convex spherical vertical lens (BP)
bplate2	Plate divided or no into 2 parts
bplate3	Plate divided into 3 parts
bplater	Basin
helixva	Vertical helix (BP)
helixvb	Vertical helix with horizontal I/o wires (BP)
helixvh	Vertical helix restricted by two planes (BP)
helixvhr	Vertical ribbon helix (BP) with horizontal input/output lines
helixvr	Vertical ribbon helix (BP) restricted by two planes
hsausager	Curved sausage with rounded ends (BP)
iwg2	Rectangular wg. in air with dielectric insert (MP/BP)
pizza	2-layered pizza
sausage	Sausage with rounded ends (BP)
sauschee	N sausages with cylindrical inserts and rounded ends (BP)
sauschee2	Sausage with cylindrical insert and rounded ends (BP)
segg	Egg (BP)
horn1	Rectangular waveguide horn (vertical)
horn1h	Rectangular horn, horizontal in air
horn1hr	Rectangular waveguide horn, horizontal in air
horn1hra	Rectangular wg. horn, horizontal in air with user-defined ridges
horn1i	Rectangular wg. horn with triangular dielectric inserts (vertical)
horncor	Rectangular corrugated horn (vertical)
hornd	Circular waveguide horn, horizontal in metal (BP) with user-defined rid
hornhar	Rectangular waveguide horn, horizontal in metal
hornhara	Rectangular waveguide horn, horizontal in metal with user-defined ridges
hornhb	Circular waveguide horn, horizontal in metal (BP)
hornhc	Circular waveguide horn, horizontal in metal (BP)
horncor	Circular waveguide horn, horizontal in air with ridges
hornhg1	Rectangular wide-band horn with user-defined ridges (BP)
hornhhd	Circular horn antenna, horizontal in air (BP)
hornvca	Circular horn antenna, vertical in air
hornvcar	Circular horn antenna with ridges, vertical in air
hornvr	Rectangular waveguide horn (vertical) with ridges
patch1	Circular patch antenna
msb	Microstrip bridge
msba	Microstrip line bend (arbitrary angle)
msbr	Microstrip line right bend
mslhw	Wire bridge
msc	Microstrip curved line
mscp	Microstrip capacitor
msd	Microstrip circuit (from file)
msi	Microstrip inductor
msl	Microstrip line
mslc	Coupled microstrip lines of the same impedance
mslca	Microstrip coupled lines (user-defined shape)
mslct	Microstrip tee-junction of lines of the same impedance
mslctd	Microstrip tee-junction of lines of the different impedances
mslcx	Microstrip junction of line of the different impedances
msls	Microstrip line shorted
Mslz	Microstrip zig-zag line
Mslztest	Microstrip zig zag line
msp	Planar circular patch
awgfil	Waveguide filter n=3-7 symmetric irises
awsept3m	Septum polarizer with 3 steps and phase ridge
bres1	Comb-line resonator rounded
bwgas	Waveguide filter n=3-7 asymmetric irises
c2step	Vertical coax step with ports
cheat	Circular waveguide for heating with linear or circular polarisation
cintdig2	Three to seven resonator interdigital filter without irises
combwi1	Three to seven resonator comb-line filter without irises
covenv	Microwave domestic oven with vertical feeding waveguide
h2total	Horn_2 total box project
plwntf	Plane wave box surrounded by NTF box and absorbing box
rhornvcaq	Hornvca in NTF box with quarter of the structure meshed due to sym
tdr1	Example 1 for Time Domain Reflectometry
tdualm4	Microstrip dual mode filter n=4
tjcoup2	Dielectric waveguide 3dB coupler with 7 ports
whexcwg	Circular waveguide with excitation port
whthrb_flare	Thrcont base & flare version 2m
wmux2	Comb-line diplexer