Antenna Design Services

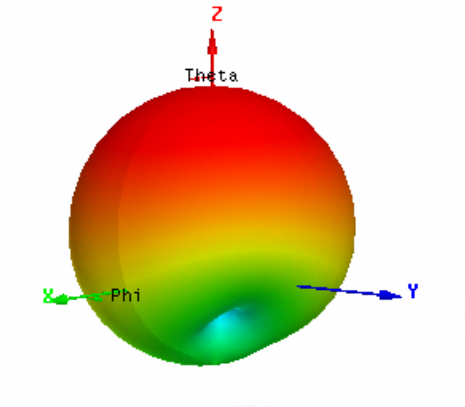
Generic PIFA antenna 2.4 GHz

The generic PIFA antenna has been developed to validate upstream the choice of an integrated solution, taking into account the size of the PCB and the effect of the radom on antenna performances. The 2.4 GHz antenna covers the following applications: Zigbee, Bluetooth, WIFI, RFID and ISM.

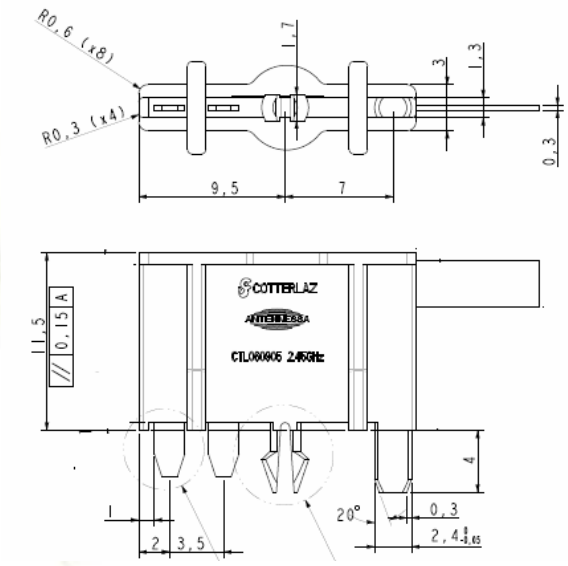
The antenna has been designed to answer the technical characteristics stated below. It can be integrated on a PCB (step 1) and tuned in order to optimize these characteristics with a specific environment. The adjustment can be done easily, using a scalar network by cutting the antenna to the appropriate length (step 2).

TECHNICAL CHARACTERISTICS	
Frequency range	2.4GHz
Impedance	50 Ohms
VSWR	< 2
Power Rating	20 W
Peak gain	2 dBi
Mean gain	0 dBi

RADIATION PATTERN



The radiation pattern is omni-directional.



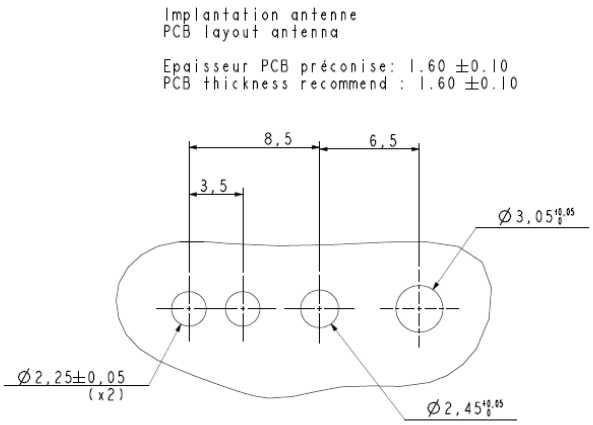
MECHANICAL DESIGN

COTTERLAZ

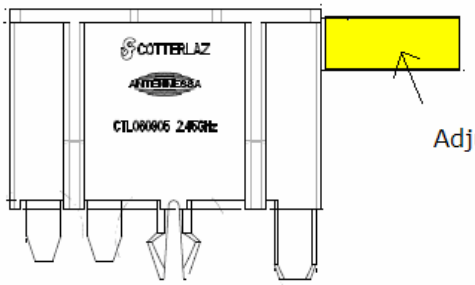
ZA les Léchères
250, rue de la Pointe d'Orchex
F-74460 MARNAZ
Tel : +33 (0)4 50 98 35 06
Fax : +33 (0)4 50 96 27 47
E-mail : sales@cotterlaz.com Internet site : www.cotterlaz.com

Issue: A0703_2.4GHz_PIFA/1

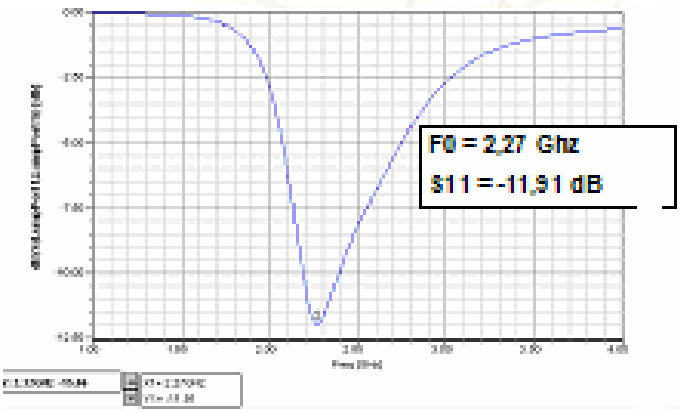
STEP 1: Plug the antenna on the PCB using the following mechanical instructions



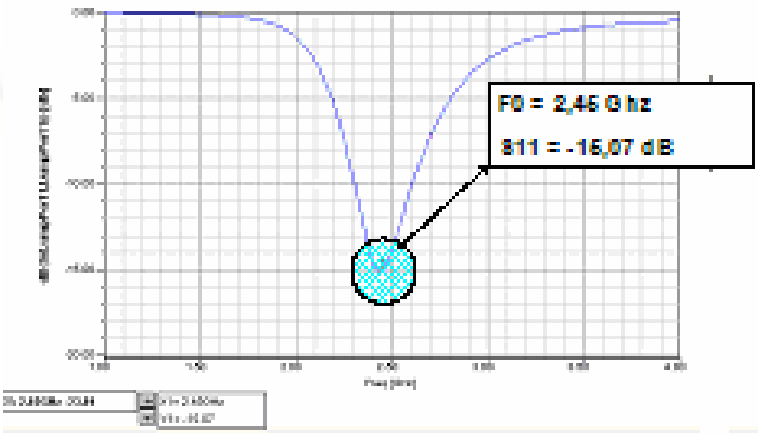
STEP 2: Adjust the length of the antenna



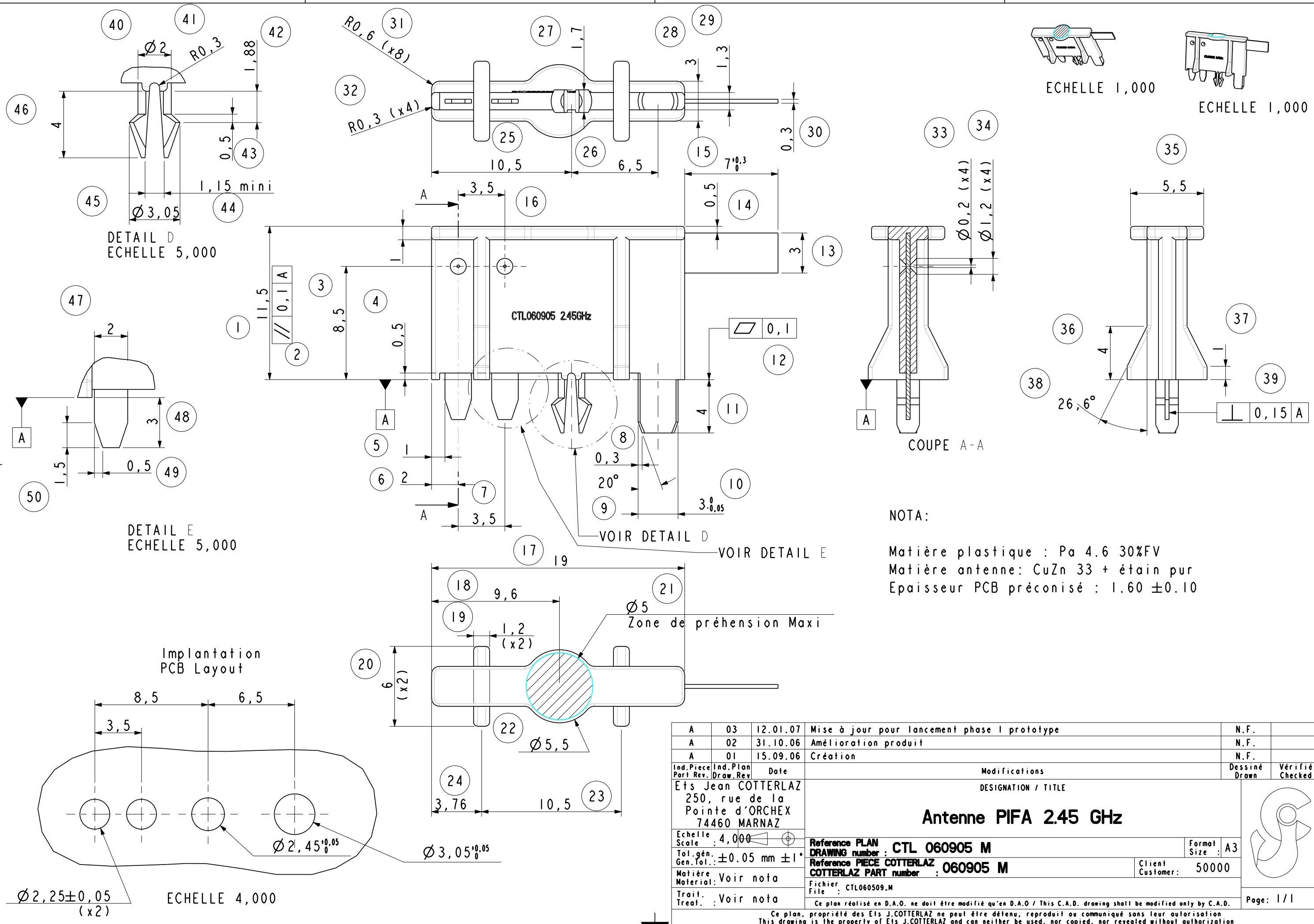
Example of VSWR adjustment



Before adjustment



After adjustment



DETAIL D
ECHELLE 5,000

ECHELLE 1,000

ECHELLE 1,000

COUPE A-A

DETAIL E
ECHELLE 5,000

Implantation
PCB Layout

ECHELLE 4,000

NOTA:

Matière plastique : Pa 4.6 30%FV
Matière antenne: CuZn 33 + étain pur
Epaisseur PCB préconisé : 1.60 ±0.10

Ind. Piece Part Rev.	Ind. Plan Draw. Rev	Date	Modifications	Dessiné Drawn	Vérifié Checked
A	03	12.01.07	Mise à jour pour lancement phase I prototype	N.F.	
A	02	31.10.06	Amélioration produit	N.F.	
A	01	15.09.06	Création	N.F.	

Ets Jean COTTERLAZ
250, rue de la Pointe d'ORCHEX
74460 MARNAZ

DESIGNATION / TITLE

Antenne PIFA 2.45 GHz

Echelle Scale :	4,000
Tol.gén. Gen.Tol. :	±0.05 mm ±1°
Matière Material :	Voir nota
Trait. Treat. :	Voir nota
Reference PLAN DRAWING number :	CTL 060905 M
Format Size :	A3
Reference PIECE COTTERLAZ COTTERLAZ PART number :	060905 M
Client Customer :	50000
Fichier File :	CTL060509_M

Ce plan réalisé en D.A.O. ne doit être modifié qu'en D.A.O / This C.A.D. drawing shall be modified only by C.A.D.

Page: 1/1