



## Q23XXA/Q2403A DELTA

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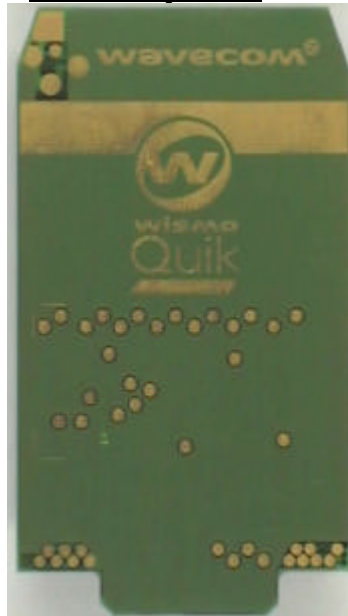
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## 1 Introduction

The purpose of this document is to list the differences between Q23xxA and Q2403A in order to ease the migration from a version to another one.

**Q2403A photo.**



## 2 Fundamental delta

- Single side .
- 3 ways of connecting RF is possible against 2 for Q2200A/Q23xxA.
  - 50  $\Omega$  COAXIAL CONNECTION.(FIG 1)
  - SPRING CONTACT AREA FOR HANDSET ANTENNA.(FIG 1+ FIG 3)
  - 50  $\Omega$  BOARD-TO-BOARD CONNECTION - IMP type - .(FIG3 + FIG 5)
- ESD Protection antenna.
  - A protection ESD was implemented around antenna RF.(tests to be done) (FIG 3)

- Mechanical thickness different .
  - thinner than Q23xxA (FIG 4)  
=> see p8 for details.

### 3 Base band delta

There is no differences because the base band chipset is the same.  
Electrical and mechanical fully compatible pin to pin on GPC connector (60pts)

### 4 Radio delta

- New chipset RF
- New PA
- New antenna switch
- new saw filter
- new coupler.
- ESD protection.

#### 4.1 Consequences of new architecture

New radio architecture :

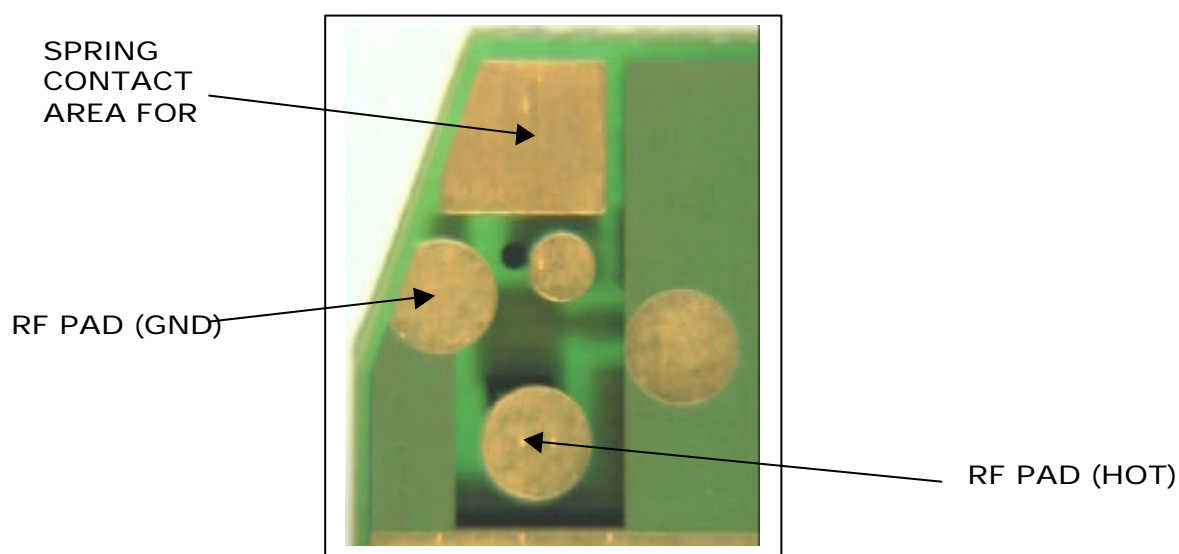
- It obliges us to remake **all the environmental tests** in order to define the new specification HARDWARE in particular the sensitivity to the perturbations known as "ac".
- It enables us to think that the electric performances (stability in band-width GSM) will be clearly improved compared to the Q23xxA.
- ESD Protection is envisaged to make tests ESD on the antenna ,tests are envisaged on the last version of PCB (V3).

## 4.2 RF connection delta : 3 ways of connecting is possible.

One more RF connection than for the Q23xxA module :IMP connector.

### 4.2.1 TOP SIDE Q2403A

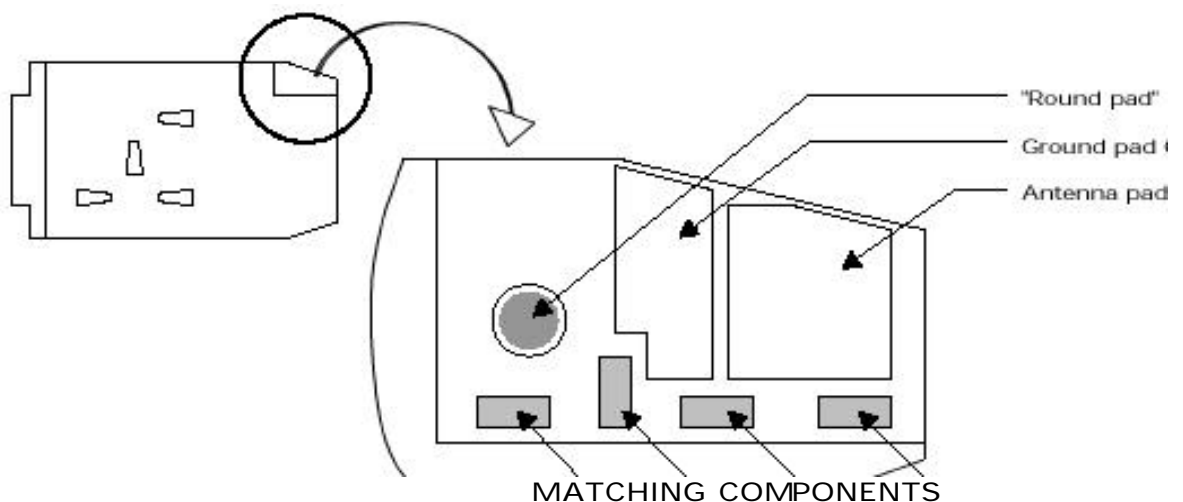
- SPRING ANTENNA CONNECTION
- COAXIAL CONNECTION



**FIG 1**

### 4.2.2 TOP SIDE Q23xxA ( only one side)

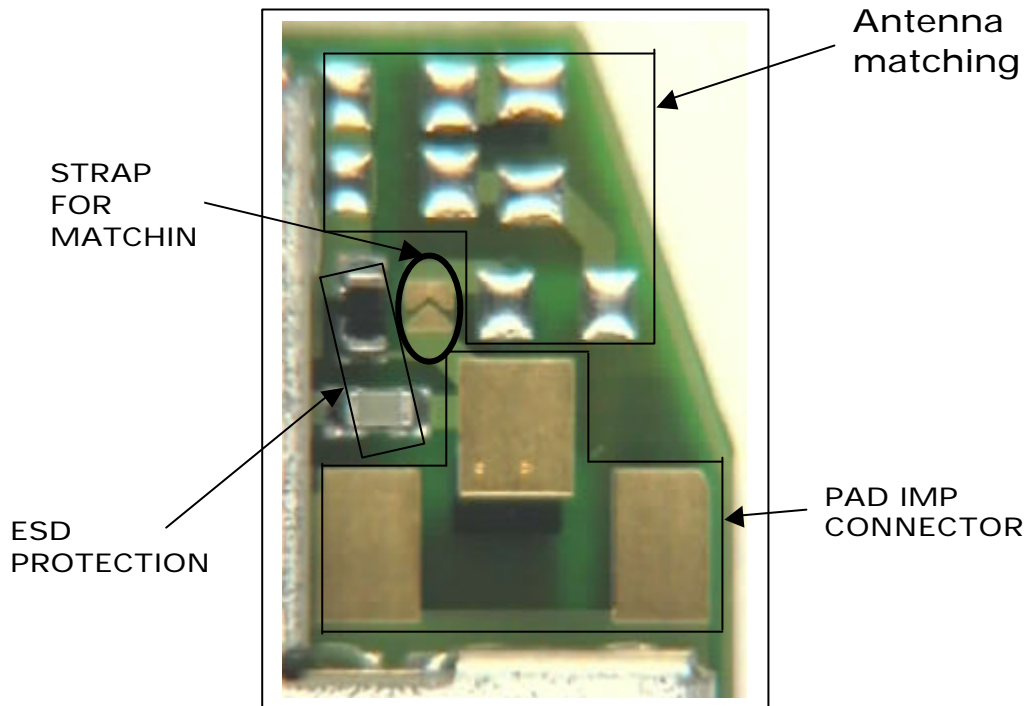
- SPRING ANTENNA CONNECTION
- COAXIAL CONNECTION



**FIG 2**

#### 4.2.3 BOTTOM SIDE Q2403A

- IMP CONTACT AREA
- ANTENNA MATCHING COMPONENTS.

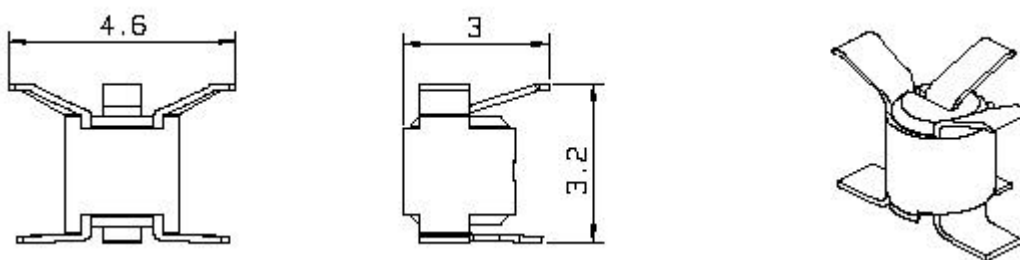


**FIG 3**

#### 4.2.4 IMP Connector

IMP connector does not exist for Q23xxA .

**It has to be welded on the CUSTOMER PCB to avoid coaxial connection .**



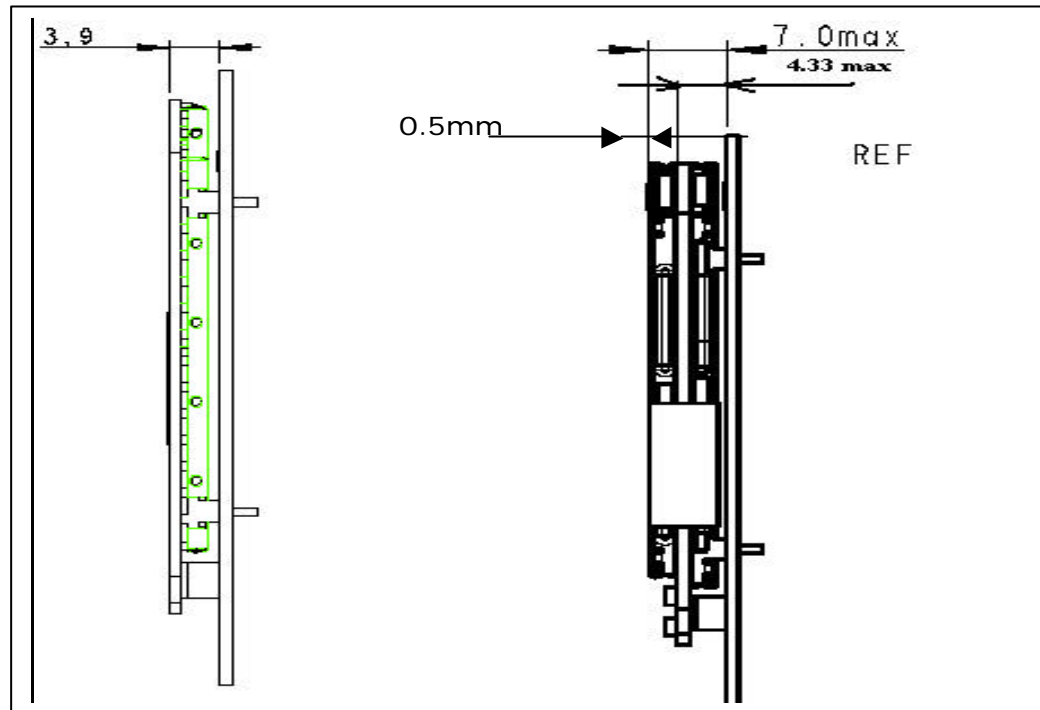
**FIG 5**

## 5 Mechanical delta

Q23xxA is HIGHER than Q2403A.(3.9 high against 7mm)

For integration of spring antenna on the top side module, the difference is 0.5mm high.

For more details you can refer to the hardware specification.



**FIG 4**

## 6 conclusion

- single side.
- Thickness is better than Q23xxA module.
- the radio performances are encouraging and better than the Q23xxA.(stability)
- 3 RF connection is available .
- ESD protection is implemented.