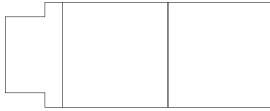
# WIREBONDING CHECKLIST FOR CMS TOB DETECTORS

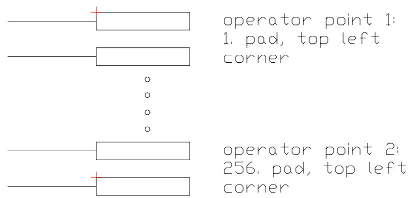
**Program**: **CMS-4MOD3 or CMS-6MOD2**

**Part Orientation:**

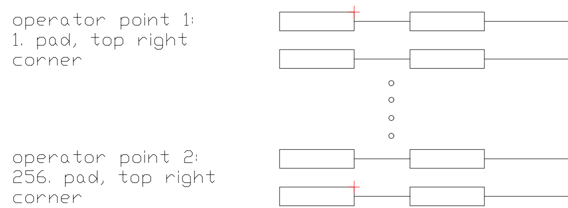


## *1. Pitch Adapter to Silicon Bonds*

**Lead Reference System (L): Pitch Adapter**




**Die Reference System (U): Silicon**




**First Bond: Pitch Adapter**

Bond time: 20 ms

USG Current: 60 to 75mA

Force: 20

**Second Bond: Silicon**

Bond time: 20 ms

USG Current: 45 to 55mA

Force: 35

**Loop Parameters:**

Shape: square

Loop height: 45 mils

Clear height: 55 mils

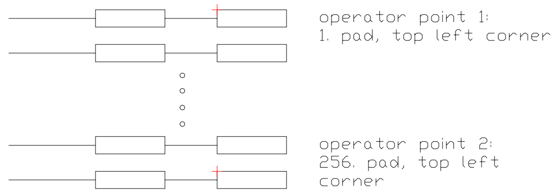
clamp close at loop

**Tail Parameters:**

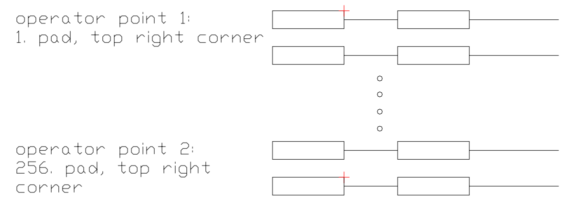
Feed: 75

## *2. Silicon to Silicon Bonds*

**<u>Lead Reference System (L):</u> Left Silicon wafer**




**<u>Die Reference System (U):</u> Right Silicon wafer**




**<u>First Bond: Left Silicon wafer</u>**

Bond time: 20 ms

USG Current: 45 to 50mA

Force: 35

**<u>Second Bond: Right Silicon wafer</u>**

Bond time: 20 ms

USG Current: 45 to 55mA

Force: 35

**<u>Loop Parameters:</u>**

Shape: square

Loop height: 45 mils

Clear height: 55 mils

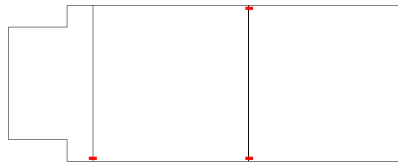
clamp close at loop

**<u>Tail Parameters:</u>**

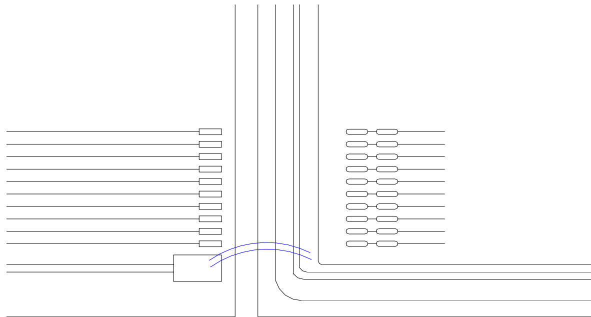
Feed: 75

## *3. Bias Bonds*

**Bond Locations:**



### Pitch Adapter to Silicon:



**First Bond: Pitch Adapter**

Bond time: 20ms

USG Current: 60 to 75mA

Force: 20

**Second Bond: Silicon**

Bond time: 20 ms

USG Current: 45 to 50mA

Force: 35

**Loop Parameters:**

Shape: square

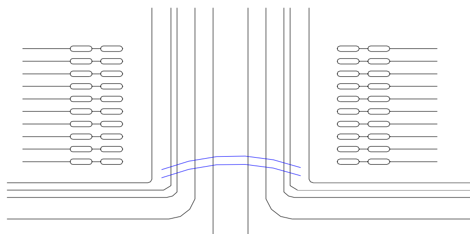
Loop height: 35 mils

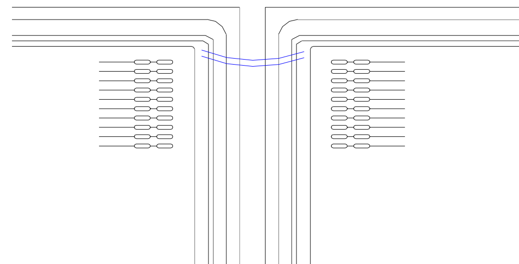
Clamp close at loop

**Tail Parameters:**

Feed: 75

### Silicon to Silicon:





**First Bond: Left Silicon wafer**

Bond time: 20 ms

USG Current: 45 to 55mA

Force: 35

**Second Bond: Right Silicon wafer**

Bond time: 20 ms

USG Current: 45 to 55mA

Force: 35

**Loop Parameters:**

Shape: square

Loop height: 35 mils

clamp close at loop

**Tail Parameters:**

Feed: 75