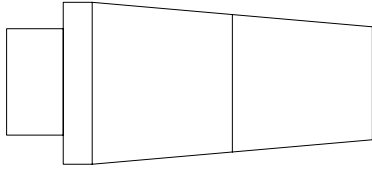


# WIREBONDING CHECKLIST FOR CMS TEC DETECTORS

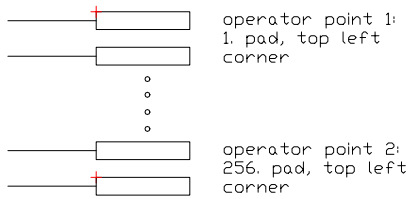
**Program:** TEC-4MOD or TEC-6MOD

**Part Orientation:**

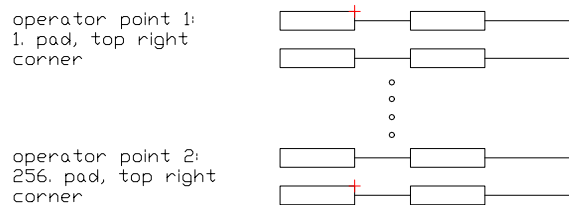


## **1. Pitch Adapter to Silicon Bonds**

**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: 50 mils

Clear height: 60 mils

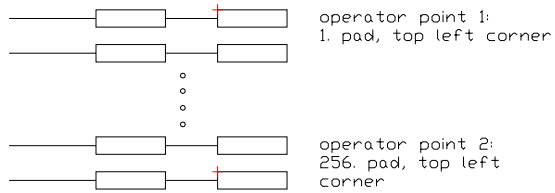
clamp close at loop

### **Tail Parameters:**

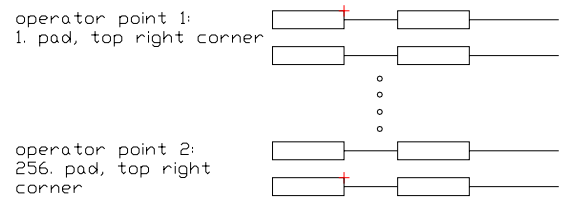
Feed: 75

## 2. Silicon to Silicon Bonds

### Lead Reference System (L): Left Silicon wafer



### Die Reference System (U): Right Silicon wafer



### First Bond: Left Silicon wafer

Bond time: 20 ms

USG Current: 45 to 50mA

Force: 35

### Loop Parameters:

Shape: square

Loop height: 50 mils

Clear height: 60 mils

clamp close at loop

### Second Bond: Right Silicon wafer

Bond time: 20 ms

USG Current: 45 to 55mA

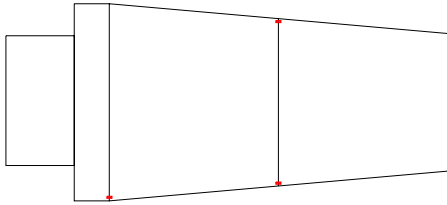
Force: 35

### Tail Parameters:

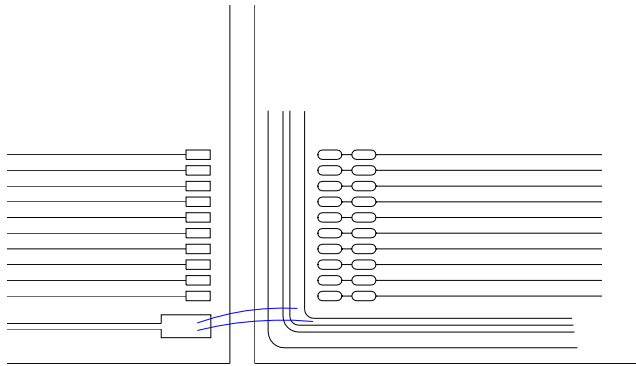
Feed: 75

### 3. Bias Bonds

#### Bond Locations:



#### Pitch Adapter to Silicon:



#### First Bond: Pitch Adapter

Bond time: 20ms

USG Current: 60 to 75mA

Force: 20

Bond foot at wire angle

#### Loop Parameters:

Shape: square

Loop height: 45 mils

Clamp close at loop

#### Second Bond: Silicon

Bond time: 20 ms

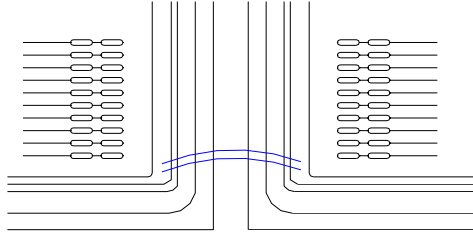
USG Current: 45 to 50mA

Force: 35

#### Tail Parameters:

Feed: 75

## Silicon to Silicon:



### **First Bond: Left Silicon wafer**

Bond time: 20 ms

USG Current: 45 to 55mA

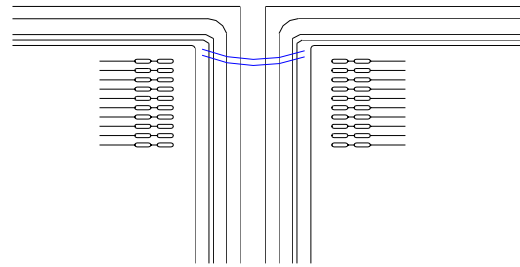
Force: 35

### **Loop Parameters:**

Shape: square

Loop height: 45 mils

clamp close at loop



### **Second Bond: Right Silicon wafer**

Bond time: 20 ms

USG Current: 45 to 55mA

Force: 35

### **Tail Parameters:**

Feed: 75

