

**ABOUT TIMES-7**

We are a high-tech company specializing in the design and manufacture of RAIN (UHF) RFID antennas. Founded in 2006, Times-7 has developed the largest portfolio of fixed RAIN RFID reader antennas. Based in Lower Hutt, New Zealand we export all over the world through an authorized network.

Times-7 antennas are famous for their quality and performance.

In addition to our world-class products and in-depth expertise, our customers appreciate Times-7's customer service and technical support.

We are responsive in supporting a large global customer base and ensuring the success of our customer's implementations.

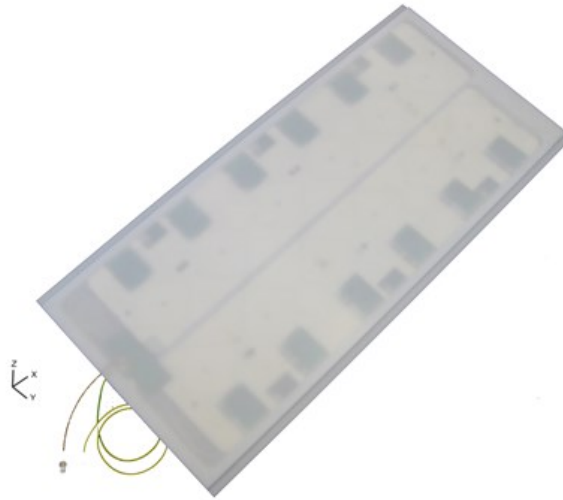
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The SlimLine A6011

Ultra-low profile circular polarised antenna

Especially suited for airport conveyor belts

Industry leading accuracy rates

Just 12 mm / 0.5 in. thick

Typical applications:  
Airport baggage handling systems  
& any conveyor belt-based application

Part of the SlimLine range of airport antennas, the A6011 is a flat panel antenna array especially suited to conveyor belt-based UHF RFID applications. Encased in an ultra-low-profile UHMWPE (Ultra-High Molecular Weight Polyethylene) radome, the A6011 is designed for continuous 24x7 operation in environments where downtime is not an option.

At just 12 mm / 0.5 in. thick, and designed for quick and easy installation, the A6011 is the ideal choice for airport baggage handling systems, or any conveyor belt-based application.

The A6011 underbelt antenna is now available in three different sizes. For more details, please refer to the physical specifications.

**Ordering Information**

*Ordering Information (please quote product code, band / cable type & part no.)*

| Antenna Product Code           | Band                | Part No.              |
|--------------------------------|---------------------|-----------------------|
| A6011 (1200 mm)                | ETSI 864-868 MHz    | 70730                 |
|                                | FCC 902-928 MHz     | 70731                 |
| A6011 (1000 mm)                | ETSI 864-868 MHz    | 71892                 |
|                                | FCC 902-928 MHz     | 71907                 |
| A6011 (800 mm)                 | ETSI 864-868 MHz    | 71891                 |
|                                | FCC 902-928 MHz     | 71906                 |
| Cable Accessories Product Code | Cable Type          | Part No.              |
| Cable 2 m, SMA to RPTNC        | LMR 195 / 240 / 400 | 71436 / 71782 / 72042 |
| Cable 4 m, SMA to RPTNC        | LMR 240 / 400       | 71784 / 72043         |
| Cable 6 m, SMA to RPTNC        | LMR 240 / 400       | 71904 / 72044         |
| Cable 8 m, SMA to RPTNC        | LMR 240 / 400       | 71788 / 72045         |

\*Built in New Zealand. ROHS & CE compliant.

View the Times-7 Cable Accessory datasheet [here](#)

## Specifications

### Physical / Environmental Specifications

|  | A6011 (1200mm)  | A6011 (1000mm)  | A6011 (800mm)  |
|--|---|---|--|
| Dimensions (L x W x D):<br>(X x Y x Z) | 1200 mm x 600 mm x 12 mm<br>48 in. x 24 in. x 0.5 in.           | 1000 mm x 800 mm x 12 mm<br>39 in. x 31 in. x 0.5 in. | 800 mm x 800 mm x 12 mm<br>31 in. x 31 in. x 0.5 in. |
| Weight:                                | 7 kg / 15.4 lbs.  | 8.5 kg / 18.7 lbs                                     | 8.0 kg / 18.0 lbs                                    |
| Radome Material:                       | 3 mm UHMWPE (Ultra-High Molecular Weight Polyethylene)          |   |  |
| Environmental Rating:                  | IP54  |   |  |
| Operating / Storage<br>Temperature:    | 0° to +50°C / -30° to +60°C<br>+32F° to +122°F / -22° to +140°F |   |  |
| Mounting:                              | Affixed directly onto conveyor frame (under conveyor belt)      |   |  |
| Connector type / position:             | SMA female side fly lead (300 mm / 11.8 in.)                    |   |  |

## Electrical Specifications

### Electrical Specifications

|                          | A6011 (1200mm)                                  | A6011 (1000mm)  | A6011 (800mm)   |
|--------------------------|---|-----------------|-----------------|
| Frequency Range:         | 865 – 868 MHz / 902-928 MHz                     |                 |                 |
| Polarization:            | RHCP (Right-hand Circular Polarised)            |                 |                 |
| Far-field Gain:          | 11dBic  | 10 dBic         | 10 dBic         |
| Far-field 3dB beamwidth: | 60Deg / 22Deg                                   | 70 Deg / 25 Deg | 70 Deg / 25 Deg |
| Axial Ratio              | 2dB typical                                     |                 |                 |
| VSWR                     | 2 typical                                       | 1.8 typical     | 1.8 typical     |
| Front to back ratio:     | > -22dB   | > -20dB         | > -20dB         |
| Read zone above belt:    | ≤ 900 mm  |                 |                 |
| Read zone across belt:   | ≤ 1200 mm                                       | ≤ 1000 mm       | ≤ 800 mm        |
| Nominal Impedance:       | 50 Ω  |                 |                 |
| Anti-static protection:  | Yes (Earthing cable, static dissipative radome) |                 |                 |
| Maximum Input Power:     | 3 W   |                 |                 |
| Antenna detection        | 10 K Ω resistance                               |                 |                 |

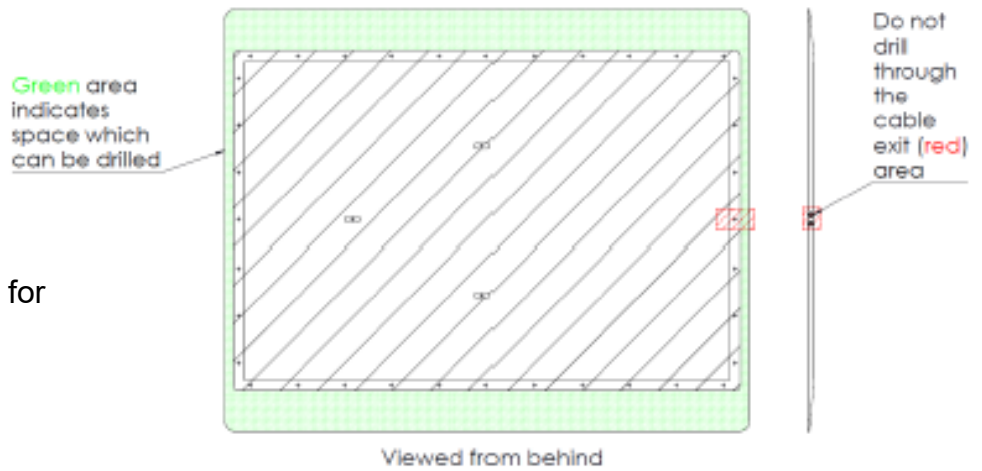
## Installation Instructions

- Ensure that only finger tightness is used for the SMA connector. Use of tools to tighten the connector will apply excessive force and will damage the connector.
- Avoid any load or bending force from the cable on the connector.

## Mounting Information

(For more detailed mounting information, please contact [sales@times-7.com](mailto:sales@times-7.com))

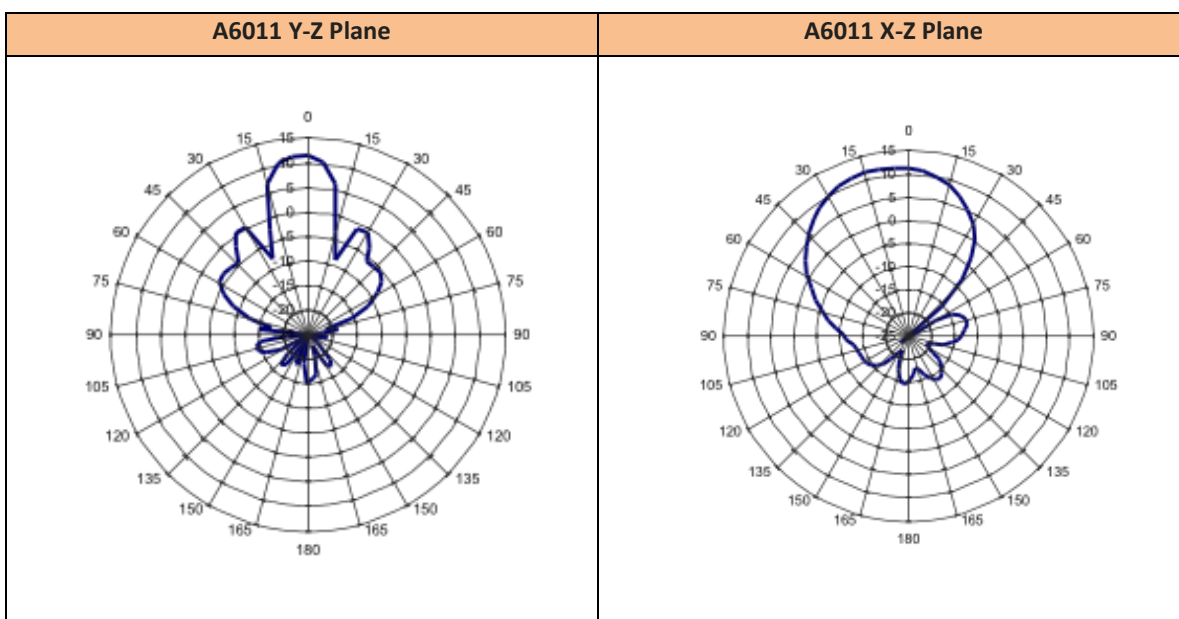
The drawing indicates the drill area for the A6011 800 mm and 1000 mm.



## Mounting Information for the A6011 1200mm

There are two attachment points provided on the back side of the antenna, but only one can be used at any one time to allow for thermal expansion of the under-belt antenna housing.

## Radiation Patterns



## Applications

### Airport Portal:

The A6011 Underbelt Antenna combined with the A6020 Conveyor Portal Antenna is perfect for airport baggage handling and provides industry leading accuracy rates. It can easily be installed into existing airport infrastructure.



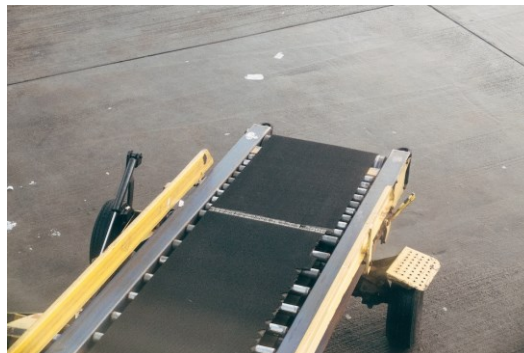
### Bag Tracking

The A6011 Underbelt Antenna airport portal provides data that allows airlines to efficiently track a bag through all airport processes.



### Conveyor belt-based application

The A6011 is a flat panel antenna array especially suited for belt-based RFID applications. The A6011 is designed for continuous 24x7 operation in fast based environments that are constantly busy.



### OUR GLOBAL NETWORK

In addition to our world-class products and in-depth expertise, Times-7 is known for their quality of customer service and technical support. We place emphasis on our responsiveness in supporting a large global customer base and ensuring the success of our customer's implementations.

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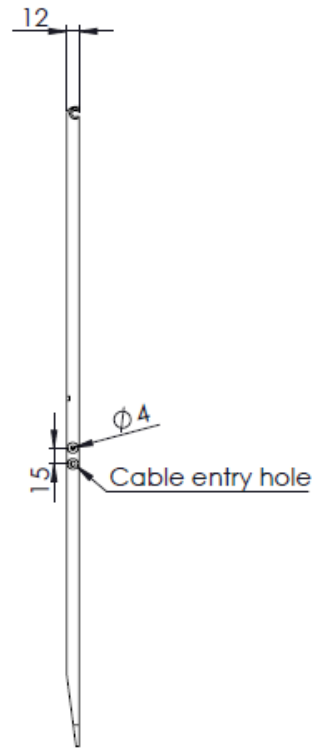
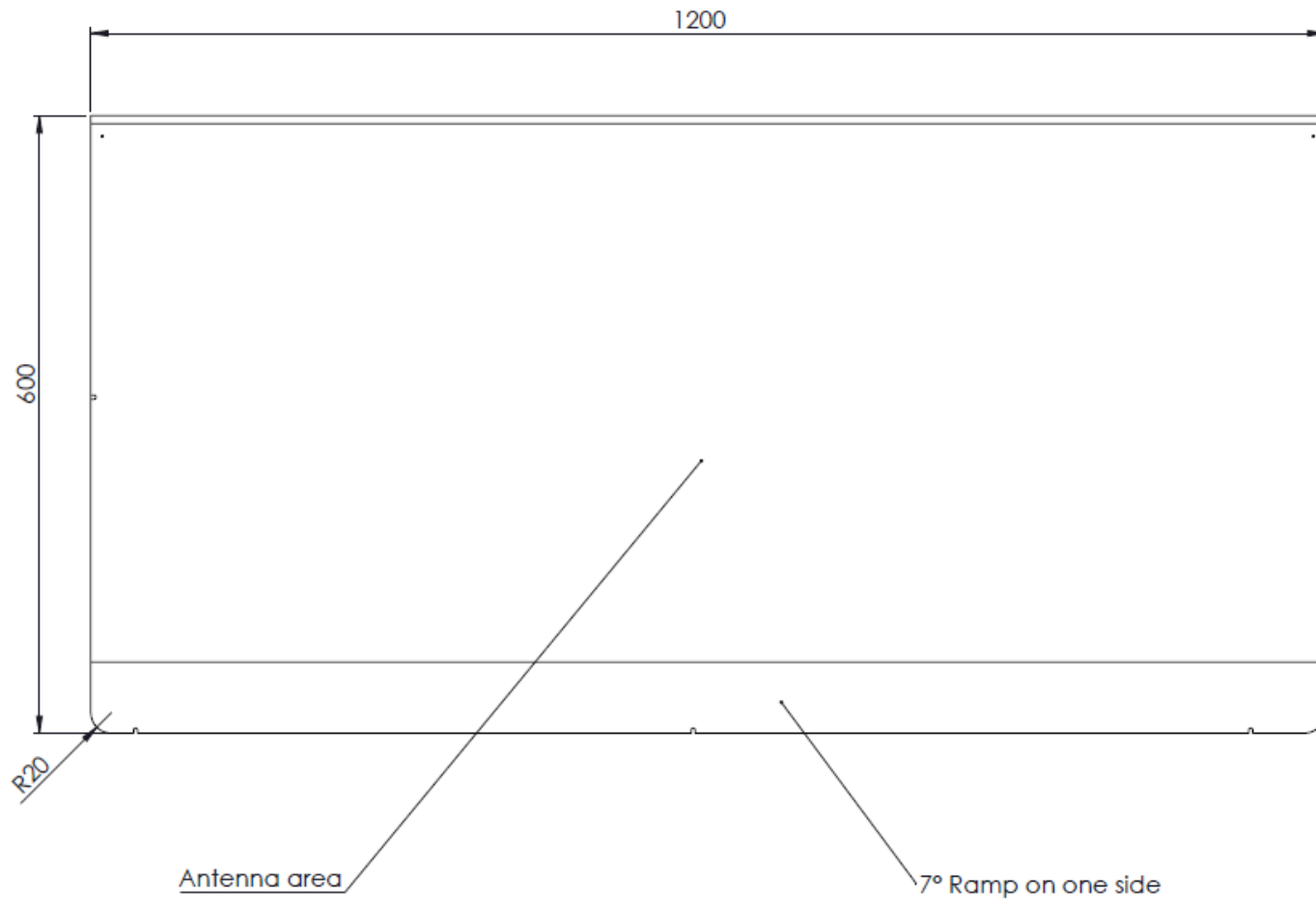


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Datasheet v3.0



Antenna area

7° Ramp on one side

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN mm  
 TOLERANCES:  
 FRACTIONAL ±  
 ANGULAR: MACH ± BEND ±  
 TWO PLACE DECIMAL ±  
 THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC  
 TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

### 1200mm Under Belt Antenna

|            |          |              |
|------------|----------|--------------|
| SIZE       | DWG. NO. | REV          |
| <b>A3</b>  |          | <b>B</b>     |
| SCALE: 1:5 | WEIGHT:  | SHEET 1 OF 1 |

R20

Antenna area

1000

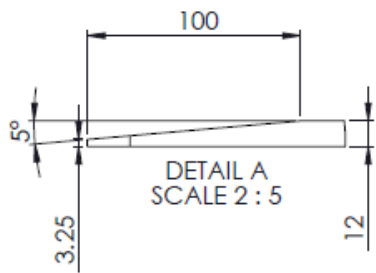
5° Ramp on each end

800

Cable entry hole

12

Ø5



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN mm  
 TOLERANCES:  
 FRACTIONAL ±  
 ANGULAR: MACH ± BEND ±  
 TWO PLACE DECIMAL ±  
 THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

1000mm Under Belt Antenna

SIZE DWG. NO.

A3

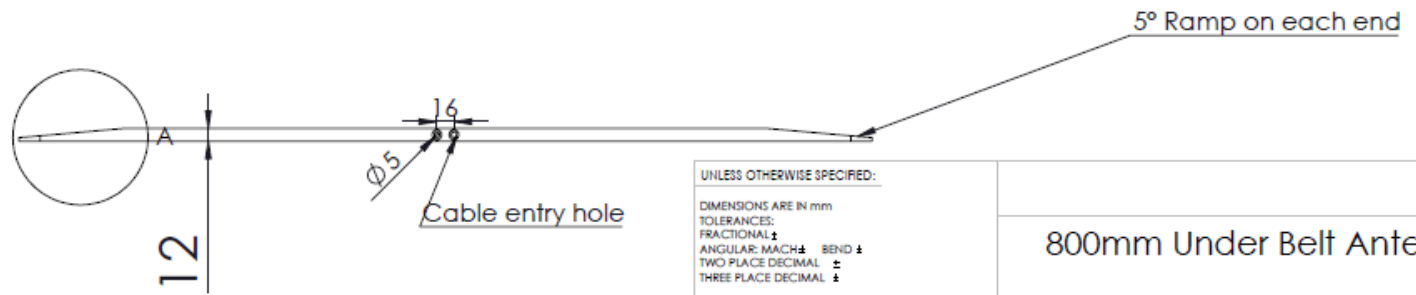
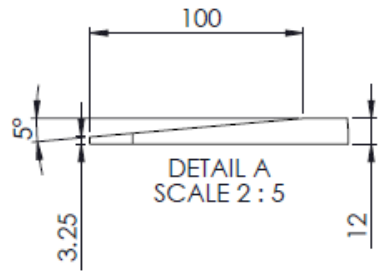
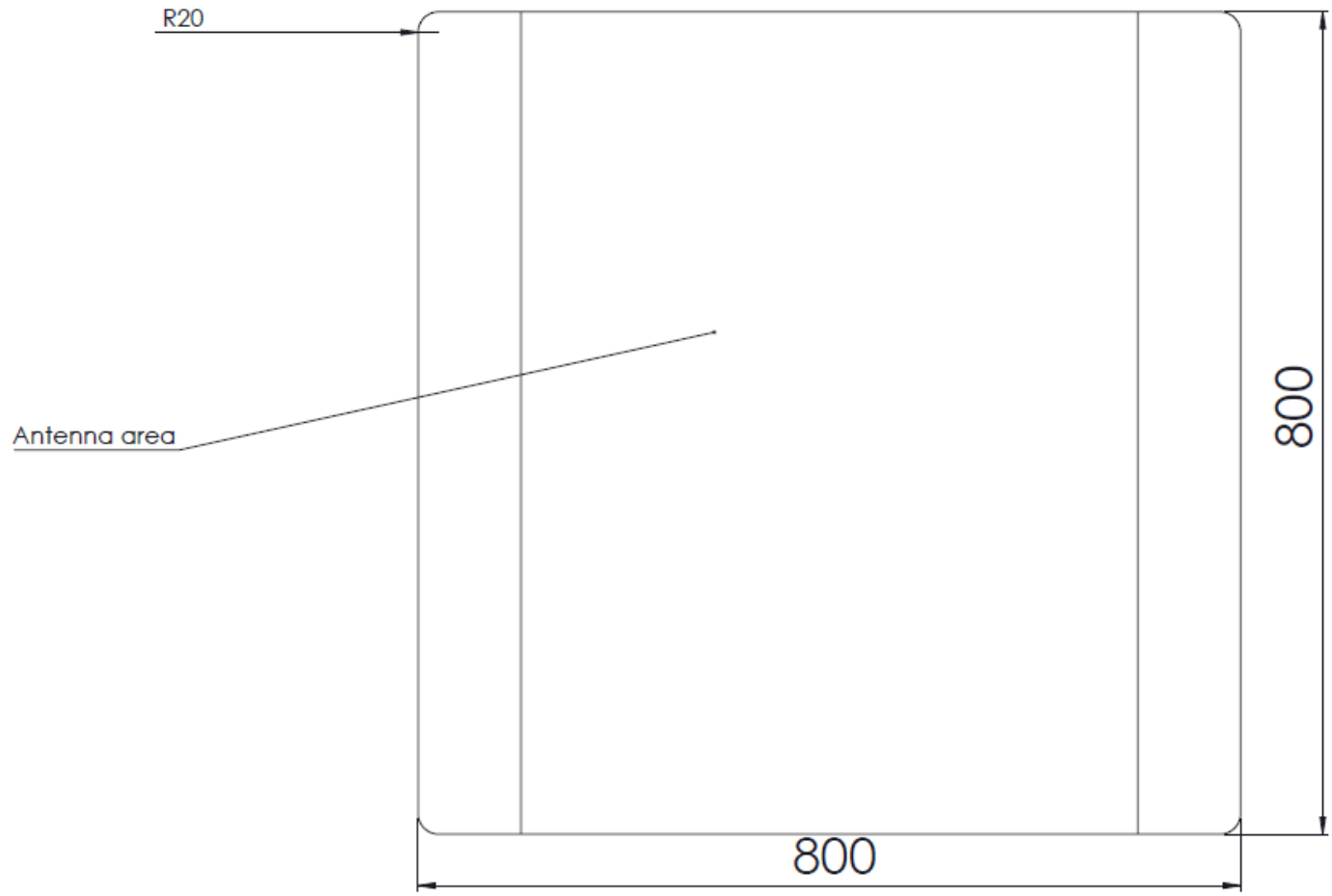
REV

B

SCALE: 1:5

WEIGHT:

SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN mm  
 TOLERANCES:  
 FRACTIONAL ±  
 ANGULAR: MACH ± BEND ±  
 TWO PLACE DECIMAL ±  
 THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC TOLERANCING PER:  
 MATERIAL  
 FINISH

DO NOT SCALE DRAWING

|                          |          |              |
|--------------------------|----------|--------------|
| 800mm Under Belt Antenna |          |              |
| SIZE                     | DWG. NO. | REV          |
| <b>A3</b>                |          | <b>B</b>     |
| SCALE: 1:5               | WEIGHT:  | SHEET 1 OF 1 |