



The PA5200 series Radar Altimeters provide height data on the shortest distance between the altimeter and the underlying terrain for heights from 0 to 5000 feet.

The altimeter uses a dual leading edge tracker to ensure tracking of the nearest object. Continuous automatic monitoring of the system ensures high reliability with accurate height indication down to 0 altitude.

RADAR ALTIMETERS

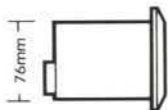
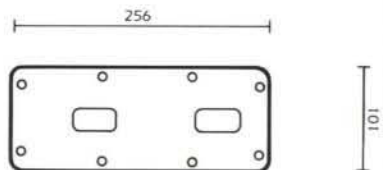
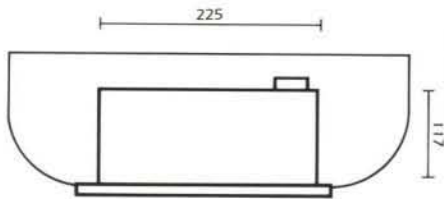
The PA5200 series Radar Altimeter operates in mid J-Band (US Ku-Band) using microwave Field Effect Transistor (FET) technology. Software controlled signal processing techniques are used to enable reliable performance to be achieved to 5000 feet with a transmitter power of only 0.5 Watt. Surface mount technology is used to give a low volume, high reliability package which includes the antenna.

- **For fixed and rotary wing aircraft, missiles, RPVs and drones**
- **Operates in J-Band (US Ku-Band)**
- **Single box unit includes antenna**
- **No RF feeders**
- **Superior accuracy and resolution 0 to 5000 feet**
- **Excellent hover performance**
- **Analogue or data bus**
- **Low cost of ownership and installation**

PA5200 - THE LOW COST SOLUTION

Electronic Systems Division

(A Division of Marconi Defence Systems Limited)



all dimensions in mm



Advantages of J-Band

High antenna isolation
One box system includes antenna
Only one fuselage cut-out required
No RF feeders
Predictable installed performance
No fading during low altitude hover
Tracks top of snow and ice covered terrain

Advantages of Pulsed Systems

Track nearest object
No averaging over the radar footprint
Minimal slant range errors
No height errors due to doppler shift
Low average power

PA5200 Construction

Ease of maintenance and logistic support
High reliability Surface Mount Device (SMD) assemblies

PA5200 Interfaces

Interfaces which can be implemented include:
RS422/RS232
Analogue outputs for autopilots
Discrete I/O for 'push-to-test'

PA5200 Installation

One-box fuselage mounted system
No installation adjustments
Multiple altimeter installations

PA5200 Reliability and Flight Safety

5000 hours MTBF
98% BITE coverage
>99% coverage of flight safety failures
RTCA DO - 178A software

SPECIFICATION SUMMARY (Average Terrain)

Height Range

0 to 5000ft option (can be extended)

Warm-Up

2 seconds including operational readiness test

Accuracy

± (3 + 3 %h)ft

Pitch

30° roll 30° pitch to 2000ft
20° roll 20° pitch 2000 to 5000ft

Track Rate

1500ft/sec ascent
2000ft/sec descent

Search Rate

6000ft/sec

Power Input

Nominal 28V DC to
Maximum Consumption 26W max

Transmitter Frequency

Mid J-Band (Navigation Aids Band) 15.65GHz

Transmitter Power

0.5W peak

Temperature Range

-40°C to 50°C standard

MTBF

5000 hours

Dimensions (Excluding Flange and Connectors)

Length: 225mm (8.9ins)
Depth: 76mm (3.0ins)
Height 117mm (6.5ins)

Weight

3.0kg (7.0lbs) max

Qualification

MIL-STD-810D
MIL-STD-461B
RTCA DO 160B

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