

Measured 'Active' Beams



Headquarters: The Electron Centre Harwell Science and Innovation Centre

SaB20/7.5/360/8/v2(v4), SaB40/7.5/360/8/v1(v3)

8 Beam, 4.9GHz to 5.9GHz, Cylindrical Antenna

Features:

- ✓ **Passive** and **Active** Units, with 24° and 12° elevation beamwidth variants (versions V1 to V4)
- ✓ Fast RF Beam Switching across 360°
- ✓ Lightweight, Low Power and Robust
- ✓ Suitable for WiMAX/WLAN Networks (PMP and MESH)

GENERAL SPECIFICATION (Preliminary Data – Customer Evaluation 1Q 2009)

Passive Versions (V1 and V2):

Frequency Band: 4.9 to 5.9GHz (3.5GHz version planned)

Polarization: Vertical

Az/EI Beamwidth: 45°/24° & 12° for V1/ V2 and V3/V4

Gain: 11dBi (20cm high), 13dBi (40cm high)

Az/EI Sidelobes: -13dB/-15dB

RF Power Handling: 1W

Active Versions (V3 and V4):

As above, but with amplification: Gain 15dBi (20cm) and 17dBi (40cm) for a 1.5dB noise figure

INTERFACE SPECIFICATION

Control Interface: GPI lines (Ethernet option planned)

Connector: 50Ω SMA Female or N-type

Beam Switch Time: <50ns

DC Power: <1mW (passive), 3W (active)

MECHANICAL SPECIFICATION

Sizes: V1 and V3: 20cm high x 7.5cm diameter,

Weight: TBA(<2Kg)

V2 and V4: 40cm high x 7.5cm high

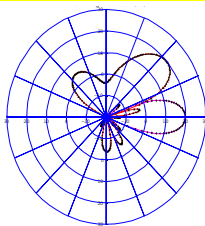
Radome: Off-white UV Protected Plastic

CONTACT: Dr David Hayes

EMAIL: dh@plasmantennas.com

The Electron Centre, Fermi Avenue
Harwell, Oxfordshire, OX11 0QR

Telephone: 44 (0)1865 373079
Mobile: 44 (0)783 9906579



Simulated (45° azimuth)



Headquarters: The Electron Centre Harwell Science and Innovation Centre

SaB20/40/90/8/v1(/v2)

8 Beam, 4.9GHz to 5.9GHz, Planar Antenna

Features:

- ✓ **Passive** and **Active** Units, (versions 1 & 2)
- ✓ Fast RF Beam Switching across +/- 45° FOV
- ✓ Lightweight, Low Power and Robust
- ✓ Suitable for WiMAX/WLAN Networks (FPA, PMP and MESH)

GENERAL SPECIFICATION (Preliminary Data – Customer Evaluation 2Q 2009)

Frequency Band: 4.9 to 5.9GHz (3.5GHz version planned)	Gain: 18dBi (passive version), 22dBi (active version)
Polarization: Vertical (Horizontal Planned)	Az/EI Sidelobes: -13dB/-15dB (az/el)
Az/EI Beamwidth: 17°/ 12°	RF Power Handling: 4W

INTERFACE SPECIFICATION

Control Word: GPI lines (Ethernet option planned)	Beam Switch Time: <50nS
Connector: 50Ω SMA Female or N-type	DC Power: <1mW (passive), 3W (active)

MECHANICAL SPECIFICATION

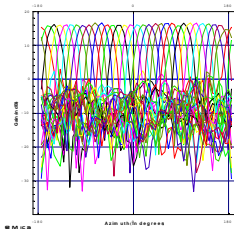
Size: 40cm high x 30cm wide	
Weight: TBA	Radome: Off-white UV Stable Plastic

CONTACT: Dr David Hayes

EMAIL: dh@plasmantennas.com

The Electron Centre, Fermi Avenue
Harwell, Oxfordshire, OX11 0QR

Telephone: 44 (0)1865 373079
Mobile: 44 (0)783 9906579



Measured Beams



Headquarters: The Electron Centre Harwell Science and Innovation Centre

SaB20/30/360/32/v2(/v4), SaB40/30/360/32/v1(/v3)

32 Beam, 4.9GHz to 5.9GHz, Cylindrical Antenna

Features:

- ✓ **Passive** and **Active** Units, (versions 1 to 2)
- ✓ Fast RF Beam Switching across 360°
- ✓ Lightweight, Low Power and Robust
- ✓ Suitable for WiMAX/WLAN Networks (PMP and MESH)

GENERAL SPECIFICATION (Preliminary Data – Customer Evaluation 1Q 2009)

Passive Versions (V1):

Frequency Band: 4.9 to 5.9GHz (3.5GHz version planned)

Gain: 16dBi

Polarization: Vertical

Az/EI Sidelobes: -18dB/-22dB

Az/EI Beamwidth: 20°/(24/12°) (1.5dB crossovers in az)

RF Power Handling: 4W

Active Versions (V3):

As above, but with integrated amplification: Gain 20dBi (20cm) for a 1.5dB noise figure

INTERFACE SPECIFICATION

Control Interface: GPI lines (Ethernet option planned)

Beam Switch Time: <50nS

Connector: 50Ω SMA Female or N-type

DC Power: <1mW (passive), 3W (active)

MECHANICAL SPECIFICATION

Sizes: **V1** and **V3**: 20cm high x 7.5cm diameter,

V2 and **V4**: 40cm high x 7.5cm high

Weight: TBA (<5Kg)

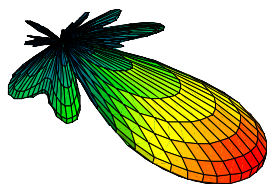
Radome: Off-white UV Protected Plastic

CONTACT: Dr David Hayes

EMAIL: dh@plasmantennas.com

The Electron Centre, Fermi Avenue
Harwell, Oxfordshire, OX11 0QR

Telephone: 44 (0)1865 373079
Mobile: 44 (0)783 9906579



Simulated



Headquarters: The Electron Centre Harwell Science and Innovation Centre

SaB20/16/360/16/v2(/v4), SaB40/16/360/16/v1(/v3)

16 Beam, 4.9GHz to 5.9GHz, Cylindrical Antenna

Features:

- ✓ Passive and Active Units, with 10° and 6° elevation beamwidth variants, (versions V1 to V4)
- ✓ Fast RF Beam Switching across 360°
- ✓ Lightweight, Low Power and Robust
- ✓ Suitable for WiMAX/WLAN Networks (PMP and MESH)
- ✓ Optional selectable 'omnidirectional' mode on the active version only

GENERAL SPECIFICATION (Preliminary Data – Customer Evaluation 2Q 2009)

Passive Versions (V1 and V2):

Frequency Band: 4.9 to 5.9GHz (3.5GHz version planned)	Gain: 13dBi (20cm high), 15dBi (40cm high)
Polarization: Vertical	Ax/EI Sidelobes: -15dB/-22dB
Az/EI Beamwidth: 22.5°/24°/12° for V1/ V2 and V3/V4	RF Power Handling: 1W

Active Versions (V3 and V4):

As above, but with integrated amplification: Gain 17dBi (20cm) and 19dBi (40cm) for a 1.5dB noise figure

INTERFACE SPECIFICATION

Control Interface: GPI lines (Ethernet option planned)	Beam Switch Time: <50nS
Connector: 50Ω SMA Female or N-type	DC Power: <1mW (passive), 3W (active)

MECHANICAL SPECIFICATION

Sizes: V1: 20cm high x 16cm diameter,	V2: 40cm high x16cm diameter
Weight: TBA (<4kg)	Radome: Off-white UV Protected Plasti

CONTACT: Dr David Hayes

EMAIL: dh@plasmantennas.com

The Electron Centre, Fermi Avenue
Harwell, Oxfordshire, OX11 0QR

Telephone: 44 (0)1865 373079
Mobile: 44 (0)783 9906579