



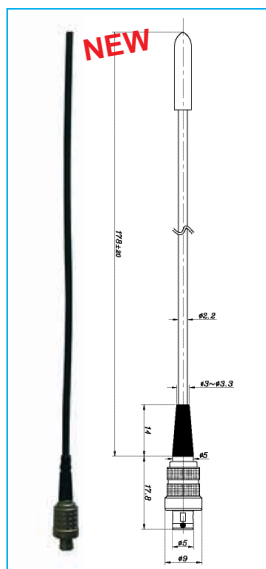
## Antenna

### Antenna

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Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# Antenna – Customizable Band Antenna



## SPB-450-Super miniature antenna

The SPB-450 is one of the versatile antenna series customizable from a bandwidth of 400MHz to 900MHz. This new 1/4 wavelength whip antenna brings wireless applications to a new paradigm.

- 1/4 Wavelength Whip antenna
- Customizable band using cutting chart
- 400MHz ~ 900MHz
- Sam Woo's High-quality SPB connector

Electrical Performance	Specifications
Frequency Range	400MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30°C ~ +70°C



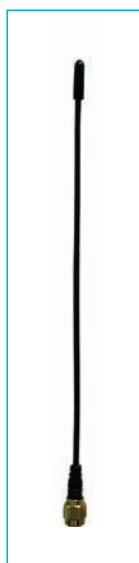
Included with all customizable band antenna

Bare SPB plug and receptacle also available.  
More information on Sam Woo's Circular Connector catalogue p. 39.



SPB-00PT1

SPB-00RT1

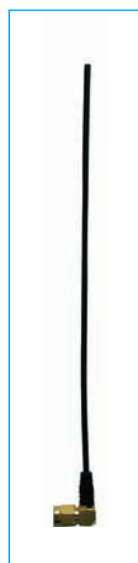


## SMAP-450

- 1/4 Wavelength whip antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SMA connector

Electrical Performance	Specifications
Frequency Range	400MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30°C ~ +70°C

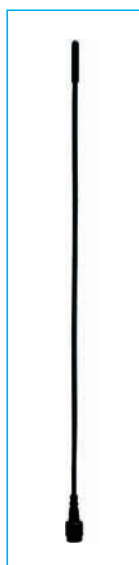


## SMAPL-450

- 1/4 Wavelength whip antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- Right-angle SMA connector

Electrical Performance	Specifications
Frequency Range	400MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30°C ~ +70°C

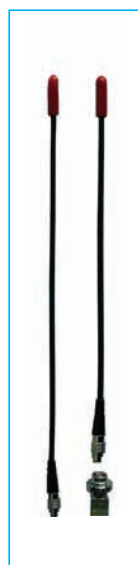


## SSMAP-450

- 1/4 Wavelength whip antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SSMA connector

Electrical Performance	Specifications
Frequency Range	400MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30°C ~ +70°C



## SPU-450

- 1/4 Wavelength whip antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SPU connector(also available with SPU recetpacle)

Electrical Performance	Specifications
Frequency Range	400MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30°C ~ +70°C

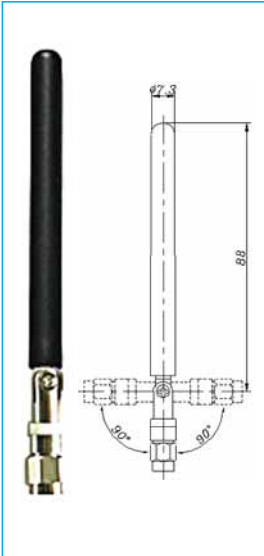
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## SMAP-434

- 1/4 Wavelength Monopole Antenna
- 180° Tilting Helical or Whip Type
- Available with other connectors

Electrical Performance	Specifications
Frequency Range	200MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	Urethane
Connector	SMA (Male)
Antenna Length	~88mm
Operating Temperature	-30°C ~ +70°C
Others	

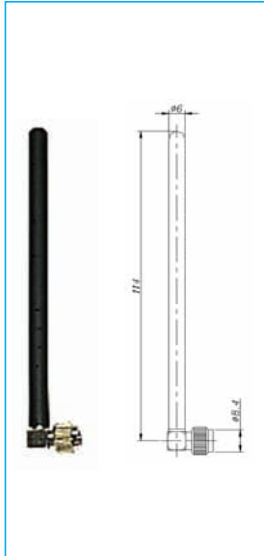


## SMALP-434

- 1/4 Wavelength Monopole Antenna
- 90° Fixed Helical or Whip Type
- Available with other connectors

Electrical Performance	Specifications
Frequency Range	135MHz~900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	SWC
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~114mm
Operating Temperature	-30°C ~ +70°C
Others	

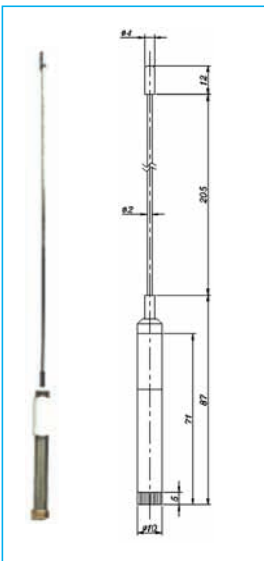


## SMAP-447

- 1/2 Wavelength Spike Antenna
- Designed for Outdoor Use

Electrical Performance	Specifications
Frequency Range	400MHz~500MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	SUS
Base Material	BS / Acetal
Connector	SMA (Male)
Antenna Length	~330mm
Operating Temperature	-30°C ~ +70°C
Others	

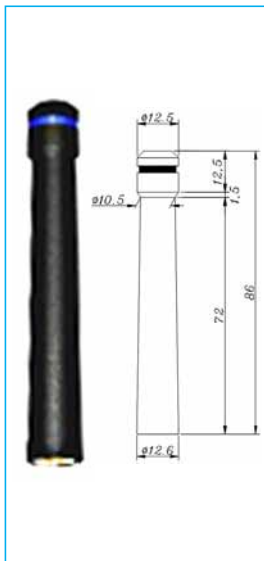


## SMAP-ANT-925S

- 1/2 Wavelength Helical Antenna
- High Gain
- 900MHz Band

Electrical Performance	Specifications
Frequency Range	900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~86mm
Operating Temperature	-30°C ~ +70°C
Others	



## SMAP-900-1

- 1/4 Wavelength Helical Antenna
- 900MHz Band

Electrical Performance	Specifications
Frequency Range	824~960MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	PVC
Connector	SMA (Male)
Antenna Length	~28.5mm
Operating Temperature	-30°C ~ +70°C
Others	



## SMAP-1800-1

- 1/4 Wavelength Helical Antenna
- 1800MHz Band

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	PVC
Connector	SMA (Male)
Antenna Length	~28.5mm
Operating Temperature	-30°C ~ +70°C
Others	



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# Antenna

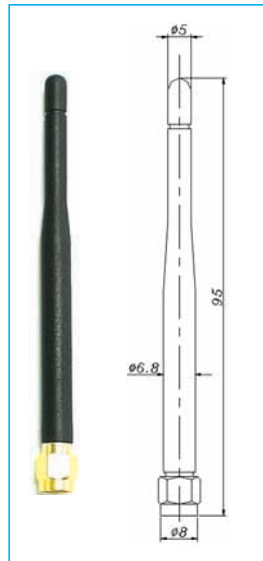


## SMAP-2400-1

- 1/4 Wavelength Helical Antenna
- 2400MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	PVC
Connector	SMA (Male)
Antenna Length	~28.5mm
Operating Temperature	-30°C ~ + 70°C
Others	

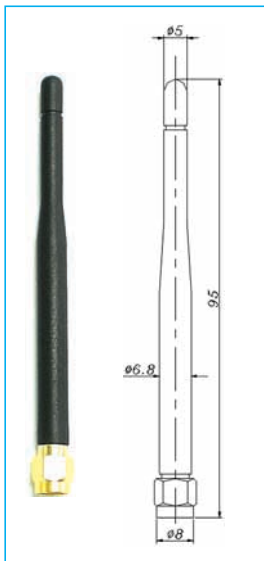


## SMAP-1800

- 1/2 Wavelength Dipole Antenna
- 1800 MHz Band

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCu
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~95mm
Operating Temperature	-30°C ~ + 70°C
Others	

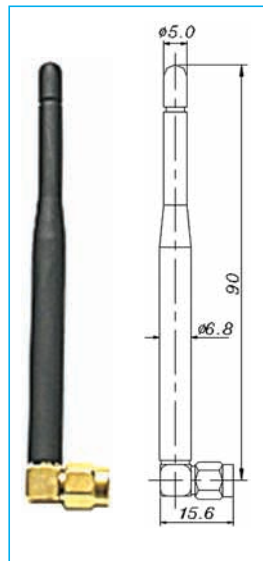


## SMAP-2400

- 1/2 Wavelength Dipole Antenna
- 2400 MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCu
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~95mm
Operating Temperature	-30°C ~ + 70°C
Others	

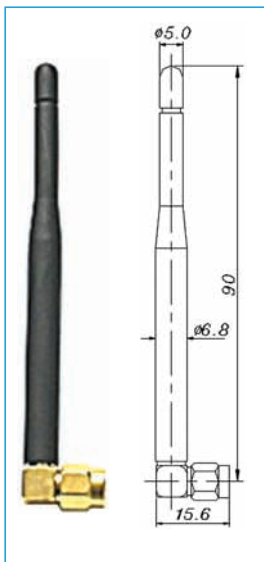


## SMALP-1800

- 1/2 Wavelength Dipole Antenna
- 90° Fixed 1800 MHz Band

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCu
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~90mm
Operating Temperature	-30°C ~ + 70°C
Others	

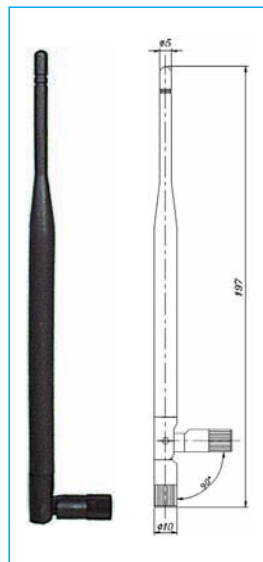


## SMALP-2400

- 1/2 Wavelength Dipole Antenna
- 90° Fixed 2400 MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCu
Base Material	TPE
Connector	SMA (Male)
Antenna Length	~90mm
Operating Temperature	-30°C ~ + 70°C
Others	



## SMAP-2400T

- 90° Tilting 2400MHz Band
- High Gain

Electrical Performance	Specifications
Frequency Range	2350~2480MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	4dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	PA
Connector	SMA (Male)
Antenna Length	~197mm
Operating Temperature	-30°C ~ + 70°C
Others	

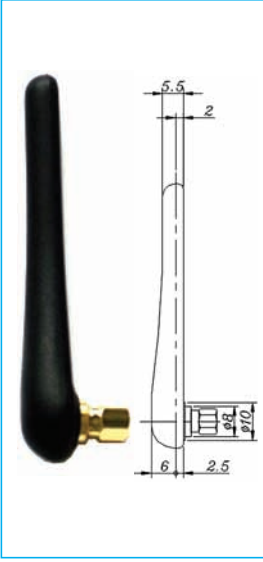
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## SMCP-900

- 1/4 Wavelength Whip Antenna
- Insert - Molding Type
- 900MHz Band
- Also available with SMA

Electrical Performance	Specifications
Frequency Range	900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	SMC (Female)
Antenna Length	~70mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMA

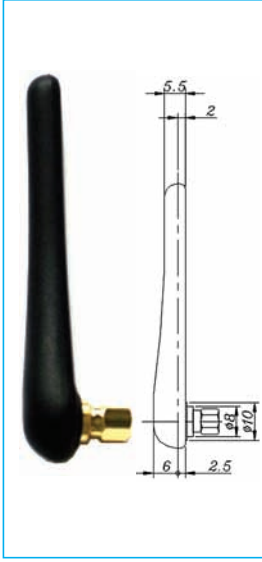


## SMCP-1800

- 1/4 Wavelength Whip Antenna
- Insert - Molding Type
- 1800MHz Band
- Also available with SMA

Electrical Performance	Specifications
Frequency Range	1800MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	SMC (Female)
Antenna Length	~70mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMA

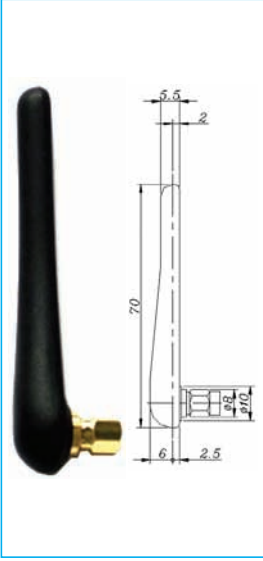


## RSMAP-900

- 1/4 Wavelength Whip Antenna
- Insert - Molding Type
- 900MHz Band
- Also available with SMC

Electrical Performance	Specifications
Frequency Range	900MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	SMA (Female)
Antenna Length	~70mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMC

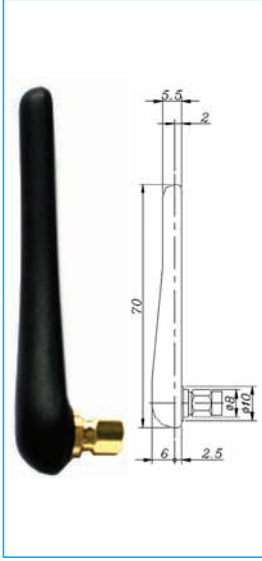


## RSMAP-1800

- 1/4 Wavelength Whip Antenna
- Insert - Molding Type
- 1800MHz Band
- Also available with SMC

Electrical Performance	Specifications
Frequency Range	1800MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	SMA (Female)
Antenna Length	~70mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMC



## FMEJ-900

- 1/4 Wavelength Monopole Antenna
- Single Band or Dual Band
- 900MHz Band
- Also available with SMA, MCX

Electrical Performance	Specifications
Frequency Range	824-960MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	FME (Female)
Antenna Length	~76mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMA, MCX



## FMEJ-1800

- 1/4 Wavelength Monopole Antenna
- Single Band or Dual Band
- 1800MHz Band
- Also available with SMA, MCX

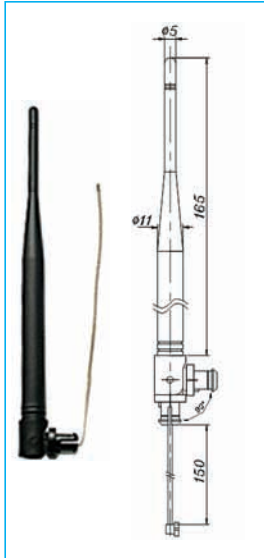
Electrical Performance	Specifications
Frequency Range	1800MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	0dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	FME (Female)
Antenna Length	~76mm
Operating Temperature	-30°C ~ +70°C
Others	Also available with SMA, MCX



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# Antenna

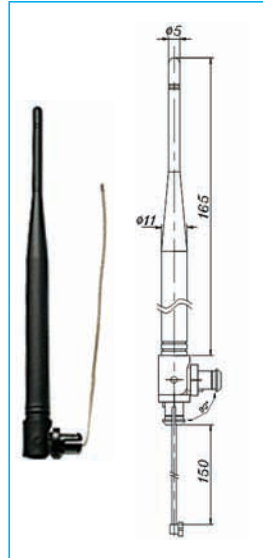


## MCX-850

- 1/2 Wavelength Dipole Antenna
- Direct Connection with RF Module
- 90° Tilting MCX Series

Electrical Performance	Specifications
Frequency Range	824~960MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCuAg
Base Material	PA
Cable Type	RG-316 or RG-178
Connector	MCX,MMCX,etc
Antenna Length	140~200mm
Operating Temperature	-30°C ~ + 70°C
Others	Snap-in Type

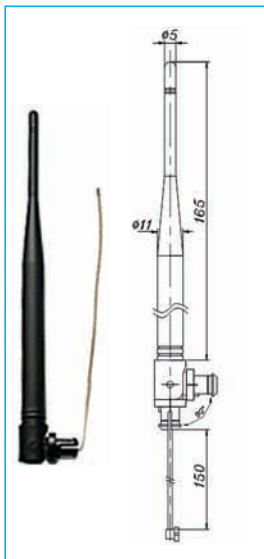


## MCX-1800

- 1/2 Wavelength Dipole Antenna
- Direct Connection with RF Module
- 90° Tilting MCX Series

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCuAg
Base Material	PA
Cable Type	RG-316 or RG-178
Connector	MCX,MMCX,etc
Antenna Length	140~200mm
Operating Temperature	-30°C ~ + 70°C
Others	Snap-in Type



## MCX-2400

- 1/2 Wavelength Dipole Antenna
- Direct Connection with RF Module
- 90° Tilting MCX Series

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:1.5
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCuAg
Base Material	PA
Cable Type	RG-316 or RG-178
Connector	MCX,MMCX,etc
Antenna Length	140~200mm
Operating Temperature	-30°C ~ + 70°C
Others	Snap-in Type

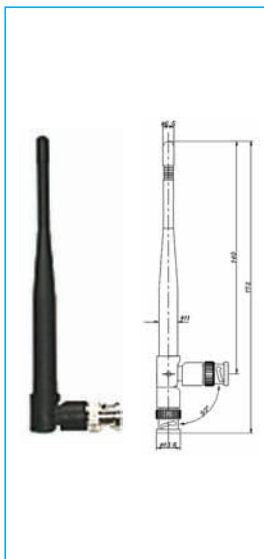


## TNCP-800

- 1/2 Wavelength Dipole Antenna
- 90° Tilting 800MHz Band

Electrical Performance	Specifications
Frequency Range	800MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	StCu
Base Material	PA
Connector	TNC (Male)
Antenna Length	~230mm
Operating Temperature	-30°C ~ + 70°C
Others	

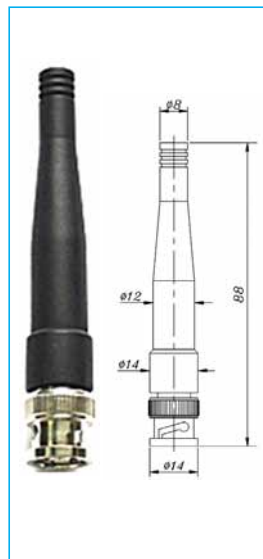


## BNCP-1800

- 1/2 Wavelength Dipole Antenna
- 90° Tilting 1800MHz Band

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	PA
Connector	BNC (Male)
Antenna Length	~172mm
Operating Temperature	-30°C ~ + 70°C
Others	



## RBNCP-2400

- 1/2 Wavelength Dipole Antenna
- 2400MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2480MHz
Nominal Impedance	50Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 1:2.0
Gain	2dB

Mechanical Performance	Specifications
Radiator	Cu
Base Material	TPE
Connector	BNC (Female)
Antenna Length	~88mm
Operating Temperature	-30°C ~ + 70°C
Others	

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.