

Retractable bottom helical Antenna

Vendor : Allgon Mobile commucations AB

Vendor P/N : 39445.1

Electrical Data

Freq. Band

Transmit Band (Tx) : 824 - 849 MHz

Receive Band (Rx) : 869 - 894 MHz

Impedance

Nominal Value : 50 Ω

VSWR (Free Space)

	Maximum Values	
	Tx	Rx
extended	2:1	2:1
retracted	3.2:1	3.2:1

GAIN

Typical Minimum Values in Maximum Direction

	Tx	Rx
extended	-2dBd	-2dBd
retracted	-3.5dBd	-3.5dBd

0 dBd : dB relative to a dipole

Maximum Lobe Tilt

	Tx	Rx
extended	45 $^{\circ}$	45 $^{\circ}$
retracted	45 $^{\circ}$	45 $^{\circ}$

Power Rating

Maximum Value P = 2W (continuous wave)

Environment

Operational Temperature

Low Operational Temperature T_{LO} : -20°C

High Operational Temperature T_{HO} : +70°C

Method : The antenna is placed in a climatic chamber at T_{LO} (or T_{HO})
The antenna is taken out after 1 hour, and the VSWR is immediately measured.

Temperature Cycling

Low Temperature Cycling T_{LC} : -40°C

High Temperature Cycling T_{HC} : +80°C

Method : The antenna is placed in a climatic chamber. The temperature is cycled as follows:
The temperature is kept constantly at T_{LC} for 1 hour, increased to T_{HC} during 1 hour, kept constantly at T_{HC} for 1 hour, and then decreased to T_{LC} during 1 hour. This procedure is repeated 10 times, ending at room temperature.

Humidity

Relative Humidity : 95%

Temperature : +55°C

Method : The antenna is placed in a climatic chamber for 24 hours.
The antenna is taken out from the chamber and measured after another 24 hours in room temperature.

Sinusoidal Vibration

Vibration Freq. : 8-25-8 Hz (1 cycle)

Sweep Rate : 1 octave/min (logarithmic)

Maximum Amplitude : $A = 1.5$ mm

Maximum Acceleration : 2g

Crossover Freq. : 18.2Hz

Method : The extended antenna is assembled in the test equipment.
The vibration is done both x- and z- directions, with a duration of 1 hour in each direction.

