



GSM GPS COMBO WIFI 433 WIMAX FM CONNECTORS

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**DATASHEET**

**ELECTRONICS SOLUTION GROUP LIMITED**  
**索魯迅電子有限集團公司**  
604, Tower A, New Trade Plaza, 6 On Ping Street, Shatin, N.T., Hong Kong

## 1. GSM ANTENNA

### 1.1 ESG-GSM-01

Frequency (MHz): 850-1900/900-1800

Bandwidth(MHz): 70/180

VSWR  $\leq$  2

Gain(dBi): 2.15

Max Input power (W): 50

Input Impedance( $\Omega$ ): 50

Polarization: Vertical

Antenna Length (mm): 50

Connector : SMA/FME ( Straight/Right Angle/Rotation ) etc.

Storage Temperature : -30C to+75C

Operating Temperature : -30C to+75C



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**1.2 ESG-GSM-02-94 (76)**

Frequency (MHz): 850-1900/900-1800

Bandwidth(MHz): 70/180

VSWR  $\leq$  2

Gain(dBi): 3 (2)

Max Input power (W): 50

Input Impedance( $\Omega$ ): 50

Polarization: Vertical

Antenna Length (mm): 94, 76

Connector : SMA/FME ( Straight/Right Angle/Rotation ) etc.

Storage Temperature : -30C to+75C

Operating Temperature : -30C to+75C

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**1.3 ESG-GSM-03**

Frequency (MHz): 850-1900/900-1800

Bandwidth (MHz): 90/280

VSWR  $\leq$  1.5

Gain (dBi): 3.5

Max Input power (W): 60

Input Impedance ( $\Omega$ ): 50

Polarization : Vertical

Size (mm):  $\Phi$ 30(Base) $\times$ 85(Height)

Cable Length (m): 2.5

Cable Type : RG174

Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.

Mounting : Magnetic

Housing : Black

Storage Temperature : -45C to +75C

Operating Temperature : -45C to+75C

**1.4 ESG-GSM-04**

Frequency (MHz): 850-1900/900-1800

Bandwidth (MHz): 90/280

VSWR  $\leq$  1.5

Gain (dBi): 3.5

Max Input power (W): 60

Input Impedance ( $\Omega$ ): 50

Polarization : Vertical

Size (mm):  $\Phi$ 30(Base) $\times$ 142(Height)

Cable Length (m): 2.5

Cable Type : RG174

Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.

Mounting : Magnetic

Housing : Black

Storage Temperature : -45C to +75C

Operating Temperature : -45C to+75C



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**1.5 ESG-GSM-05**

Frequency (MHz): 824-960/1710-1990  
 Bandwidth ( MHz ) : 136/280  
 VSWR  $\leq$ 1.5  
 Gain ( dBi ) : 3.5  
 Max Input power ( W ) : 60  
 Input Impedance (  $\Omega$  ) : 50  
 Polarization : Vertical  
 Size ( mm ) : 115  $\times$ 22 $\times$ 4  
 Cable Length ( m ) : 5 etc.  
 Cable Type : RG174  
 Connector  
 : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.  
 Mounting : Adhesive base

**1.6 ESG-GSM-06**

Frequency(MHz): 850-1900/900-1800  
 Bandwidth ( MHz ) : 90/280  
 VSWR  $\leq$ 1.5  
 Gain ( dBi ) : 7  
 Max Input power ( W ) : 60  
 Input Impedance (  $\Omega$  ) : 50  
 Polarization : Vertical  
 Size ( mm ) :  $\Phi$ 45(Base) $\times$ 290(Height)  
 Cable Length ( m ) : 2,3,5 etc.  
 Cable Type : RG174  
 Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX  
 etc.  
 Mounting : Magnetic  
 Housing : Black  
 Storage Temperature : -45C to+75C  
 Operating Temperature : -45C to+75C

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**1.7 ESG-GSM-051**

Frequency (MHz): 824-960/1710-1990  
 Bandwidth ( MHz ) : 136/280  
 VSWR  $\leq$ 1.5  
 Gain ( dBi ) : 3.5  
 Max Input power ( W ) : 60  
 Input Impedance (  $\Omega$  ) : 50  
 Polarization : Vertical  
 Cable Length ( m ) : 3, 5 etc.  
 Cable Type : RG174  
 Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.  
 Mounting : Adhesive base

**1.8 ESG-GSM-052**

Frequency (MHz): 824-960/1710-1990  
 Bandwidth ( MHz ) : 136/280  
 VSWR  $\leq$ 1.5  
 Gain ( dBi ) : 7  
 Max Input power ( W ) : 60  
 Input Impedance (  $\Omega$  ) : 50  
 Size: 160mm  
 Polarization : Vertical  
 Cable Length ( m ) : 5 etc.  
 Cable Type : RG174  
 Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.  
 Mounting : Adhesive base

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**1.9 ESG-GSM-053**

Frequency range: 890-960/1710-1880MHZ  
 VSWR:  $\leq 2.0$   
 Gain : 3dBi  
 Polarization: Vertical  
 Maximum input power: 50W  
 Impedance : 50 $\Omega$   
 Cable type: RG178, RG174  
 Length: 3M or other  
 Input Connector : SMA Male  
 Dimensions of Antenna: 12 $\times$ 90mm  
 Weight : 65g

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**2. GPS ANTENNA****2.1 ESG-GPS-01****1. Dielectric Antenna**Center Frequency 1575.42MHz $\pm$ 3 MHz

V.S.W.R 1.5:1

Band Width  $\pm$ 5 MHz

Impedance 50 ohm

Peak Gain > 3dBic Based on 7 $\times$ 7cm ground planeGain Coverage > -4dBic at -90 $^{\circ}$  < 0 < +90 $^{\circ}$ 

(over 75% Volume)

Polarization RHCP

**2. LNA/Filter**

LNA Gain(Without cable) 28dB

Noise Figure 1.5dB

Filter Out Band Attenuation (f<sub>0</sub>=1575.42 MHz)7dB Min f<sub>0</sub> $\pm$ 20MHZ ;20dB Min f<sub>0</sub> $\pm$ 50MHZ;30dB Min f<sub>0</sub> $\pm$ 100MHZ

V.S.W.R &lt; 2.0

DC Voltage 2.7V/ 3.3V/3.0V/3-5V

DC Current 6mA Max

**3.Mechanical**

Weight &lt; 60gram

Size 22 $\times$ 22 $\times$ 7.7mm

Cable RG174 8cm

Connector without

**3.Environmental**Working Temp -40C $\sim$ +85CStorage Temp. -45C $\sim$ +100CVibration Sine sweep 1g(0-p)10 $\sim$ 50 $\sim$ 10Hz each axis

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**2.2 ESG-GPS-02****1. Dielectric Antenna**

Center Frequency ( MHz ) : 1575.42±3

VSWR : 1.5:1

Bandwidth ( MHz ) : ±5

Impedance ( Ω ) : 50

Peak Gain &gt; 3dBi Based on 7cm×7cm ground plane

Gain Coverage &gt; -4dBi at -90° &lt; 0 &lt; +90°(over 75% Volume)

Polarization : RHCP

**2. LNA/Filter**

LNA Gain(Without Cable) : 28 dBi Typical

Noise Figure ( dB ) : 1.5

Filter Out Band Attenuation (f0=1575.42 MHz)

7dB Min f0+/-20MHz ;

20dB Min f0+/-50MHz;

30dB Min f0+/-100MHz

VSWR &lt; 2.0

DC Voltage ( V ) : 2.7/3.0/3.3/5.0/ 3.0 to 5.0 etc.

DC Current ( mA ) : 11 Max

**3. Mechanical**

Weight ( gram ) &lt; 60

Size ( mm ) : 27×27X8.2

Cable Length ( cm ) : 5-20

Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.

**4. Environmental**

Working Temp : -40C+85C

Storage Temp : -45C+100C

Vibration : Sine sweep 1g(0-p)10~50~10Hz each axis

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**2.3 ESG-GPS-03****1. Dielectric Antenna**

Center Frequency ( MHz ) : 1575.42±3

VSWR : 1.5:1

Bandwidth ( MHz ) : ±5

Impedance ( Ω ) : 50

Peak Gain &gt; 3dBi Based on 7cm×7cm ground plane

Gain Coverage &gt; -4dBi at -90° &lt; 0 &lt; +90°(over 75% Volume)

Polarization : RHCP

**2. LNA/Filter**

LNA Gain (Without cable) : 28 dBi Typical

Noise Figure ( dB ) : 1.5

Filter Out Band Attenuation (f0=1575.42 MHz)

7dB Min f0+/-20MHz ;

20dB Min f0+/-50MHz;

30dB Min f0+/-100MHz

VSWR &lt; 2.0

DC Voltage ( V ) : 2.7/3.0/3.3/5.0/3.0 to 5.0 etc.

DC Current ( mA ) : 11 Max

**3. Mechanical**

Weight ( gram ) &lt; 110

Size ( mm ) : 44.0×35.5×14.0

Cable Length ( m ) : 2,3 etc.

Connector:SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX etc.

Mounting : Magnetic

Housing : Black

**4. Environmental**

Working Temp : -40C+85C

Storage Temp : -45C+100C

Vibration : Sine sweep 1g(0-p)10~50~10Hz each axis

Humidity : Humidity95%~100%RH

Weatherproof : 100%Waterproof



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**2.4 ESG-GPS-04****1. Dielectric Antenna**

Center Frequency ( MHz ) : 1575.42±3

VSWR : 1.5:1

Bandwidth ( MHz ) : ±5

Impedance ( Ω ) : 50

Peak Gain &gt; 3dBi Based on 7cm×7cm ground plane

Gain Coverage &gt; -4dBi at -90° &lt; 0 &lt; +90° (over 75% Volume)

Polarization : RHCP

**2. Without LNA/Filter****3. Mechanical**

Weight ( gram ) &lt; 110

Size ( mm ) : 44.0×35.5×14.0

Cable Length ( m ) : 2,3 etc.

Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/MMC X etc.

Mounting : Magnetic base

Housing : Black

**4. Environmental**

Working Temp : -40C~+85C

Storage Temp : -45C~+100C

Vibration : Sine sweep 1g(0-p)10~50~10Hz each axis

Humidity : Humidity95%~100%RH

Weatherproof : 100% Waterproof

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**2.5 ESG-GPS-06**

Size:	D46x15mm
Center Frequency	1575.42 MHz±3 MHz
V.S.W.R	1.5 : 1
Band Width	±5 MHz
Impedence	50 ohm
Polarization Type	RHCP
LNA Gain(Without cable)	28±2 dB Typical
Noise Figure	1.5 dB
DC Voltage	2.2~5 V
DC current	5~15 mA
Cable	RG174 5m / 3m / or others SMA / SMB / MCX / or others
Connector	others
Housing	Black or others
Working Temp	-40C+85C
Humidity	55%~75%RH
Waterproof	IP67

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**2. LNA/Filter**

LNA Gain(Without cable)  
13dB/26dB/28dB/other Typical  
Noise Figure 1.5dB  
Filter Out Band Attenuation ( $f_0=1575.42$  MHz)  
7dB Min  $f_0\pm 20$ MHZ ;  
20dB Min  $f_0\pm 50$ MHZ;  
30dB Min  $f_0\pm 100$ MHZ  
V.S.W.R <2.0  
DC Voltage 2.7V/3.0V/3.3V/5.0V/3.0V to 5.0V/other  
DC Current 5mA /11mA/15mA Max

**2.6 ESG-GPS-07****1.Dielectric Antenna**

Center Frequency 1575.42MHz $\pm 3$  MHz  
V.S.W.R 1.5:1  
Band Width  $\pm 5$  MHz  
Impedance 50 ohm  
Peak Gain >3dBic Based on 7 $\times$ 7cm ground plane  
Gain Coverage >-4dBic at  $-90^\circ < 0 < +90^\circ$  (over 75% Volume)  
Polarization RHCP

**3.Mechanical**

Weight <130gram  
Size 50mmx39mmx15mm  
Cable :RG174 2meter, 5meter long or other  
Connector:-  
SMA/SMB/SMC/BNC/FME/TNC/MCX /MMCX or other

Mounting Sticking /Magnetic /Hole Mounting  
Housing Black

**4. Environmental**

Working Temp.  $-40^\circ \sim +85^\circ$   
Storage Temp.  $-45^\circ \sim +100^\circ$   
Vibration Sine sweep 1g(0-p)10~50~10Hz each axis  
Humidity Humidity95%~100%RH  
Weatherproof 100%Waterproof

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**2. LNA/Filter**

LNA Gain(Without cable)  
13dB/26dB/28dB/other Typical  
Noise Figure 1.5dB  
Filter Out Band Attenuation ( $f_0=1575.42$  MHz)  
7dB Min  $f_0\pm 20$ MHZ ;  
20dB Min  $f_0\pm 50$ MHZ;  
30dB Min  $f_0\pm 100$ MHZ  
V.S.W.R <2.0  
DC Voltage 2.7V/3.0V/3.3V/5.0V/3.0V to 5.0V/other  
DC Current 5mA /11mA/15mA Max

**2.6 ESG-GPS-08****1.Dielectric Antenna**

Center Frequency 1575.42MHz $\pm 3$  MHz  
V.S.W.R 1.5:1  
Band Width  $\pm 5$  MHz  
Impedance 50 ohm  
Peak Gain >3dBic Based on 7 $\times$ 7cm ground plane  
Gain Coverage >-4dBic at  $-90^\circ < 0 < +90^\circ$  (over 75% Volume)  
Polarization RHCP

**3.Mechanical**

Weight <130gram  
Size 38x35x13mm  
Cable :RG174 2meter, 5meter long or other

Connector:-  
SMA/SMB/SMC/BNC/FME/TNC/MCX /MMCX or other

Mounting Sticking /Magnetic /Hole Mounting  
Housing Black

**4. Environmental**

Working Temp.  $-40^\circ \sim +85^\circ$   
Storage Temp.  $-45^\circ \sim +100^\circ$   
Vibration Sine sweep 1g(0-p)10~50~10Hz each axis  
Humidity Humidity95%~100%RH  
Weatherproof 100%Waterproof

**3. COMBO ANTENNA****1. Dielectric Antenna**

Center Frequency 1575.42MHz±3 MHz

V.S.W.R 1.5:1

Band Width ±5 MHz

Impedance 50 ohm

Peak Gain >3dBic Based on 7×7cm ground plane

Gain Coverage >-4dBic at -90°<0<+90°(over 75% Volume)

Polarization RHCP

**2. GSM Antenna**

Center Frequency 850/900/1800/1900Mhz

Typical Gain 2dBi+/-1dB@850MHZ

2dBi+/-1dB@900MHZ

1dBi+/-1dB@1800MHZ; 1dBi+/-1dB@1900MHZ

V.S.W.R 2.0:1

Impedance 50 ohm

**3.1 ESG-GPSGSM-01****3. LNA/Filter**

LNA Gain(Without cable) 13dB/26dB/28dB/other Typical

Noise Figure 1.5dB

Filter Out Band Attenuation (f0=1575.42 MHz)

7dB Min f0+/-20MHZ ;

20dB Min f0+/-50MHZ;

30dB Min f0+/-100MHZ

V.S.W.R <2.0

DC Voltage 2.7V/3.0V/3.3V/5.0V/3.0V to 5.0V/other

DC Current 5mA /11mA/15mA Max

**4. Mechanical**

Weight <130gram

Size 70mmx70mmx14mm

Cable GPS-----RG174 2meter, 5meter long or other

GPS-----RG174 2meter, 5meter long or other Connector GPS-----SMA/SMB/SMC/BNC/FME/TNC/MCX /MMCX or other

GSM-----SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX or other

Mounting Sticking /Magnetic /Hole Mounting

Housing Black

**5. Environmental**

Working Temp. -40°~+85°

Storage Temp. -45°~+100°

Vibration Sine sweep 1g(0-p)10~50~10Hz each axis

Humidity Humidity95%~100%RH

Weatherproof 100%Waterproof

**3.2 ESG-GPSGSM-02****1. Dielectric Antenna**

Center Frequency 1575.42MHz±3 MHz

V.S.W.R 1.5:1

Band Width ±5 MHz

Impedance 50 ohm

Peak Gain >3dBic Based on 7×7cm ground plane

Gain Coverage >-4dBic at -90°<0<+90°(over 75% Volume)

Polarization RHCP

**2. GSM Antenna**

Center Frequency 850/900/1800/1900Mhz

Typical Gain 2dBi+/-1dB@850MHZ

2dBi+/-1dB@900MHZ

1dBi+/-1dB@1800MHZ; 1dBi+/-1dB@1900MHZ

V.S.W.R 2.0:1

Impedance 50 ohm

**3. LNA/Filter**

LNA Gain(Without cable) 28dB Typical

Noise Figure 1.5dB

Filter Out Band Attenuation (f0=1575.42 MHz)

7dB Min f0+/-20MHZ ;

20dB Min f0+/-50MHZ;

30dB Min f0+/-100MHZ

V.S.W.R <2.0

DC Voltage 2.7V/3.0V/3.3V/5.0V/3.0V to 5.0V/other

DC Current 11mA Max

**4. Mechanical**

Weight <240gram

Size 80 mm(D)×13mm(H)

Cable GPS-----RG174 2meter, 5meter long or other

GSM-----RG174 2meter, 5meter long or other Connector GPS-----SMA/SMB/SMC/BNC/FME/TNC/MCX /MMCX or other

GSM-----SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX or other

Mounting Adhesive /Magnetic/Screw Mounting

Housing Black

**5. Environmental**

Working Temp. -40°~+85°

Storage Temp. -45°~+100°

Vibration Sine sweep 1g(0-p)10~50~10Hz each axis

Humidity Humidity95%~100%RH

Weatherproof 100%Waterproof

**3.2.1 ESG-GPSGSM-02-S****4. Mechanical**

Size 50 mm(D)×14mm(H)





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**4. Wi-Fi ANTENNA****4.1 ESG-2400-01**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 2.15

Return Loss ( dBi ) : 17

power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Antenna Length ( mm ) : 50

Connector : SMA/FME

( Straight/Right Angle ) etc.

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**4.2 ESG-2400-02-94 (76)**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 3

Return Loss ( dBi ) : 17

Power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Antenna Length ( mm ) : 94, 76

Connector : SMA/FME ( Straight/Right Angle/Rotation ) etc.

**4.2.1 ESG-2400-02**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.8

Gain ( dBi ) : 3

Polarization: Vertical

Power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Weight: 35g

Connector : SMA/FME ( Straight/Right Angle/Rotation ) etc.

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**4.3 ESG-2400-03**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 5

Max Input power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Polarization : Vertical

Size ( mm ) :  $\Phi$ 30(Base) $\times$ 142(Height)

Cable Length ( m ) : 2,3,5 etc.

Cable Type : RG174

Connector : SMA/SMB/BNC/FME/TNC etc.

Mounting : Magnetic

Housing : Black

Storage Temperature : -45 C to +75C

Operating Temperature : -45C to +75C

**4.4. ESG-2400-04**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 3.5

Max Input power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Polarization : Vertical

Size ( mm ) : 115 X 22 X 4

Cable Length ( m ) : 2,3,5 etc.

Cable Type : RG174

Connector : SMA/BNC/FME/TNC etc.

Mounting : Adhesive Base

**4.5 ESG-2400-05**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 5

Return Loss ( dBi ) : 17

Power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Length ( mm ) : 195

Connector : SMA/FME/TNC etc.

**4.6 ESG-2400-06**

Frequency ( MHz ) : 2400-2500

VSWR  $\leq$  1.5

Gain ( dBi ) : 5

Return Loss ( dBi ) : 17

Power ( W ) : 50

Input Impedance (  $\Omega$  ) : 50

Length ( mm ) : 260

Connector : SMA/FME/TNC etc.



**4.7 ESG-2400-07**

Frequency (MHz) : 2400-2500  
 VSWR $\leq$ 1.5  
 Gain (dBi) : 10  
 Return Loss (dBi) : 17  
 Power (W) : 50  
 Input Impedance ( $\Omega$ ) : 50  
 Length (mm) : 380  
 Connector : SMA/FME/TNC etc.

**4.8. ESG-2400-08**

Frequency (MHz) : 2400-2500  
 VSWR $\leq$ 1.5  
 Gain (dBi) : 12  
 Return Loss (dBi) : 17  
 Power (W) : 50  
 Input Impedance ( $\Omega$ ) : 50  
 Length (mm) : 430  
 Connector : SMA/FME/TNC etc.

**4.9 ESG-2400-09 WATERPROOF**

Frequency (MHz) : 2400-2500  
 VSWR $\leq$ 2.0  
 Gain (dBi) : 5  
 Radiation: Omni  
 Polarization: Vertical  
 Power (W) : 50  
 Input Impedance ( $\Omega$ ) : 50  
 Length (mm) : 190  
 Connector : N type.

**4.8. ESG-2400-09-1 WATERPROOF**

Frequency (MHz) : 2400-2500  
 VSWR $\leq$ 2.0  
 Gain (dBi) : 4  
 Radiation: Omni  
 Polarization: Line  
 Power (W) : 50  
 Input Impedance ( $\Omega$ ) : 50  
 Length (mm) : 192  
 Connector : N type.

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**5. 433MHZ ANTENNA****5.1 ESG-433-01**

Frequency 434MHz±5MHz

VSWR ≤2.5

Gain (dBi) ≥1

Polarization Vertical

Radiation Omni

power (W) 50

Input Impedance (Ω) 50

Length(mm) 50

Connector SMA Series

Radome Material Polyurethane

Radome Color Black

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**5.2 ESG-433-02-94 (76)**

Frequency (MHz) : 433±5

VSWR ≤ 2

Gain (dBi) ≥ 2

Polarization : Vertical

Radiation : Omni

power (W) : 50

Input Impedance (Ω) : 50

Length (mm) : 94, 76

Connector : SMA/FME (Straight/Right Angle/Rotation) etc.

Radome Material : Polyurethane Radome

Color : Black



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**5.3 ESG-433-03**

Frequency (MHz) : 433±15

VSWR ≤ 2

Gain (dBi) ≥ 2.15

Polarization : Vertical

Radiation : Omni

Power (W) : 50

Input Impedance (Ω) : 50

Antenna Length (mm) : 165

Connector : SMA/BNC etc.

Radome Color : Black

**5.4 ESG-433-04**

Frequency (MHz) : 433±15

Bandwidth (MHz) : 30

VSWR ≤ 1.5

Gain (dBi) : 2.5

Max Input power (W) : 60

Input Impedance (Ω) : 50

Polarization : Vertical

Size (mm) : Φ30×170

Cable Length (m) : 2,3,5 etc.

Cable Type : RG174

Connector : SMA/SMB/SMC/BNC/FME/TNC/MCX/  
MMCX etc.

Mounting : Magnetic

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**5.5 ESG-433-05**

Frequency (MHz) : 433±15

Bandwidth (MHz) : 30

VSWR ≤ 1.5

Gain (dBi) : 2.15

Max Input power (W) : 60

Input Impedance (Ω) : 50

Polarization: Vertical

Size (mm) : 115×22×4

Cable Length (mm) : 2,3,5 etc.

Cable Type: RG174

Connector: SMA/SMB/SMC/BNC/FME/TNC/MCX/MMCX  
etc.

Mounting: Adhesive Base

**6. WiMAX ANTENNA****6.1 ESG-WIMAX-01**

Frequency (GHz) : 2.3-2.5  
 VSWR ≤ 2  
 Gain (dBi) ≥ 4.0  
 Polarization : Vertical  
 Radiation : Omni  
 Power (W) : 50  
 Input Impedance (Ω) : 50  
 Antenna Length (mm) : 197  
 Connector : SMA  
 Radome Color : Black

**6.2 ESG-WIMAX-02**

Frequency (GHz) : 2.5-2.7  
 VSWR ≤ 2.0  
 Gain (dBi) : 6.0  
 Input Impedance (Ω) : 50  
 Polarization : Line  
 Radiation: Directional  
 Material: FR-4 PCB  
 Size (mm) : 120\*30  
 Cable Length (m) : optional  
 Cable Type : 1.33  
 Connector : U.F.L

**7. CAR FM AM ANTENNA****7.1 ESG-AF41 300mm**

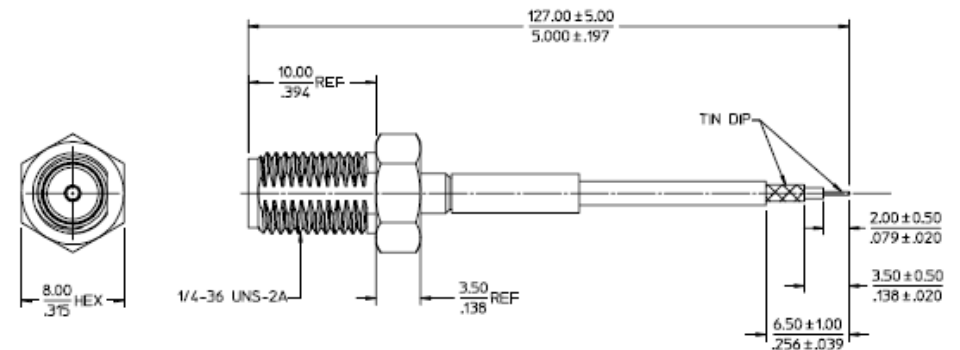
ITEM	AM Specification	FM Specification
Frequency	535K – 1705KHz	88 – 108MHz
Gain (with cable)	-	>7dB
Noise Figure	-	<3.5dB
Output VSWR (amp)	<3.5	<2.5
Antenna VSWR	-	<3.5
Impedance	75 – 150 Ohm	
Operating Temperature	-40C ~ +85C	
Power Supply	14V 60mA ~ 75mA	
Cable	RG-174/U, 565mm	
Connector	DIN connectors (RAKU2 / FAKRA are available)	

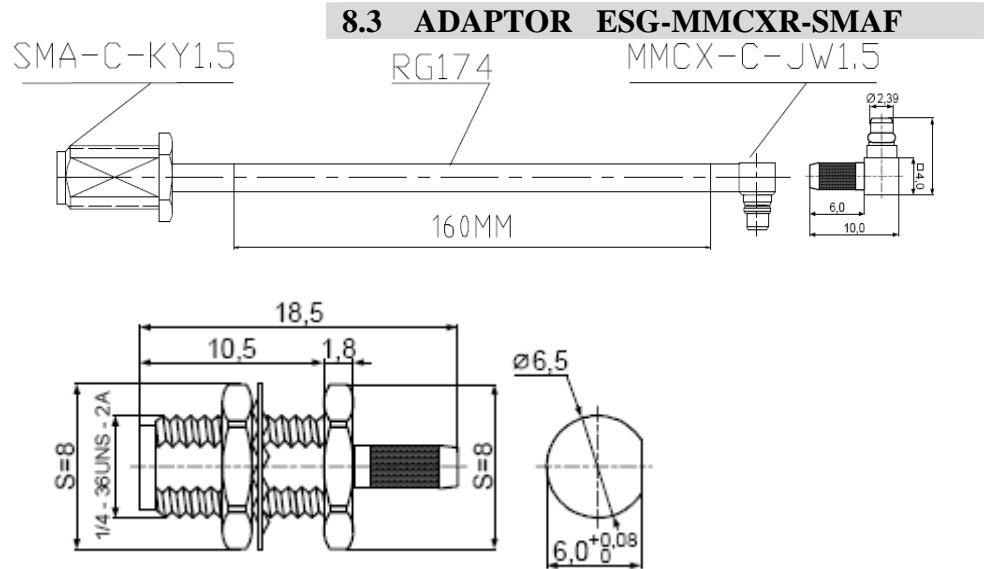
**7.2 ESG-AF42 405mm**

ITEM	AM Specification	FM Specification
Frequency	535K – 1705KHz	88 – 108MHz
Gain (with cable)	-	>7dB
Noise Figure	-	<3.5dB
Output VSWR (amp)	<3.5	<2.5
Antenna VSWR	-	<3.5
Impedance	75 – 150 Ohm	
Operating Temperature	-40C ~ +85C	
Power Supply	14V 60mA ~ 75mA	
Cable	RG-174/U, 565mm	
Connector	DIN connectors (RAKU2 / FAKRA are available)	

**8. ADAPTORS AND CABLES****8.1 ADAPTOR ESG-SMA-UFL-113**

UFL-SMA (120mm - 1.13 thin cable, male, straight)

**8.2 CONNECTOR ESG-SMA-RG178-113**

**8.4 CONNECTOR ESG-SMA-F-RA-PCB**

SMA F, Right angel PCB mount, Brass, Gold, 50 Ohm

**8.5 CONNECTOR ESG-SMA-F-PCB**

SMA F, PCB mount, Brass, Gold, 50 Ohm





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**8.6 CONNECTOR ESG-SMA-M-RF**

SMA M, Reverse, Brass, Gold, 50 Ohm



**8.7 CONNECTOR ESG-MMCX-F-PCB-4**

MMCX F, PCB mount, Brass, Gold, 50 Ohm



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**8.8 CONNECTOR ESG-MMCX-F-PCB-2**

MMCX F, Reverse, PCB mount, Brass, Gold, 50 Ohm



**8.9 CONNECTOR ESG-MCX-F-RA-PCB**

MCX F, PCB mount, Brass, Gold, 50 Ohm

