UHF Gap TV Transmitting Antenna

Model: FYY-AFXU

Product Manual

1. Overview

UHF gap TV transmitting antenna is a product that radiates electromagnetic signals in the UHF (frequency range: 470-702MHz) band into space. It belongs to wireless digital TV signal and wireless analog TV transmission antenna. Designed using an infinitely large ideal metal surface with a simplified design method. The polarization mode of the antenna is horizontal polarization.

2. Product schematic diagram

3. Characteristics of antenna structure

The antenna adopts multi-channel transmission technology, which has higher gain and more uniform horizontal radiation field pattern

Long operating distance, uniform field strength coverage, and low standing wave ratio.

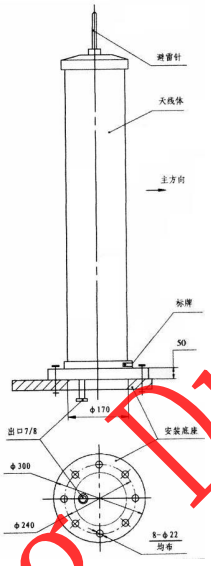
The antenna cavity is made of high gloss aluminum plate, the antenna feeding system is all silver plated, and the antenna cover is made of high strength and low loss glass fiber material

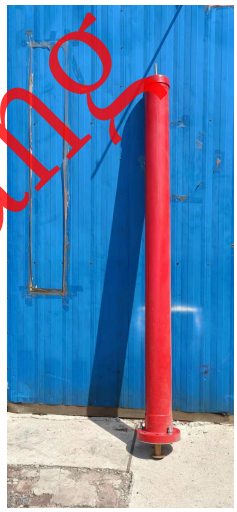
High stability, low feed loss, and strong corrosion resistance

A slot antenna is composed of a resonant cavity and a protective cover. The rectangular resonant cavity has several slots on its wide side, and the number of slots determines the gain of the antenna. The distance between the two layers of gaps in the axial direction is about one

wavelength, and the length of each gap is also nearly one wavelength. Theoretical calculations are based on one wavelength. The feeding of each slot is coupled by inductance or capacitance, and the maximum gain of the antenna is obtained by adjusting the balance of the resonance amplitude of each slot.

The feeding system of the slot antenna is accommodated inside the antenna cavity, so the feeding joints of the antenna are few, the feeding is compact, miniaturized, and the feeding loss is low. In addition, the feeding system is completely sealed inside the antenna cover, so the antenna has the characteristics of compactness, strong sealing, and high stability.





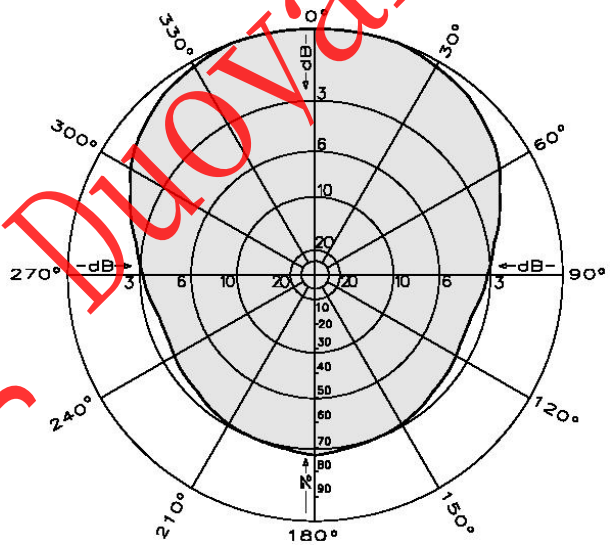
4. Technical Parameter

1.4.1. Technical performance and parameters

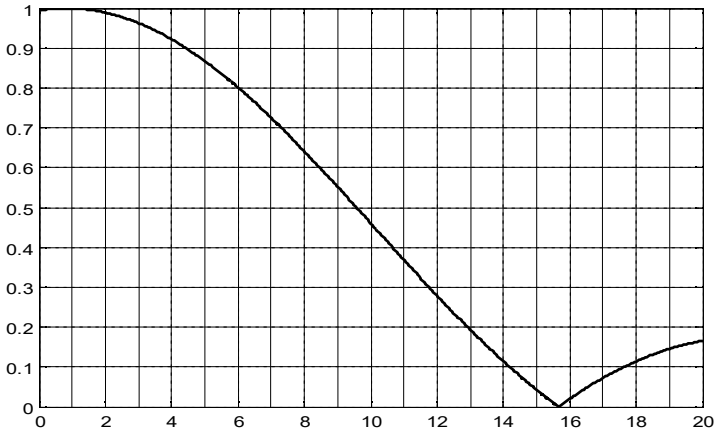
No.	Content	Parameters
1	MODEL	FYY-AFXU
2	Frequency	470-702MHz

3	Input Impedance	50Ω
4	Input connector	L29-50K、IF45K、IF70K、IF110K
5	VSWR	＜1.10
6	Power	1KW-20KW
7	Polarization	Horizontal
8	Gain	◆ 9dBd 4Gap ◆ 10.8dBd 6Gap ◆ 12dBd 8Gap ◆ 13.8dBd 12Gap
9	Beam tilt	0.5°—2°
10	Radiation pattern	Omnidirectional
11	Max wind velocity	200km/h

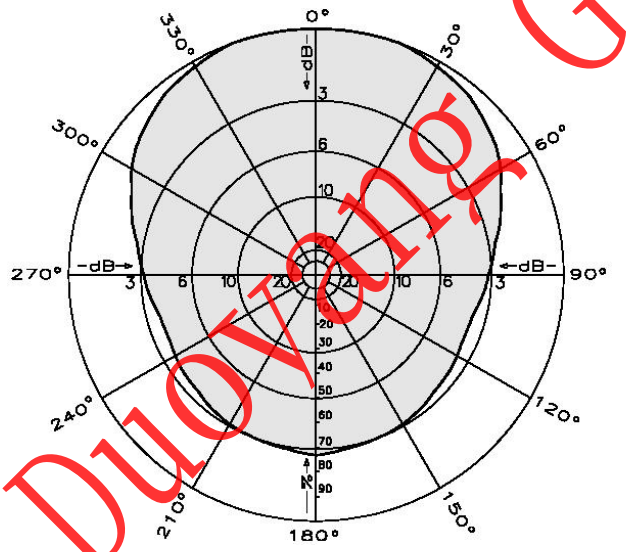
1.4.2. Directional diagram



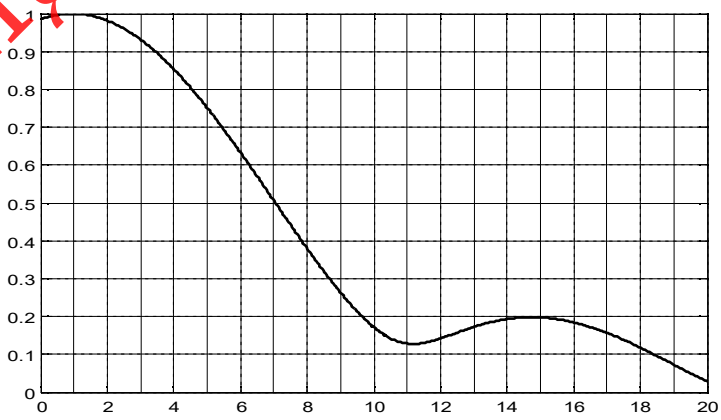
Horizontal direction



1.4.3. Directional diagram



Horizontal direction



1.4.4. Directional diagram