JOYMAX

RF Coaxial WaveGuide Catalog

Horn Antenna • Coaxial WaveGuide Adaptor • Terminator • RF Filter



www.joymax.com.tw

About Joymax Inc.

Joymax Inc. found in 1994 manufactures wireless components including antennas, RF connectors and cable assemblies for Internet of Things (IoT) application. Antennas for wireless IoT can be a design challenge. The Joymax team relentlessly focuses on ensuring customer successful product launches by guiding customers through selection and adoption of the best antenna for each individual design. Joymax Inc. lives in EnJOY MAX Wireless®. With easy to use products and a focus on customer service, Joymax strives to make every customer engineer success in making wireless design.

For Internet of Things and LPWA applications, Joymax has antenna, connector and cable assembly offerings that support LTE-M (Cat-M1), NB-IoT, LoRaWAN®, Sigfox®, Wi-SUN®, Weightless-P™, WiFi Ha-Low™ as well as LTE offerings. These include external antennas for permanent or connector attachment, and embedded ceramic and chip antenna offerings. The Joymax antenna portfolio covers single-band solutions for targeted applications, multi-band and wideband antennas to cover wireless mobile network operator and cellular carrier operation, and specialty IoT frequency bands plus GPS/GNSS or 2.4 GHz protocols like WiFi, Bluetooth®, ZigBee® and Thread®.

Support and Service

In addition to antenna products, Joymax offers design support and services:

- Complimentary Design Reviews
- Complimentary antenna-matching circuit design
- Full-custom and semi-custom antenna and cable assembly design and documentation

Brand Promise

If you choose to incorporate our components in your design, we relentlessly focus on ensuring your successful product launches.

How to Purchase

Joymax sells directly and through a global network of distributors, catalog houses and representatives. See the full list of distributors at the end of this cat alog or visit:

https://www.joymax.com.tw/en/

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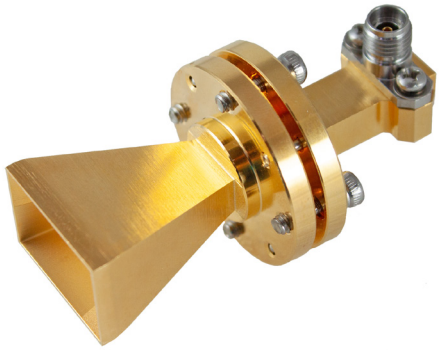
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RF Filter

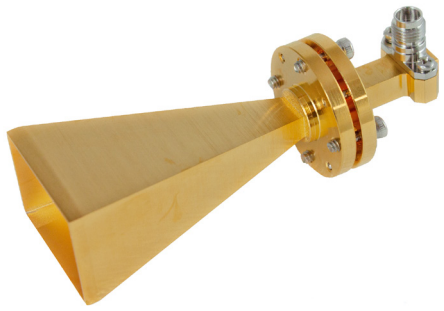
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Horn Antenna & Waveguide Set

804JX45G15		804JX45G20		804JX50G15	
					
Overview		**Overview**		**Overview**	
WR-22 Gain Horn + Waveguide 15 dBi Gain, 2.92 mm Jack (female) General Purpose		WR-22 Gain Horn + Waveguide 20 dBi Gain, 2.92 mm Jack (female) General Purpose		WR-19 Gain Horn + Waveguide 15 dBi Gain, 1.85 mm Jack (female) General Purpose	
Electrical Data		**Electrical Data**		**Electrical Data**	
Frequency Range	33 to 50 GHz	Frequency Range	33 to 50 GHz	Frequency Range	40 to 60 GHz
Center Frequency	41.5 GHz	Center Frequency	41.5 GHz	Center Frequency	50 GHz
VSWR (Max.)	1.8	VSWR (Max.)	1.8	VSWR (Max.)	1.8
Return Loss	-10.9 dB	Return Loss	-10.9 dB	Return Loss	-10.9 dB
Gain	15 dBi	Gain	20 dBi	Gain	15 dBi
Isolation	35 dB Typ.	Isolation	35 dB Typ.	Isolation	35 dB Typ.
3 dB Beamwidth	21° to 31°	3 dB Beamwidth	12° to 18°	3 dB Beamwidth	21° to 31°
Polarization	Linear	Polarization	Linear	Polarization	Linear
Impedance Ohms	50 Ω	Impedance Ohms	50 Ω	Impedance Ohms	50 Ω
Mechanical Data		**Mechanical Data**		**Mechanical Data**	
Dimensions	56 x 21 x 15 mm	Dimensions	91 x 35 x 26 mm	Dimensions	56 x 18 x 12 mm
Material	Cu	Material	Cu	Material	Cu
Plating	Au	Plating	Au	Plating	Au
Waveguide	WR-22	Waveguide	WR-22	Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C
Net Weight	70 g (approx.)	Net Weight	75 g (approx.)	Net Weight	40 g (approx.)
Flange Connector	2.92 mm Jack	Flange Connector	2.92 mm Jack	Flange Connector	1.85 mm Jack
Datasheet		Datasheet		Datasheet	

Horn Antenna & Waveguide Set

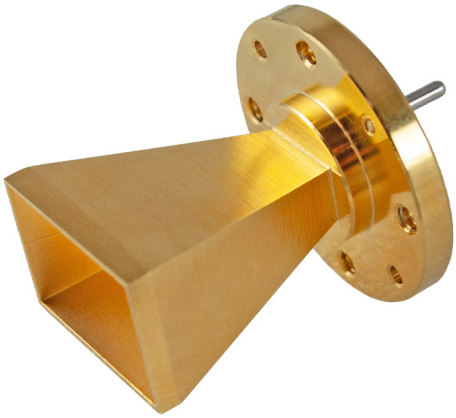
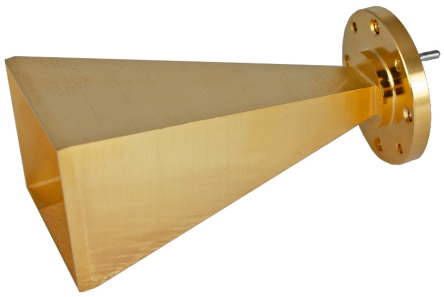
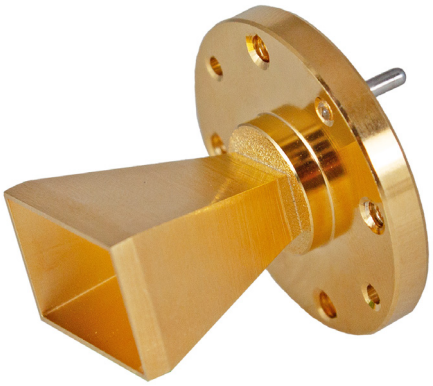
804JX50G20



Overview	
WR-19 Gain Horn + Waveguide 20 dBi Gain, 1.85 mm Jack (female) General Purpose	
Electrical Data	
Frequency Range	40 to 60 GHz
Center Frequency	50 GHz
VSWR (Max.)	1.8
Return Loss	-10.9 dB
Gain	20 dBi
Isolation	35 dB Typ.
3 dB Beamwidth	12° to 18°
Polarization	Linear
Impedance Ohms	50 Ω
Mechanical Data	
Dimensions	86 x 30 x 22 mm
Material	Cu
Plating	Au
Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C
Net Weight	60 g (approx.)
Flange Connector	1.85 mm Jack

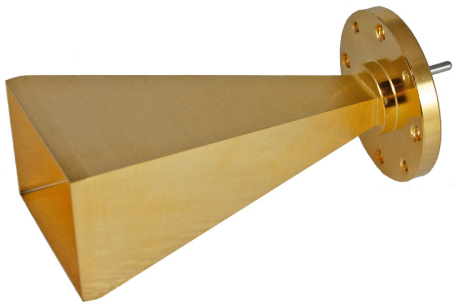
Datasheet

Horn Antenna

800JX45G15		800JX45G20		800JX50G15	
					
Overview		**Overview**		**Overview**	
WR-22 Gain Horn, 15 dBi Gain General Purpose		WR-22 Gain Horn, 20 dBi Gain General Purpose		WR-19 Gain Horn, 15 dBi Gain General Purpose	
Electrical Data		**Electrical Data**		**Electrical Data**	
Frequency Range	33 to 50 GHz	Frequency Range	33 to 50 GHz	Frequency Range	40 to 60 GHz
Center Frequency	41.5 GHz	Center Frequency	41.5 GHz	Center Frequency	50 GHz
VSWR (Max.)	1.25	VSWR (Max.)	1.25	VSWR (Max.)	1.25
Return Loss	-19 dB	Return Loss	-19 dB	Return Loss	-19 dB
Gain	15 dBi	Gain	20 dBi	Gain	15 dBi
Isolation	35 dB Typ.	Isolation	35 dB Typ.	Isolation	35 dB Typ.
3 dB Beamwidth	21° to 31°	3 dB Beamwidth	12° to 18°	3 dB Beamwidth	21° to 31°
Polarization	Linear	Polarization	Linear	Polarization	Linear
Impedance Ohms	50 Ω	Impedance Ohms	50 Ω	Impedance Ohms	50 Ω
Mechanical Data		**Mechanical Data**		**Mechanical Data**	
Dimensions	30 x 21 x 15 mm	Dimensions	65 x 35 x 26 mm	Dimensions	25 x 18 x 12 mm
Material	Cu	Material	Cu	Material	Cu
Plating	Au	Plating	Au	Plating	Au
Waveguide	WR-22	Waveguide	WR-22	Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C
Net Weight	55 g (approx.)	Net Weight	65 g (approx.)	Net Weight	30 g (approx.)
Flange Connector	FUGP400	Flange Connector	FUGP400	Flange Connector	FUGP500
Datasheet		Datasheet		Datasheet	

Horn Antenna

800JX50G20



Overview
WR-19 Gain Horn, 20 dBi Gain General Purpose

Electrical Data	
Frequency Range	40 to 60 GHz
Center Frequency	50 GHz
VSWR (Max.)	1.25
Return Loss	-19 dB
Gain	20 dBi
Isolation	35 dB Typ.
3 dB Beamwidth	12° to 18°
Polarization	Linear
Impedance Ohms	50 Ω
Mechanical Data	
Dimensions	60 x 30 x 22 mm
Material	Cu
Plating	Au
Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C
Net Weight	70 g (approx.)
Flange Connector	FUGP500

Datasheet

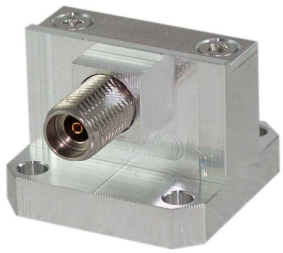
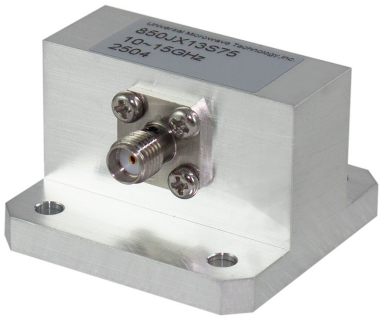
Coaxial Waveguide Adaptor

850JX45G01		850JX50G01	
			
Overview		**Overview**	
WR-22 Waveguide Adaptor 2.4 mm Jack (female) Connector General Purpose		WR-19 Waveguide Adaptor 1.85 mm Jack (female) Connector General Purpose	
Electrical Data		**Electrical Data**	
Frequency Range	33 to 50 GHz	Frequency Range	40 to 60 GHz
Center Frequency	41.5 GHz	Center Frequency	50 GHz
VSWR (Max.)	1.4	VSWR (Max.)	1.5
Return Loss	-15.6 dB	Return Loss	-13.9 dB
Insertion Loss	0.8 dB	Insertion Loss	0.8 dB
Impedance Ohms	50 Ω	Impedance Ohms	50 Ω
Mechanical Data		**Mechanical Data**	
Dimensions	29 x 22 x 15 mm	Dimensions	29 x 22 x 15 mm
Material	Cu	Material	Cu
Plating	Au	Plating	Au
Waveguide	WR-22	Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C
Net Weight	36 g (approx.)	Net Weight	36 g (approx.)
Ouput Connector	2.4 mm Jack	Output Connector	1.85 mm Jack

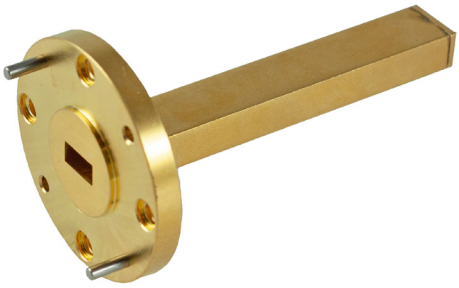
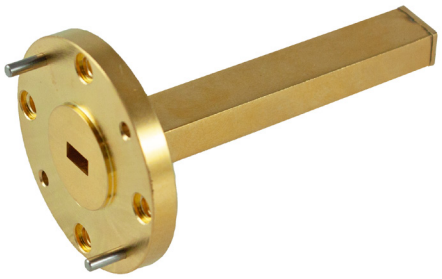
Datasheet

Datasheet

Coaxial Waveguide Adaptor

WRAA-042A290		WRAA-075ASA0		WRAA-090ASA0	
					
Overview		**Overview**		**Overview**	
WR-042 Waveguide Adaptor 2.92 mm Jack (female) General Purpose		WR-075 Waveguide Adaptor SMA Jack (female) General Purpose		WR-090 Waveguide Adaptor SMA Jack (female) General Purpose	
Electrical Data		**Electrical Data**		**Electrical Data**	
Frequency Range	18 to 26.5 GHz	Frequency Range	10 to 15 GHz	Frequency Range	8.2 to 12.4 GHz
Center Frequency	22 GHz	Center Frequency	12.5 GHz	Center Frequency	10.3 GHz
VSWR (Max.)	1.4	VSWR (Max.)	1.3	VSWR (Max.)	1.3
Return Loss	-15.6 dB	Return Loss	-17.7 dB	Return Loss	-17.7 dB
Max. Power		Max. Power		Max. Power	
Impedance Ohms	50 Ω	Impedance Ohms	50 Ω	Impedance Ohms	50 Ω
Mechanical Data		**Mechanical Data**		**Mechanical Data**	
Dimensions	27 x 23 x 18 mm	Dimensions	38 x 38 x 26 mm	Dimensions	42 x 42 x 26 mm
Material	AL	Material	AL	Material	AL
Plating		Plating		Plating	
Waveguide	WR-042	Waveguide	WR-075	Waveguide	WR-090
Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C
Net Weight	13 g (approx.)	Net Weight	43 g (approx.)	Net Weight	57 g (approx.)
Output Connector	2.92 mm Jack	Output Connector	SMA Jack (female)	Output Connector	SMA Jack (female)
Datasheet		Datasheet		Datasheet	

Terminator

890JX45G01		890JX50G01	
			
Overview		**Overview**	
WR-22 Waveguide Terminator General Purpose		WR-19 Waveguide Terminator General Purpose	
Electrical Data		**Electrical Data**	
Frequency Range	33 to 50 GHz	Frequency Range	40 to 60 GHz
Center Frequency	41.5 GHz	Center Frequency	50 GHz
VSWR (Max.)	1.1	VSWR (Max.)	1.1
Return Loss	-26.4 dB	Return Loss	-26.4 dB
Max. Power	0.5 W	Max. Power	0.4 W
Impedance Ohms	50 Ω	Impedance Ohms	50 Ω
Mechanical Data		**Mechanical Data**	
Dimensions	50 x 29 x 8 mm	Dimensions	50 x 29 x 7 mm
Material	Cu	Material	Cu
Plating	Au	Plating	Au
Waveguide	WR-22	Waveguide	WR-19
Operating Temp.	-40˚C to +85˚C	Operating Temp.	-40˚C to +85˚C
Storage Temp.	-40˚C to +85˚C	Storage Temp.	-40˚C to +85˚C
Net Weight	40 g (approx.)	Net Weight	35 g (approx.)
Absorbent Body	Silicon Carbide	Absorbent Body	Silicon Carbide

Datasheet

Datasheet

RF Filter

DRF-SJ6525A



Overview	
6.5 GHz Bandpass DR Filter (Dielectric Resonator) for WiFi 7, WiFi 6E, U-NII 5–8	
Electrical Data	
Frequency Range	5925–7125 MHz
Center Frequency	6525 MHz
VSWR (Max.)	1.8
Return Loss	-12 dB
Insertion Loss	3.7 dB Max.
Passband Ripple	2.3 dB Max.
Attenuation:	
@0–5150 MHz	50 dB Min.
@5150–5835 MHz	48 dB Min.
@7400–7800 MHz	10 dB Min.
@780–8500 MHz	25 dB Min.
Max. Power	10 W (40 dBm)
Impedance Ohms	50 Ω
Mechanical Data	
Dimensions	9.4 x 3.9 x 2.8 mm
Material	Ceramic (εr=9~11)
Plating	Ag
MSL	3 (168 Hours)
Operating Temp.	-40˚C to +105˚C
Storage Temp.	-40˚C to +105˚C
Net Weight	0.25 g (approx.)
Termination	Solder Pad

Datasheet

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