



# WR-42 Waveguide Magic Tee, UG-595/U Square Cover Flange Operating from 18 GHz to 26.5 GHz

## Waveguide Magic Tees Technical Data Sheet

PEWMT1006

### Features

- 18 to 26.5 GHz Frequency Range
- E to H Port Isolation 25 dB Min
- Collinear Port Isolation 15 dB Min
- 0.5 dB Insertion loss
- K Band

### Applications

- Test and Measurement
- Military Communications
- Commercial Communications
- Wireless Communications
- SATCOM

### Description

Pasternack's PEWMT1006 is a magic, or hybrid tee that operates from 18 GHz to 26.5 GHz, K band. It is a 4 port device that is internally tuned to optimize matching, balance, and isolation. Magic tees have an H-plane (sum) port, an E-plane (difference) port, and two collinear ports. A signal applied to the H port will be equally divided between the two collinear ports. A signal applied to the E port will be divided between the two collinear ports but with a 180 degree phase difference. Similarly, when two in-phase signals of equal amplitude are applied to the collinear ports, these will be added together at the H-plane (sum) port and subtracted from one another at the E-plane (difference) port.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	18		26.5	GHz
Insertion Loss			0.5	dB
Isolation, E-H (Difference-Sum) Ports	25			dB
Isolation, Collinear Ports	15			dB

### Mechanical Specifications

#### Size

Weight	0.169 lbs [76.66 g]
Waveguide Size	WR-42
Flange Type	Square Cover
Flange Designation	UG-595/U
Body Material and Plating	Aluminum, Gold
Body Plating Specification	ASTMB488

### Environmental Specifications

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Magic Tee, UG-595/U Square Cover Flange Operating from 18 GHz to 26.5 GHz PEWMT1006](#)

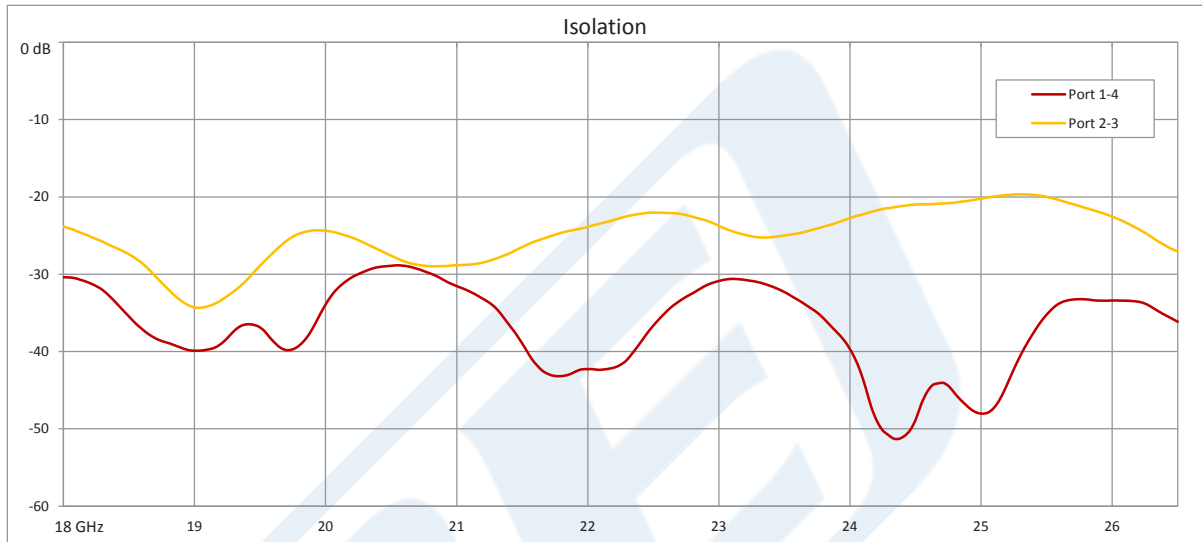




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PEWMT1006



WR-42 Waveguide Magic Tee, UG-595/U Square Cover Flange Operating from 18 GHz to 26.5 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Magic Tee, UG-595/U Square Cover Flange Operating from 18 GHz to 26.5 GHz PEWMT1006](https://www.pasternack.com/wr-42-waveguide-magic-tee-ug595-square-26.5-ghz-pewmt1006-p.aspx)

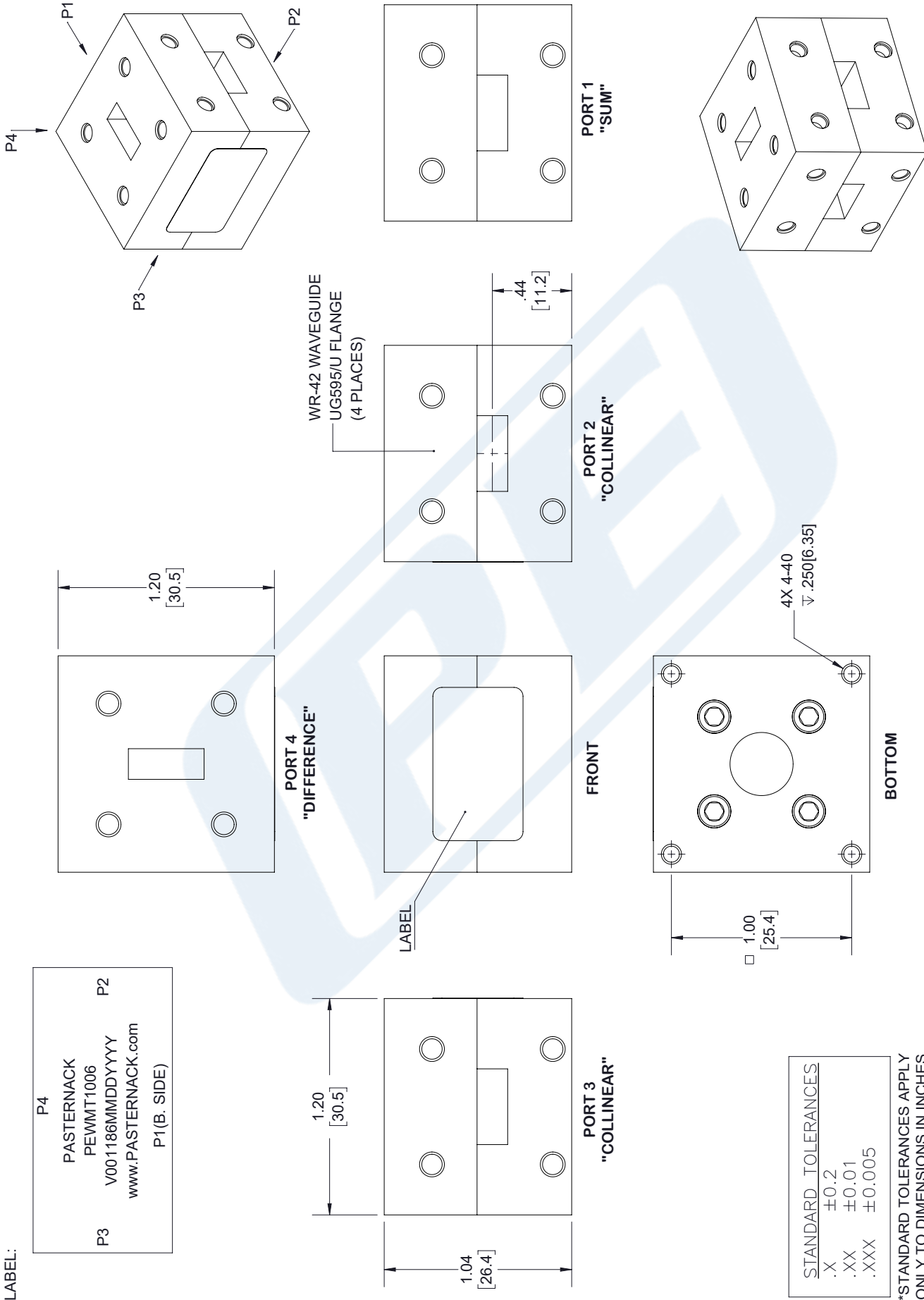
URL: <https://www.pasternack.com/wr-42-waveguide-magic-tee-ug595-square-26.5-ghz-pewmt1006-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PEWMT1006 CAD Drawing

WR-42 Waveguide Magic Tee, UG-595/U Square Cover

Flange Operating from 18 GHz to 26.5 GHz



NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME  
 3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE	PEWMT1006
CAGE CODE	53919
CAD FILE	111417
SCALE	N/A
SIZE	A
	7361

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