

MIL-STD-1636

22 April 1977

MILITARY STANDARD

ADAPTERS, COAXIAL TO WAVEGUIDE SELECTION OF



FSC 5985

MIL-STD-1636
22 April 1977

DEPARTMENT OF DEFENSE
WASHINGTON, DC 20301

Adapters, Coaxial to Waveguide, Selection of.

MIL-STD-1636

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1. SCOPE

1.1 Scope. This standard provides standard coaxial to waveguide adapters considered by the Department of Defense as standard for use in military equipment and applications.

1.2 Purpose. The purpose of this standard is to:

- a. Provide the equipment designer with a list of adapters considered standard for use in military applications.
- b. Restrict and minimize the variety of adapters for use in military applications in order to provide effective logistic support of equipment.
- c. Establish criteria pertinent to choice and application of adapters for use in military equipment.

2. REFERENCED DOCUMENTS

2.1 Issues of documents. The issues of the following documents in effect on the date of invitation for bids form a part of this standard to the extent specified herein.

SPECIFICATIONS

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- MIL-W-85 - Waveguides, Rigid, Rectangular General Specification for.
- MIL-F-3922 - Flanges, Waveguide, General Purpose General Specification for.
- MIL-A-22641 - Adapters, Coaxial to Waveguide, General Specification for.

(Copies of specifications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. DEFINITIONS

3.1 The terms used in this standard are those commonly encountered in microwave engineering practice.

4. GENERAL REQUIREMENTS

4.1 Selection of adapters. Adapters to be used in military applications shall be selected from those listed in tables I through VI.

4.2 Criteria for inclusion. The criteria for the selection of adapter types for inclusion in this standard are:

- a. The adapter shall be considered by representatives of the Military Departments the best available type for current application.
- b. Availability of the adapter shall be reasonably certain.
- c. The adapter shall have an approved military specification.

4.3 Electrical and physical tolerances. Adapters used in military applications shall be representative of manufactured lots possessing acceptable material and physical and electrical characteristics and shall in no manner degrade the operational characteristics of the equipment it is used in.

4.4 Detailed requirements. The detailed requirements for adapters listed in this standard are covered by the applicable MIL-A-22641 specification sheet.

5. DETAILED REQUIREMENTS

Not applicable.

6. NOTES

Not applicable.

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TABLE I. Coaxial to waveguide adapters (Series N to waveguide-class 1).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|------------------------------|---|---------------------------|-----------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/16- | GHz | | | dB | M85/ | | | |
| 01 | 7.05-10.0 | 1.25:1 | 1.20:1 | 0.1 | 1-069 1-073 (RG-51/U) | M3922/53-002 (UG-51/U) (Cover) Butt | Copper alloy | M3922/59-007 (UG-52B/U) |
| 02 | 5.85-8.2 | 1.25:1 | 1.20:1 | 0.1 | 1-063 1-067 (RG-50/U) | M3922/55-001 (UG-344/U) (Cover) Sleeve | Copper alloy | M3922/60-001 (UG-343B/U) |
| 03 | 3.95-5.85 | 1.25:1 | 1.20:1 | 0.1 | 1-051 1-055 (RG-49/U) | M3922/57-002 (UG-149A/U) (Cover) Sleeve | Copper alloy | M3922/62-002 (UG-148C/U) |
| 04 | 2.60-3.95 | 1.25:1 | 1.20:1 | 0.1 | 1-039 1-043 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-54B/U) |
| 05 | 8.20-12.40 | 1.25:1 | 1.20:1 | 0.2 | 1-079 1-075 (RG-52/U) | M3922/53-001 (UG-39/U) (Cover) Butt | Copper alloy | M3922/59-006 (UG-40B/U) |
| 06 | 1.70-2.60 | 1.25:1 | 1.20:1 | 0.05 | 1-027 1-031 (RG-104/U) | M3922/58-009 (UG-435B/U) (Contact) Butt | Copper alloy | M3922/58-009 |
| 07 | 1.12-1.70 | 1.25:1 | 1.20:1 | 0.05 | 1-015 1-017 (RG-69/U) | M3922/58-007 (UG-417B/U) (Contact) Butt | Copper alloy | M3922/58-007 |
| 08 | 4.9-7.05 | 1.25:1 | 1.20:1 | 0.1 | 1-057 1-061 (RG-343/U) | M3922/52-037 (UG-1354/U) (Contact) Butt | Copper alloy | M3922/52-037 |
| 09 | 7.05-10.0 | 1.25:1 | 1.20:1 | 0.1 | 1-071 (RG-68/U) | M3922/53-004 (UG-136/U) (Cover) Butt | Aluminum alloy | M3922/59-009 (UG-137B/U) |
| 10 | 5.85-8.2 | 1.25:1 | 1.20:1 | 0.1 | 1-065 (RG-106/U) | M3922/55-002 (UG-441/U) (Cover) Sleeve | Aluminum alloy | M3922/60-002 (UG-440B/U) |
| 11 | 3.95-5.85 | 1.25:1 | 1.20:1 | 0.1 | 1-053 (RG-95/U) | M3922/57-001 (UG-407/U) (Cover) Sleeve | Aluminum alloy | M3922/62-001 (UG-4063/U) |
| 12 | 2.60-3.95 | 1.25:1 | 1.20:1 | 0.1 | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 13 | 8.20-12.4 | 1.25:1 | 1.20:1 | 0.2 | 1-077 (RG-67/U) | M3922/53-003 (UG-135/U) (Cover) Butt | Aluminum alloy | M3922/59-008 (UG-136B/U) |

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TABLE I. Coaxial to waveguide adapters (Series N to waveguide-class 1). - Continued

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|--------------------------------------|---|---------------------------|--------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/16- | GHz | | | dB | M85/ | | | |
| 14 | 1.70-2.60 | 1.25:1 | 1.20:1 | 0.1 | 1-029 (RG-105/U) | M3922/58-010 (UG-437B/U) (Contact) Butt | Aluminum alloy | M3922/58-010 |
| 15 | 1.12-1.70 | 1.25:1 | 1.20:1 | 0.05 | 1-018 (RG-103/U) | M3922/58-008 (UG-418B/U) (Contact) Butt | Aluminum alloy | M3922/58-008 |
| 16 | 4.90-7.05 | 1.25:1 | 1.20:1 | 0.1 | 1-059 (RG-344/U) | M3922/52-038 (UG-1355/U) (Contact) Butt | Aluminum alloy | M3922/52-038 |
| 17 | 7.0-11.0 | 1.25:1 | 1.20:1 | 0.2 | 1-155 (RG-320/U) | M3922/70-001 (UG-1493/U) (Cover) Butt | Copper alloy | M3922/69-001 (UG-1494/U) |
| 18 | 4.9-7.05 | 1.25:1 | 1.20:1 | 0.1 | 1-059 (RG-344/U) 1-060 (RG-344/U) | M3922/52-038 (UG-1355/U) (Contact) Butt | Aluminum alloy | M3922/52-038 |
| 19 | 4.9-7.05 | 1.25:1 | 1.20:1 | 0.1 | 1-061 (RG-343/U) | M3922/52-037 (UG-1354/U) (Contact) Butt | Copper alloy | M3922/52-037 |
| 20 | 2.25-5.5 | 1.30:1 | 1.20:1 | 0.1 | 4-001 (RG-109/U) | RE-49F554 (UG-509/U) (Cover) Sleeve | Copper alloy | UG-510/U |
| 21 | 5.0-10.0 | 1.40:1 | 1.30:1 | 0.1 | 4-003 (RG-110/U) | RE-49F555 (UG-511/U) (Cover) Sleeve | Copper alloy | UG-512/U |
| 22 | 7.0-11.0 | 1.10:1 | 1.10:1 | 0.2 | 1-155 (RG-320/U) | M3922/70-001 (UG-1493/U) (Cover) Butt | Copper alloy | M3922/69-001 (UG-1494/U) |
| 23 | 3.95-5.85 | 1.065:1 | 1.03:1 | 0.1 | 1-055 (RG-49/U) | M3922/52-013 (UG-1728/U) (Contact) Butt | Copper alloy | M3922/52-013 |
| 24 | 3.95-5.85 | 1.065:1 | 1.03:1 | 0.1 | 1-053 (RG-95/U) | M3922/52-014 (UG-1729/U) (Contact) Butt | Aluminum alloy | M3922/52-014 |
| 25 | 7.05-10.0 | 1.065:1 | 1.03:1 | 0.1 | 1-073 (RG-51/U) | M3922/52-019 (UG-1734/U) (Contact) Butt | Copper alloy | M3922/52-019 |
| 26 | 7.05-10.0 | 1.065:1 | 1.03:1 | 0.1 | 1-071 (RG-68/U) | M3922/52-020 (UG-1735/U) (Contact) Butt | Aluminum alloy | M3922/52-020 |

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TABLE II. Coaxial to waveguide adapters (7/8 inch coaxial to waveguide-class 3).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|-------------------|-----------------|--------------------|-----------------|----------------------|-------------------|--|---------------------------|--------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| <u>M22641/17-</u> | <u>GHz</u> | | | <u>dB</u> | <u>M85/</u> | | | |
| 01 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-039 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-548/U) |
| 02 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-039 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-548/U) |
| 03 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 04 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |

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TABLE III. Coaxial to waveguide adapters (5/8 inch coaxial to waveguide-class 2).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing 1/ | Flange and mounting method 2/ | Waveguide and flange mat. | Mating flange |
|-------------------|-----------------|--------------------|-----------------|----------------------|----------------------|---|---------------------------|--------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| <u>M22641/18-</u> | <u>GHz</u> | | | <u>dB</u> | <u>M85/</u> | | | |
| 01 | 5.85-8.20 | 1.30:1 | 1.20:1 | -- | 1-063 (RG-50/U) | M3922/55-001 (UG-344/U) (Cover) Sleeve | Copper alloy | M3922/60-001 (UG-343B/U) |
| 02 | 5.85-8.20 | 1.30:1 | 1.20:1 | -- | 1-063 (RG-50/U) | M3922/55-001 (UG-344/U) (Cover) Sleeve | Copper alloy | M3922/60-001 (UG-343B/U) |
| 03 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-039 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-54B/U) |
| 04 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-039 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-54B/U) |
| 05 | 3.95-5.85 | 1.30:1 | 1.20:1 | -- | 1-051 (RG-49/U) | M3922/57-002 (UG-149A/U) (Cover) Sleeve | Copper alloy | M3922/62-002 (UG-148C/U) |
| 06 | 3.95-5.85 | 1.30:1 | 1.20:1 | -- | 1-051 (RG-49/U) | M3922/57-002 (UG-149A/U) (Cover) Sleeve | Copper alloy | M3922/62-002 (UG-148C/U) |
| 07 | 5.85-8.20 | 1.30:1 | 1.20:1 | -- | 1-065 (RG-106/U) | M3922/55-002 (UG-441/U) (Cover) Sleeve | Aluminum alloy | M3922/60-002 (UG-440B/U) |
| 08 | 5.85-8.20 | 1.30:1 | 1.20:1 | -- | 1-065 (RG-106/U) | M3922/55-002 (UG-441/U) (Cover) Sleeve | Aluminum alloy | M3922/60-002 (UG-440B/U) |
| 09 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 10 | 2.60-3.95 | 1.30:1 | 1.25:1 | -- | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 11 | 3.95-5.85 | 1.30:1 | 1.20:1 | -- | 1-053 (RG-95/U) | M3922/57-001 (UG-407/U) (Cover) Sleeve | Aluminum alloy | M3922/62-001 (UG-406B/U) |
| 12 | 3.95-5.85 | 1.30:1 | 1.20:1 | -- | 1-053 (RG-95/U) | M3922/57-001 (UG-407/U) (Cover) Sleeve | Aluminum alloy | M3922/62-001 (UG-406B/U) |

1/ Waveguide in accordance with MIL-W-85.
2/ Flange in accordance with MIL-F-3922.

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TABLE IV. Coaxial to waveguide adapters (Series TNC to waveguide-class 4).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|--------------|--------------------------|--------------------|-----------------|----------------------|--|---|---------------------------|----------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/19-01 | <u>GHz</u> 8.20-12.40 | 1.25:1 | 1.20:1 | <u>dB</u> -- | <u>M85/</u> 1-075 1-079 (RG-52/U) | M3922/53-001 (UG-39/U) (Cover) Butt | Copper alloy | M3922/59-006 (UG-40B/U) |

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TABLE V. Coaxial to waveguide adapters (SMA coaxial to waveguide-class 5).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|-------------------|--|---------------------------|--------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/20- | GHz | | | dB | M85/ | | | |
| 01 | 2.60-3.95 | 1.10:1 | 1.05:1 | 0.05 | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 02 | 2.60-3.95 | 1.10:1 | 1.05:1 | 0.05 | 1-041 (RG-75/U) | M3922/56-002 (UG-584/U) (Cover) Sleeve | Aluminum alloy | M3922/61-001 (UG-585A/U) |
| 03 | 8.20-12.40 | 1.10:1 | 1.05:1 | 0.15 | 1-077 (RG-67/U) | M3922/53-003 (UG-135/U) (Cover) Butt | Aluminum alloy | M3922/59-006 (UG-136B/U) |
| 04 | 8.20-12.40 | 1.10:1 | 1.05:1 | 0.15 | 1-077 (RG-67/U) | M3922/53-003 (UG-135/U) (Cover) Butt | Aluminum alloy | M3922/59-008 (UG-136B/U) |
| 05 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-090 (RG-349/U) | M3922/53-006 (UG-1665/U) (Cover) Butt | Aluminum alloy | M3922/59-002 (UG-1666/U) |
| 06 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-090 (RG-349/U) | M3922/53-006 (UG-1665/U) (Cover) Butt | Aluminum alloy | M3922/59-002 (UG-1666/U) |
| 07 | 2.60-3.95 | 1.10:1 | 1.05:1 | 0.05 | 1-043 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-54B/U) |
| 08 | 2.60-3.95 | 1.10:1 | 1.05:1 | 0.05 | 1-043 (RG-48/U) | M3922/56-001 (UG-53/U) (Cover) Sleeve | Copper alloy | M3922/61-002 (UG-54B/U) |
| 09 | 8.20-12.40 | 1.10:1 | 1.05:1 | 0.15 | 1-079 (RG-52/U) | M3922/53-001 (UG-39/U) (Cover) Butt | Copper alloy | M3922/59-006 (UG-40B/U) |
| 10 | 8.20-12.40 | 1.10:1 | 1.05:1 | 0.15 | 1-079 (RG-52/U) | M3922/53-001 (UG-39/U) (Cover) Butt | Copper alloy | M3922/59-006 (UG-40B/U) |
| 11 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-089 (RG-91/U) | M3922/53-005 (UG-419/U) (Cover) Butt | Copper alloy | M3922/59-001 (UG-541A/U) |
| 12 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-089 (RG-91/U) | M3922/53-005 (UG-419/U) (Cover) Butt | Copper alloy | M3922/59-001 (UG-541A/U) |
| 13 | 7.0-11.0 | 1.10:1 | 1.05:1 | 0.15 | 1-158 | M3922/70-014 (Cover) Butt | Aluminum alloy | M3922/69-002 |
| 14 | 7.0-11.0 | 1.10:1 | 1.05:1 | 0.15 | 1-158 | M3922/70-014 (Cover) Butt | Aluminum alloy | M3922/69-002 |
| 15 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-090 (RG-349/U) | M3922/70-020 (Cover) Butt | Aluminum alloy | - - - |

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TABLE V. Coaxial to waveguide adapters (SMA coaxial to waveguide-class 5). - Continued

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing | Flange and mounting method | Waveguide and flange mat. | Mating flange |
|-------------------|-----------------|--------------------|-----------------|----------------------|-------------------|----------------------------|---------------------------|--------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| <u>M22641/20-</u> | <u>GHz</u> | | | <u>dB</u> | <u>M85/</u> | | | |
| 16 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-090 (RG-349/U) | M3922/70-020 (Cover) Butt | Aluminum alloy | --- |
| 17 | 7.0-11.0 | 1.10:1 | 1.05:1 | 0.15 | 1-155 (RG-320/U) | M3922/70-013 (Cover) Butt | Copper alloy | M3922/69-001 (UG-1494/U) |
| 18 | 7.0-11.0 | 1.10:1 | 1.05:1 | 0.15 | 1-155 (RG-320/U) | M3922/70-013 (Cover) Butt | Copper alloy | M3922/69-001 (UG-1494/U) |
| 19 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-089 (RG-91/U) | M3922/70-019 (Cover) Butt | Copper alloy | M3922/59-001 (UG-541A/U) |
| 20 | 12.40-18.0 | 1.10:1 | 1.05:1 | 0.20 | 1-089 (RG-91/U) | M3922/70-019 (Cover) Butt | Copper alloy | M3922/59-001 (UG-541A/U) |

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TABLE VI. Pressurable coaxial to waveguide adapters (Series N to waveguide-class 1, with air fitting).

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing 1/ | Flange and mounting method 2/ | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|----------------------|---------------------------------|---------------------------|---------------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/21- | GHz | | | dB | MB5/ | | | |
| 001 | 2.30-4.40 | 1.15:1 | 1.08:1 | 0.05 | 4-001 (RG-109/U) | M3922/71-13 (Contact) Butt 3/ | Copper alloy | UG-509/U RE-F2687361 RE-49F554 |
| 002 | | | | | 4-001 (RG-109/U) | M3922/71-01 (Contact) Socket 3/ | Copper alloy | UG-509/U RE-F2687361 RE-49F554 |
| 003 | | | | | 4-002 | M3922/71-14 (Contact) Butt 3/ | Aluminum alloy | --- |
| 004 | | | | | 4-002 | M3922/71-02 (Contact) Socket 3/ | Aluminum alloy | --- |
| 005 | 4.30-7.35 | | | | 1-061 (RG-343) | M3922/71-17 (Contact) Butt 3/ | Copper alloy | M3922/52-037 |
| 006 | | | | | 1-061 (RG-343) | M3922/71-05 (Contact) Socket 3/ | Copper alloy | M3922/52-037 |
| 007 | | | | | 1-060 | M3922/71-18 (Contact) Butt 3/ | Aluminum alloy | M3922/52-038 |
| 008 | | | | | 1-060 | M3922/71-06 (Contact) Socket 3/ | Aluminum alloy | M3922/52-038 |
| 009 | 5.0-10.75 | 1.20:1 | 1.15:1 | 0.08 | 4-003 (RG-110/U) | M3922/71-15 (Contact) Butt 3/ | Copper alloy | RE-F-2687362 UG-511/U RE-49F555 |
| 010 | | | | | 4-003 (RG-110/U) | M3922/71-03 (Contact) Socket 3/ | Copper alloy | UG-511/U RE-F2687362 RE-49F555 |
| 011 | | | | | 4-004 | M3922/71-16 (Contact) Butt 3/ | Aluminum alloy | --- |
| 012 | | | | | 4-004 | M3922/71-04 (Contact) Socket 3/ | Aluminum alloy | --- |
| 013 | 7.0-11.0 | | | | 1-155 (RG-320/U) | M3922/72-05 (Cover) Butt 3/ | Copper alloy | M3922/69-001 |
| 014 | 7.0-11.0 | 1.20:1 | 1.15:1 | 0.08 | 1-155 (RG-320/U) | M3922/72-01 (Cover) Socket 3/ | Copper alloy | M3922/69-001 |

See footnotes at end of table.

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TABLE VI. Pressurable coaxial to waveguide adapters (Series N to waveguide-class 1, with air fitting). - Continued

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing 1/ | Flange and mounting method 2/ | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|----------------------|---------------------------------|---------------------------|--------------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/21- | GHz | | | dB | M85/ | | | |
| 015 | 7.0-11.0 | 1.20:1 | 1.15:1 | 0.08 | 1-155 (RG-320/U) | M3922/73-05 (Choke) Butt 3/ | Copper alloy | M3922/70-001, -013 |
| 016 | | | | | 1-155 | M3922/73-01 (Choke) Socket 3/ | ↓ | M3922/70-001, -013 |
| 017 | | | | | 1-158 | M3922/72-06 (Cover) Butt 3/ | Aluminum alloy | M3922/69-002 |
| 018 | | | | | | M3922/72-02 (Cover) Socket 3/ | Aluminum alloy | M3922/69-002 |
| 019 | | | | | | M3922/73-06 (Choke) Butt 3/ | Aluminum alloy | M3922/52-038 |
| 020 | | | | | 1-158 | M3922/73-02 (Choke) Socket 3/ | Aluminum alloy | --- |
| 021 | 2.30-4.40 | 1.15:1 | 1.08:1 | 0.05 | 4-001 (RG-109/U) | M3922/71-19 (Contact) Butt 4/ | Copper alloy | UG-509/U RE-F2687361 RE-49F554 |
| 022 | | | | | 4-001 (RG-109/U) | M3922/71-07 (Contact) Socket 4/ | Copper alloy | UG-509/U RE-F2687361 RE-49F554 |
| 023 | | | | | 4-002 | M3922/71-20 (Contact) Butt 4/ | Aluminum alloy | --- |
| 024 | | | | | 4-002 | M3922/71-06 (Contact) Socket 4/ | Aluminum alloy | --- |
| 025 | 4.30-7.35 | | | | 1-061 (RG-343/U) | M3922/71-23 (Contact) Butt 4/ | Copper alloy | M3922/52-037 |
| 026 | | | | | 1-061 (RG-343/U) | M3922/71-11 (Contact) Socket 4/ | Copper alloy | M3922/52-037 |
| 027 | | | | | 1-060 | M3922/71-24 (Contact) Butt 4/ | Aluminum alloy | M3922/52-038 |
| 028 | | | | | 1-060 | M3922/71-12 (Contact) Socket 4/ | Aluminum alloy | M3922/52-038 |

See footnotes at end of table.

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TABLE VI. Pressurable coaxial to waveguide adapters (Series N to waveguide-class 1, with air fitting). - Continued

| Part number | Frequency range | VSWR over | | Insertion loss (max) | Waveguide housing 1/ | Flange and mounting method 2/ | Waveguide and flange mat. | Mating flange |
|-------------|-----------------|--------------------|-----------------|----------------------|-------------------------|----------------------------------|---------------------------|--------------------------------------|
| | | entire freq. range | 50% freq. range | | | | | |
| M22641/21- | GHz | | | dB | M85/ | | | |
| 029 | 5.0-10.75 | 1.20:1 | 1.15:1 | 0.08 | 4-003 (RG-110/U) | M3922/71-21 (Contact) Butt 4/ | Copper alloy | UG-511/U RE-F2687362 RE-49F555 |
| 030 | | | | | 4-003 (RG-110/U) | M3922/71-09 (Contact) Socket 4/ | Copper alloy | UG-511/U RE-F2687362 RE-49F555 |
| 031 | | | | | 4-004 | M3922/71-22 (Contact) Butt 4/ | Aluminum alloy | --- |
| 032 | | | | | 4-004 | M3922/71-10 (Contact) Socket 4/ | Aluminum alloy | --- |
| 033 | 7.0-11.0 | | | | 1-155 (RG-320/U) | M3922/72-07 (Cover) Butt 4/ | Copper alloy | M3922/69-001 |
| 034 | | | | | | M3922/72-03 (Cover) Socket 4/ | | M3922/69-001 |
| 035 | | | | | | M3922/73-07 (Choke) Butt 4/ | | M3922/70-001, 013 |
| 036 | | | | | | M3922/73-03 (Choke) Socket 4/ | | M3922/70-001, 013 |
| 037 | | | | | 1-158 | M3922/72-08 (Cover) Butt 4/ | Aluminum alloy | M3922/69-001, -002 |
| 038 | | | | | | M3922/72-04 (Cover) Socket 4/ | | M3922/69-001, -002 |
| 039 | | | | | | M3922/73-08 (Choke) Butt 4/ | | M3922/70-002, -014 |
| 040 | | | | | | M3922/73-04 (Choke) Socket 4/ | | M3922/70-002, -014 |

1/ Waveguide in accordance with MIL-W-85.

2/ Flange in accordance with MIL-F-3922.

3/ Air fitting is installed in the broad wall side of the flange.

4/ Air fitting is installed in the narrow wall side of the flange.

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TABLE VII. Cross-reference of AN nomenclature to part number.

| AN nomenclature | Part number | AN nomenclature | Part number |
|-----------------|----------------|-----------------|----------------|
| | <u>M22641/</u> | | <u>M22641/</u> |
| UG-397/U | 16-01 | UG-1647/U | 18-07 |
| UG-398/U | 16-02 | UG-1648/U | 18-08 |
| UG-399/U | 16-03 | UG-1649/U | 18-09 |
| UG-400/U | 16-04 | UG-1650/U | 18-10 |
| UG-403/U | 18-01 | UG-1651/U | 18-11 |
| UG-404/U | 18-06 | UG-1652/U | 18-12 |
| UG-405/U | 17-02 | UG-1653/U | 16-09 |
| UG-445/U | 18-03 | UG-1654/U | 16-10 |
| UG-446A/U | 16-05 | UG-1655/U | 16-11 |
| UG-520/U | 18-02 | UG-1656/U | 16-12 |
| UG-521/U | 18-05 | UG-1657/U | 16-13 |
| UG-522/U | 17-01 | UG-1658/U | 16-14 |
| UG-523/U | 18-04 | UG-1659/U | 16-15 |
| UG-952/U | 16-06 | UG-1660/U | 16-16 |
| UG-953/U | 16-07 | UG-1661/U | 16-08 |
| UG-1004/U | 16-20 | UG-1662/U | 17-03 |
| UG-1005/U | 16-21 | UG-1663/U | 17-04 |
| UG-1538/U | 16-17 | UG-1679/U | 16-19 |
| UG-1646/U | 16-18 | | |

Custodians:

Army - FI
Navy - EC
Air Force - 11

Review activities:

Army - MI, AV
Navy - OS
Air Force - 17, 85, 99
DLA - ES

User activities:

Army - MU
Navy - MC

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 5985-0848)

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