

# EIA SPECIFICATION

NQ-EIA/IS-43AF

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## Cable For LAN Twisted Pair Data Communications – Detail Specification For Type 2, Plenum Cable

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### NQ-EIA/IS-43AF

SEPTEMBER 1988

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ELECTRONIC INDUSTRIES ASSOCIATION  
ENGINEERING DEPARTMENT



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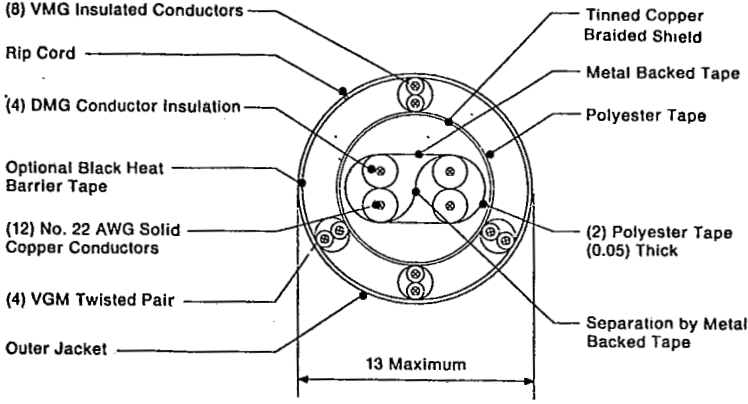
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|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Standard Organization<br><br>Electronic Industries Association                                                                         | Detail Specification Number<br><br>NQ-EIA/IS-43AF                                                                                                                                                                                                                       |
| Omnibus Specification Number: EIA/IS-43<br>Electronic Components of assessed<br>quality in accordance with:                                   | Blank Detail Specification:<br><br>None                                                                                                                                                                                                                                 |
| Outline Drawing:<br>Cross Section<br><br><br>Type 2 Plenum, | Product Description<br><br>Exchange Cable for use<br>With Data Processing<br>Equipment<br><br>Type 2 Plenum Cable<br><br>Two Insulated Data Grade<br>Media (DGM) and Four<br>Insulated Voice Grade Media<br>(VGM) Copper Conductor<br>Pairs in a Fluorocarbon<br>Jacket |
|                                                                                                                                               | Electrical Circuit                                                                                                                                                                                                                                                      |
|                                                                                                                                               | Typical Construction                                                                                                                                                                                                                                                    |
|                                                                                                                                               | Application/Assessment Level<br><br>Assessment Level: C<br>Performance Grade:<br>IEEE 802.5                                                                                                                                                                             |

Information on the availability of components  
qualified to this specification is given in  
the Qualified Products List.



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## 1.0 SCOPE AND OBJECTIVE

### 1.1 SCOPE

This Detail Specification defines Type 2 Plenum cable used with the Token Ring LAN Cabling System. Type 2 P consists of 2 twisted pairs of Data Grade Media (DGM) shielded with aluminum tape and braided shields, all cabled into a single fluorocarbon jacketed assembly. The Cabling System is intended to be compatible with IEEE Standard 802.5. It is designed to be used as a total building wiring system. The Cabling System may be used as the communications medium for a Token Ring Network as well as for other data equipment.

### 1.2 OBJECTIVE

The objective of the Detail Specification is to provide a document describing Type 2 P cable as a basis for certification under the NECQ system and for acquisition of conforming cable.

## 2.0 GENERAL DATA

### 2.1 GENERAL

Cable provided under this Detail Specification shall conform to all general and specific requirements applicable to Type 2 P cable in Omnibus Specification EIA/IS-43, Exchange Cable for Use with Data Processing Equipment, and those requirements specified herein.

### 2.2 ORDERING INFORMATION

Orders for cable covered by this Detail Specification shall include the following information:

1. Identification of cable type
2. Length required
3. Special requirements of reel size or type
4. Other unique requirements not covered in this specification

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### 3.0 SPECIFIC CABLE REQUIREMENTS

#### 3.1 CONFIGURATION

##### 3.1.1 CONDUCTORS

Cable Type 2 P contains two twisted pairs of DGM and four twisted pairs of VGM.

##### 3.1.1.1 Data Grade Media (DGM)

The wire gauge, insulation material, and thickness of the DGM conductors are as follows:

| <u>Wire Type &amp; Dia. (mm)</u>      | <u>Insulation/Wire Diameter (mm)</u> |
|---------------------------------------|--------------------------------------|
| AWG 22 solid copper, $0.643 \pm 0.02$ | polyethylene/ $2.3 \pm 0.3$          |

##### 3.1.1.2 Voice Grade Media (VGM)

The wire type, insulation, and insulation thickness of the VGM conductors are as follows:

| <u>Wire Type &amp; Dia. (mm)</u>      | <u>Insulation/Wire Diameter (mm)</u> |
|---------------------------------------|--------------------------------------|
| AWG 22 solid copper, $0.643 \pm 0.02$ | solid polyethylene/ $1.32 \pm 0.2$   |

The four pairs of VGM must be located between the cable outer jacket and the braided shield of the DGM media.

| TIP  |                     |                         | RING                |                         |
|------|---------------------|-------------------------|---------------------|-------------------------|
| Pair | Color of Insulation | Color of Tracer Marking | Color of Insulation | Color of Tracer Marking |
| 1    | White               | Blue                    | Blue                | White                   |
| 2    | "                   | Orange                  | Orange              | "                       |
| 3    | "                   | Green                   | Green               | "                       |
| 4    | "                   | Brown                   | Brown               | "                       |



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