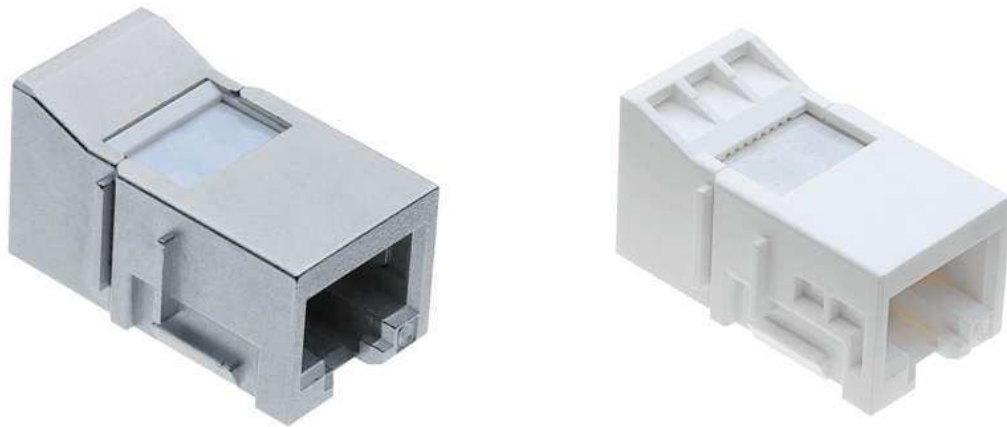


# Technical Datasheet



## **R&M Cat. 6 Coupler Module Cat. 6 2x RJ45**

## **Coupler Module Cat. 6**

The coupler module is designed to be flexible enough to be used for many different applications, such as consolidation points, cross connects, to extend a patch cord or in furniture applications such as the DeskBox. It enables the connection of services to the rear of patch panels by means of normal patch cords and also allows connection of services from switches that have their output interface on the rear, eliminating the need for through panels, spaces between patch panels and special cords with one plug and one jack each. In the industrial market, it is used for point to point connections in the Network Interface (NI) on the automation island or apparatus, or in the Intermediate Distributor (ID).

### **Cat. 6 Coupler Module Features**

Fulfills all Cat. 6 requirements specified in the relevant cabling standards (ISO/IEC 11801, EN 50173 and TIA/EIA 568B/C)

Achieves Class E performance when installed as part of an R&M permanent link

Compatible with Cat. 6 standard plugs

Fits into all R&Mfreenet patch panels, most R&M outlets and many third party platforms through the use of adapters, e.g. freenet module holder plate, snap-in, Adapter #1 and keystone

Very short design for applications with restricted space

### **Standards**

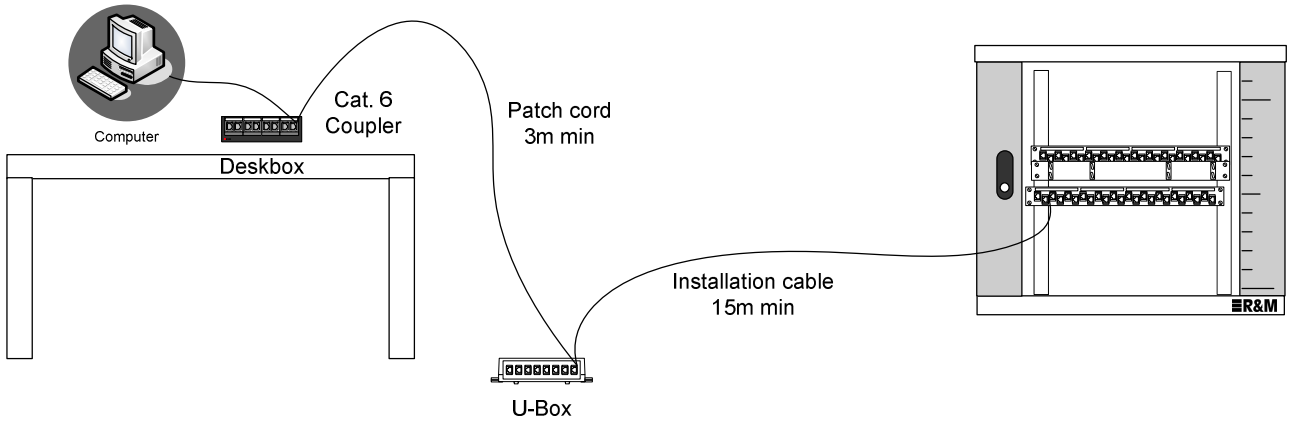
IEC 60603-7, IEC 60603-7-1 Electrical Characteristics of the Telecommunication Outlet

ISO/IEC 11801, Second Edition: September 2002, Information Technology – Generic Cabling for customer premises

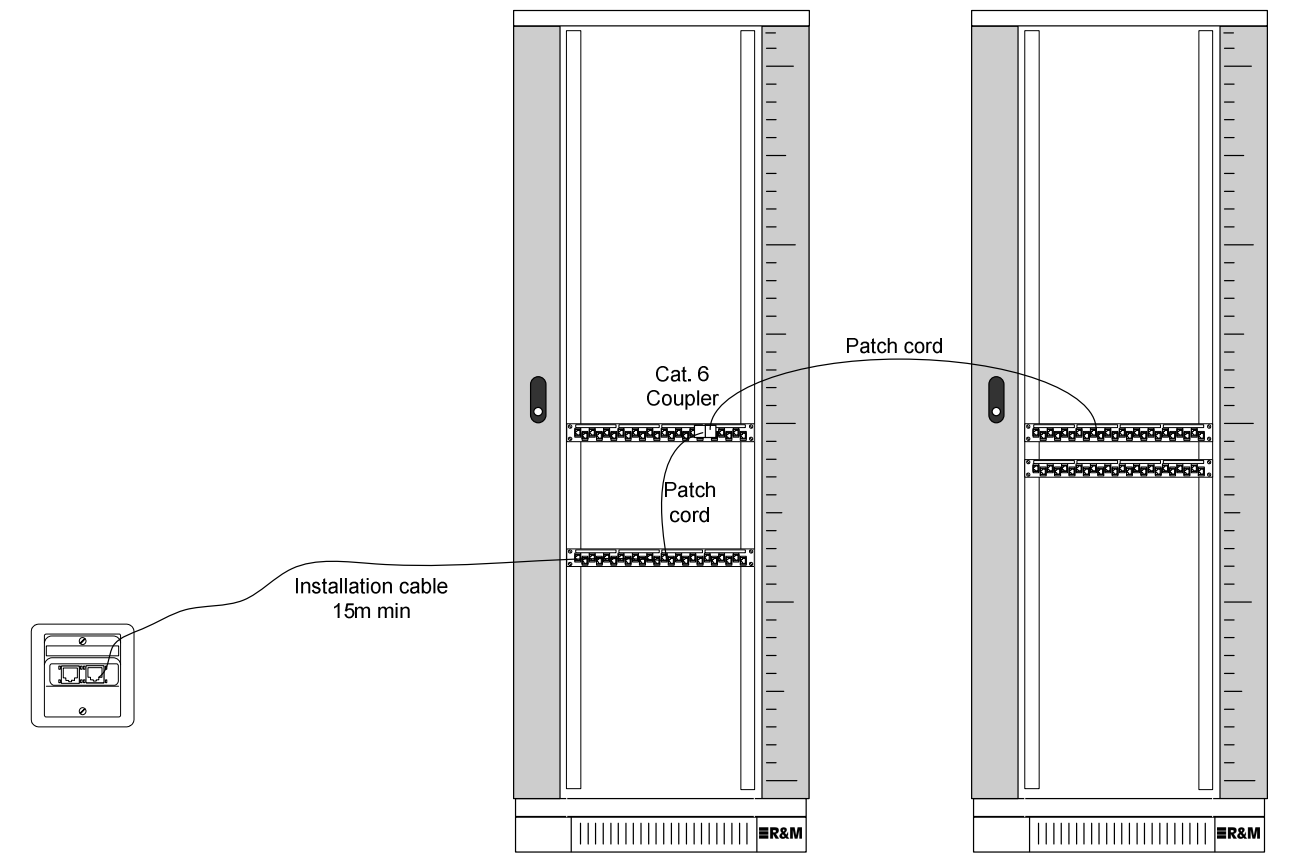
EN50173-1: May 2007: Information Technology – Generic Cabling Systems Part 1: General Requirements

ANSI EIA/TIA 568C.2: General requirements – Commercial Building Telecommunications Cabling Standard  
Part 2: Balanced Twisted-pair Cabling Components

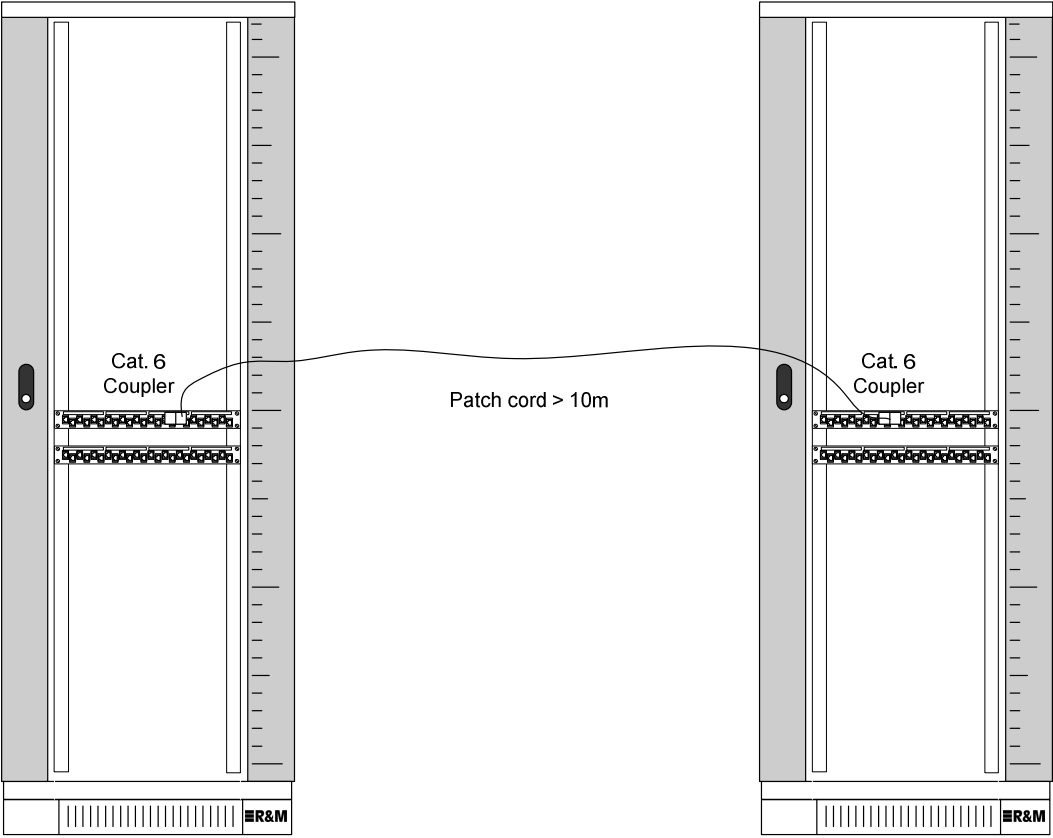
### Typical Applications



### Consolidation Point



### Cross Connect



“Pre-terminated” DC Permanent Link

### Mechanical Data

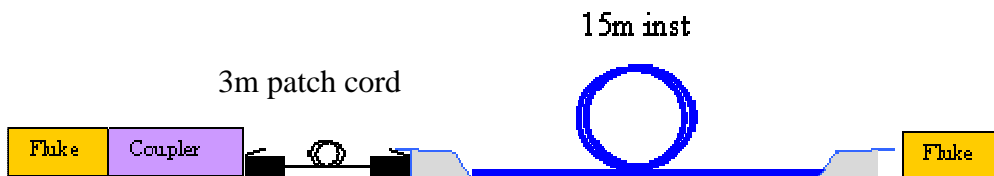
|                             |                          |
|-----------------------------|--------------------------|
| Number of RJ45 jacks        | 2                        |
| Number of contacts          | 8P8C/jack                |
| Operating temperature range | -10°C to 60°C            |
| Assembly temperature range  | -10°C to 60°C            |
| Storage temperature range   | -40°C to 70°C            |
| Humidity                    | 95% (non-condensing)     |
| Contact material            | Spring steel             |
| Contact surface             | Gold over nickel plating |
| Housing material unshielded | PC                       |
| Housing material shielded   | Zinc alloy               |

| Description      | Standard value | Relevant standard                 | Typical value ( at 20°C) |
|------------------|----------------|-----------------------------------|--------------------------|
| Insertion cycles | > 750          | ISO/IEC 11801 2 <sup>nd</sup> Ed. | > 750                    |

### Electrical Data

| Description                | Standard value         | Relevant standard | Typical value (at 20°C) |
|----------------------------|------------------------|-------------------|-------------------------|
| Dielectric strength        | > 1000 V <sub>dc</sub> | IEC 60512-4a      | > 1000 V <sub>eff</sub> |
| Insulation resistance      | > 500 MΩ               | IEC 60512-3a      | > 500 MΩ                |
| Voltage rating             | 72V DC                 | ISO/IEC 11801     | -                       |
| Input to output resistance | 200 mΩ                 | EN 60512-2-1      | < 200 mΩ                |

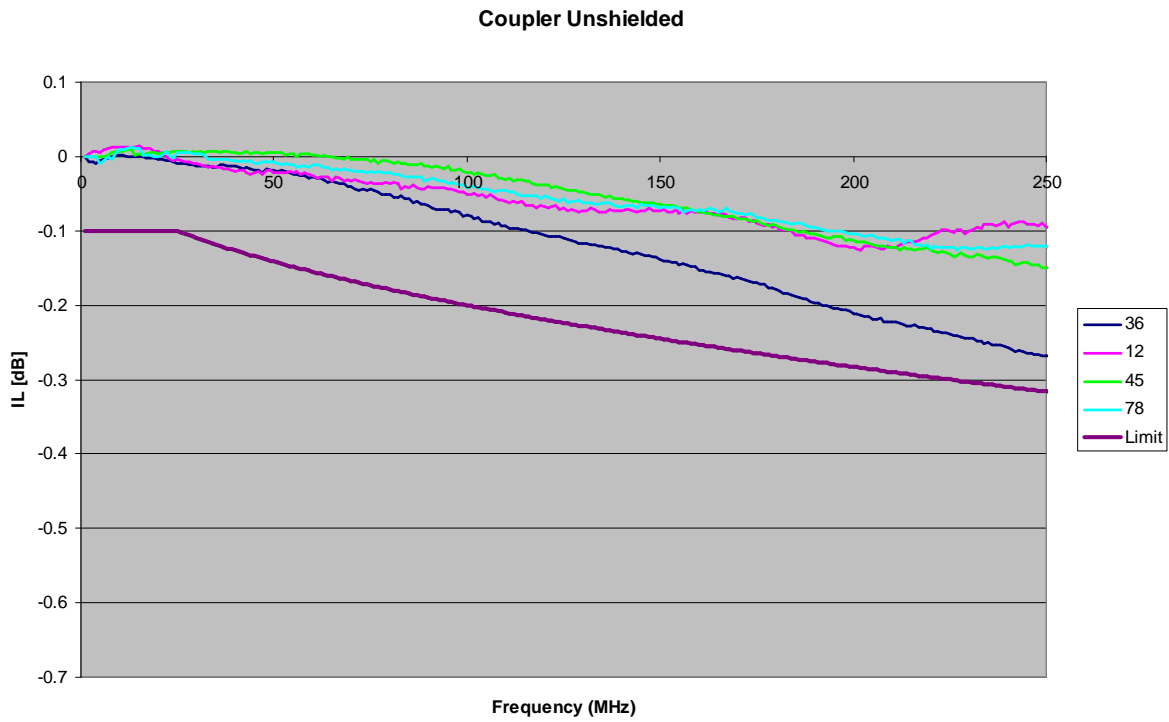
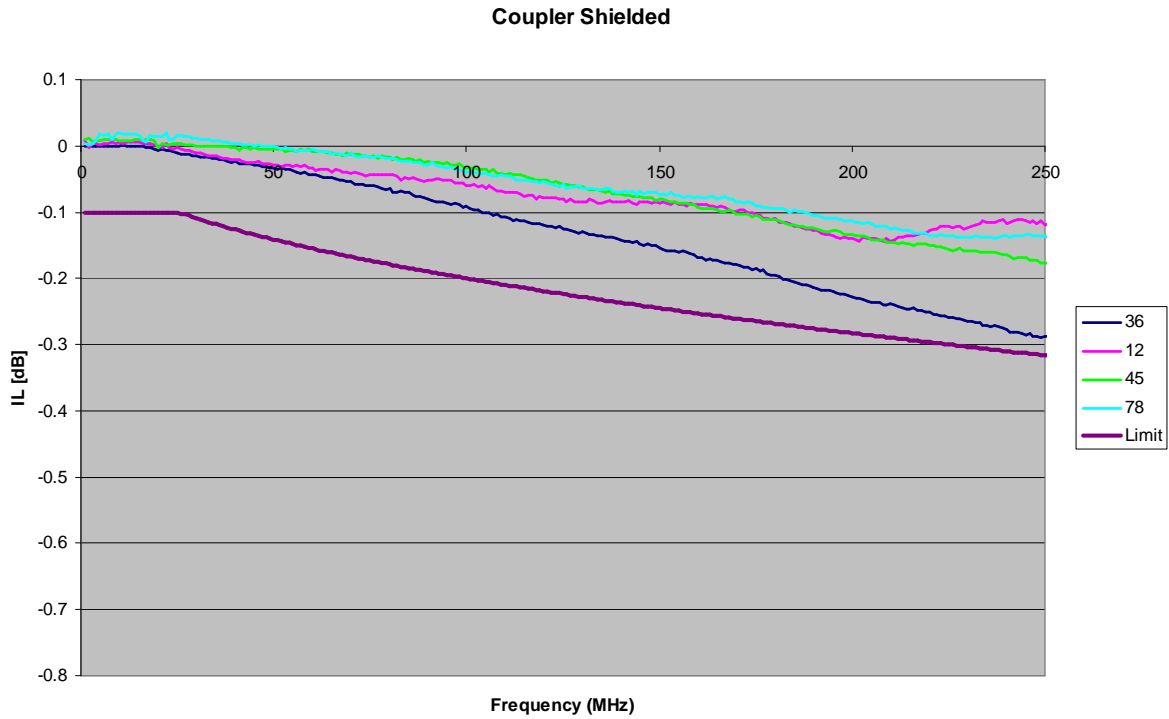
### Tested Configuration



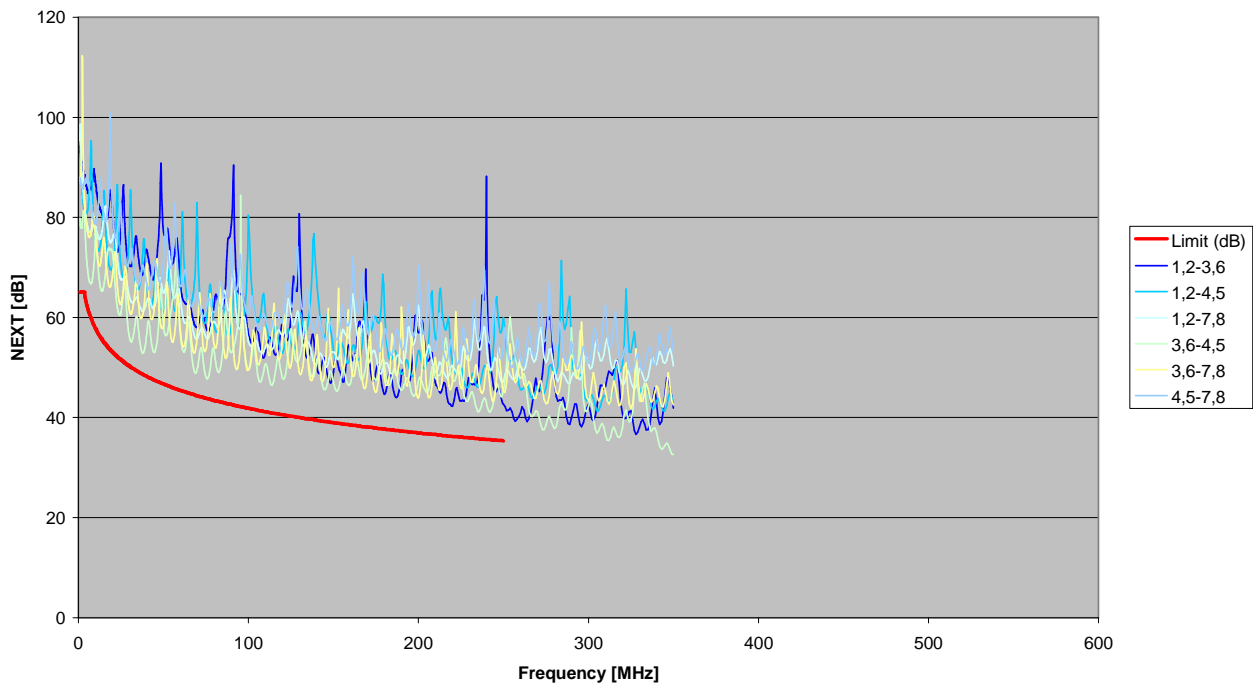
**Electrical Data, continued**

| Frequency<br>(MHz) | Shielded (20°C) [dB] |                               |             | Unshielded (20°C) [dB] |                               |             |
|--------------------|----------------------|-------------------------------|-------------|------------------------|-------------------------------|-------------|
|                    | Insertion Loss       | NEXT all pair<br>combinations | Return Loss | Insertion Loss         | NEXT all pair<br>combinations | Return Loss |
| 1.0                | 0                    | 79.8                          | 25.2        | 0                      | 80.4                          | 25.1        |
| 4.0                | 0                    | 77.2                          | 30.9        | 0                      | 76.1                          | 22.3        |
| 10.0               | 0                    | 75.5                          | 31.3        | 0                      | 71.9                          | 23.3        |
| 16.0               | 0                    | 68.9                          | 28.9        | 0                      | 67.6                          | 22.3        |
| 20.0               | 0                    | 68.2                          | 24.6        | 0                      | 63.1                          | 28.3        |
| 31.25              | -0.01                | 55.1                          | 28.5        | -0.01                  | 60.4                          | 24.4        |
| 62.5               | -0.04                | 53.3                          | 28.4        | -0.03                  | 56.7                          | 28.6        |
| 100                | -0.09                | 49.5                          | 22.2        | -0.07                  | 50.9                          | 23.2        |
| 125                | -0.12                | 50.4                          | 20.8        | -0.11                  | 48.4                          | 19.7        |
| 155                | -0.16                | 47.7                          | 19.1        | -0.14                  | 45.2                          | 18.0        |
| 175                | -0.18                | 45.0                          | 21.3        | -0.16                  | 44.9                          | 19.7        |
| 200                | -0.22                | 43.9                          | 18.7        | -0.21                  | 41.7                          | 16.4        |
| 250                | -0.28                | 42.6                          | 18.5        | -0.26                  | 37.2                          | 20.2        |

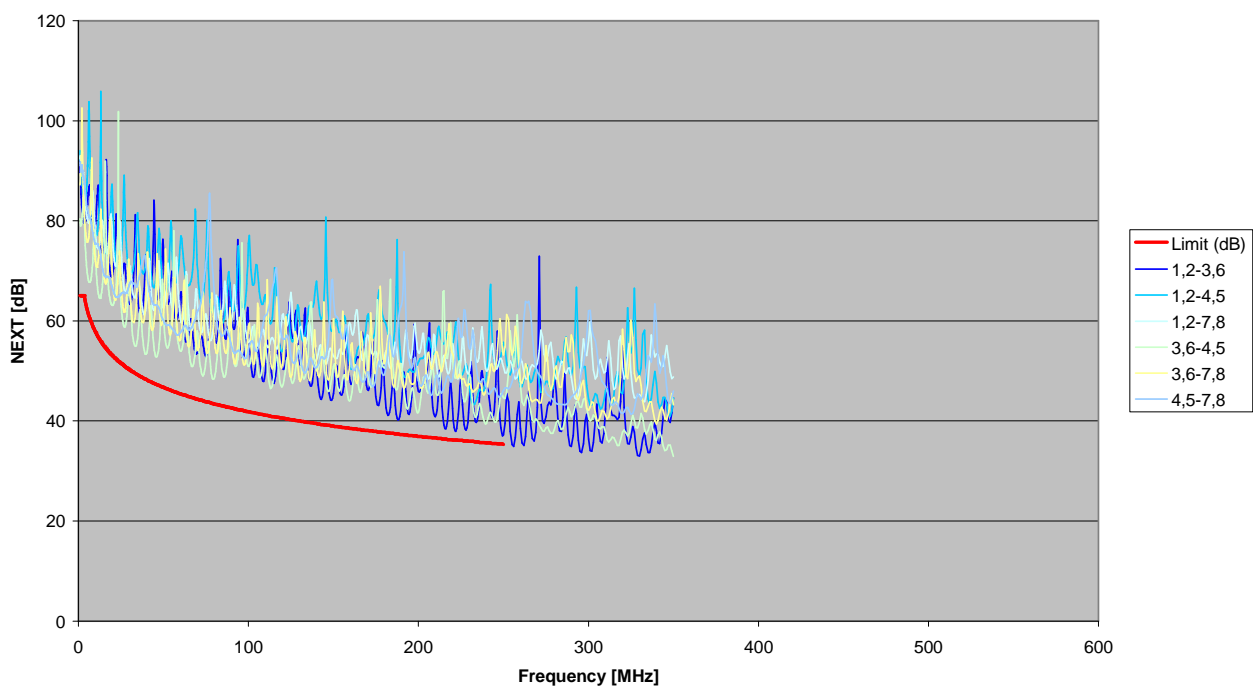
### Insertion Loss



### NEXT Shielded



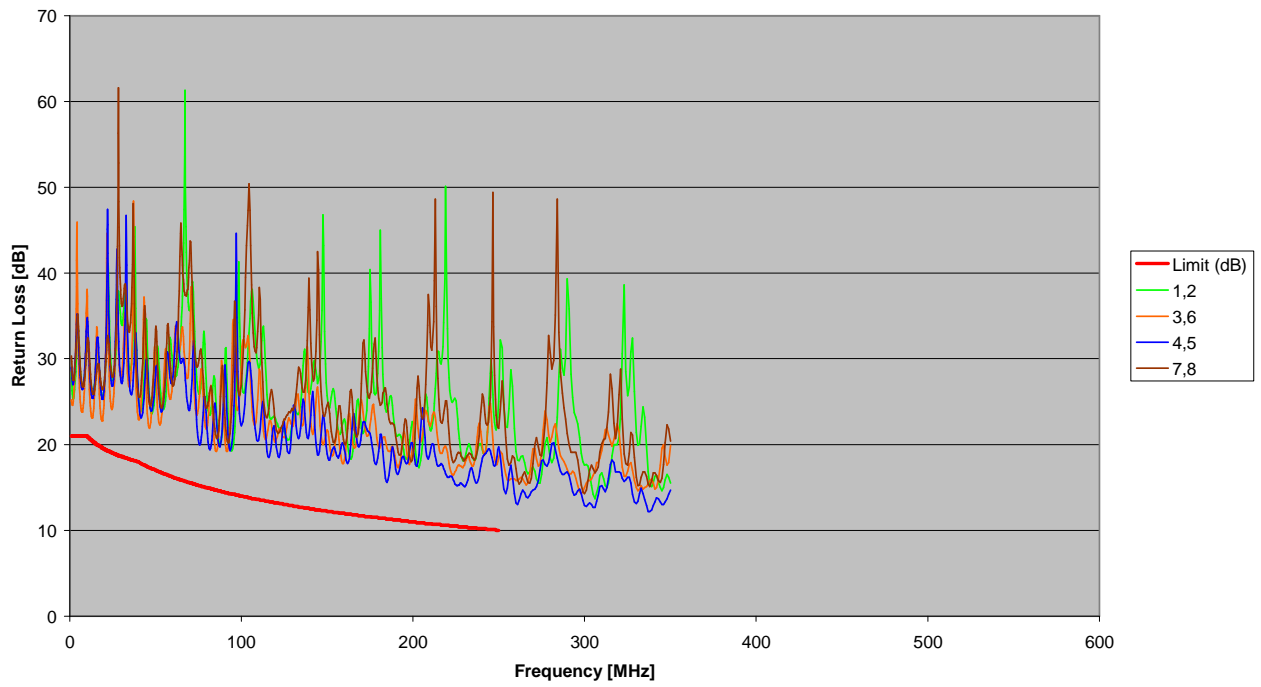
### NEXT Unshielded



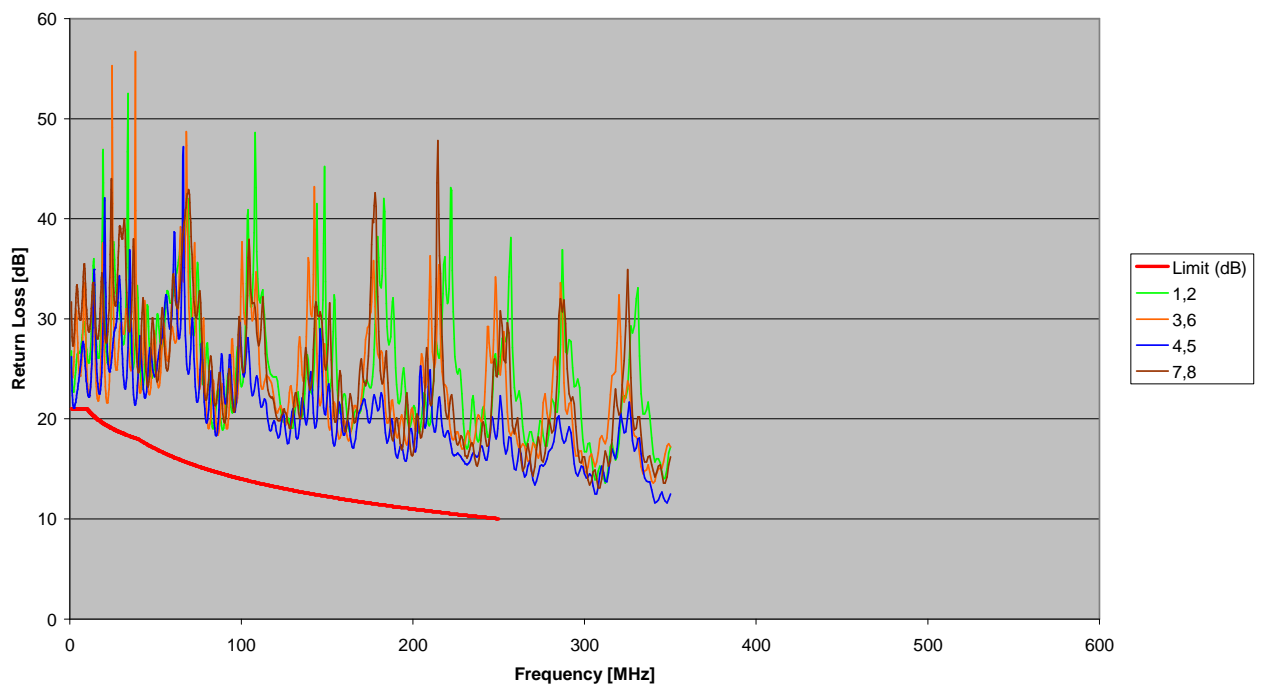


## Return Loss

Return Loss Shielded

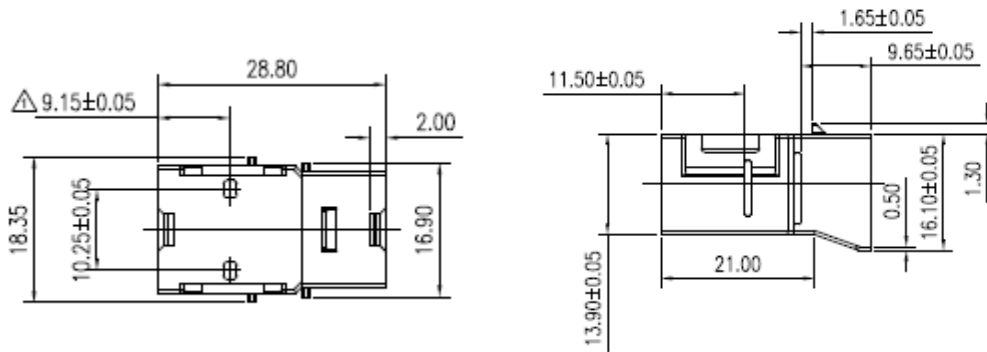


Return Loss Unshielded



## Dimensions

### Coupler shielded



### Coupler unshielded

