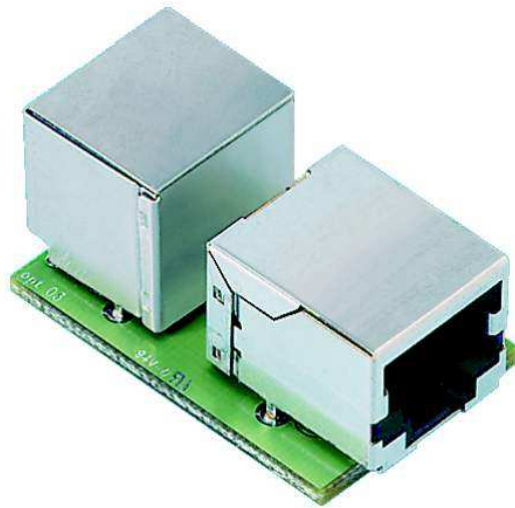


# Technical Datasheet



## R&M Cat 5e Coupler Module

## Cat 5e Coupler Module

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 hubs 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).

### Features

Fulfills all Cat. 5e requirements specified in the relevant cabling standards (ISO/IEC 11801, EN 50173 and TIA/EIA 568B)

Attains Cat. 5e values together with R&M Cat. 5e patch cables from the R&Mfreenet cabling system, as specified in the component standard IEC 60603-7

NEXT values at 100 MHz are 3dB better than Cat. 5 (1995)

Compatible with Cat. 5e standard plugs

Fits into R&Mfreenet patch panels which use the R&M mounting plate footprint, e.g. Global Patch Panel, 16-Port Patch Panel, etc., the Compact Box 6x1 port, the DESKbox using the Module Holder, or in applications using the universal module holder

### Standards

IEC 60603-7: Electrical Characteristics of the Telecommunication Outlet

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

EN 50173-1, May 2007: Information technology – Generic Cabling Systems Part 1: General requirements

ANSI EIA/TIA 568B.2, 2001: General requirements - Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

### Mechanical Data

Number of RJ45 jacks	2
Number of contacts	8/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	Phosphor bronze
Contact surface	Gold over nickel plating
Housing material	Thermoplastic (UL-94-V0)
Shield material	Tin-plated brass

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

### Electrical Data

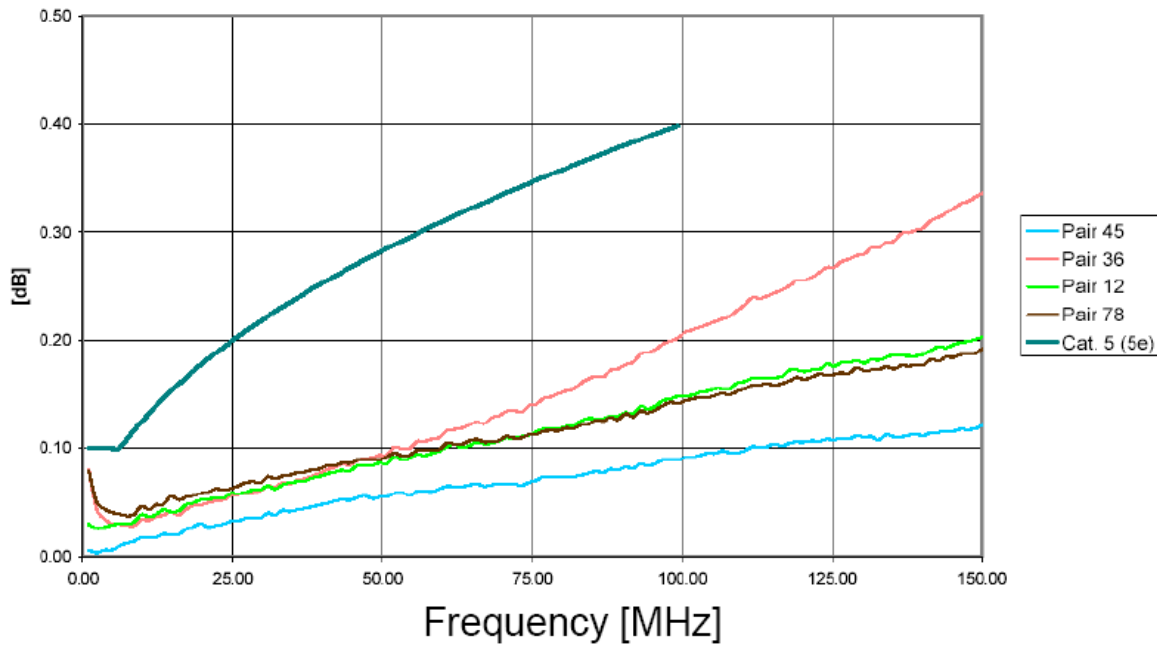
	Standard value	Relevant standard	Typical value (at 20°C)
Dielectric strength	> 1000 V <sub>eff</sub>	IEC 60512-4a	> 1000 V <sub>eff</sub>
Insulation resistance	> 500 MΩ	IEC 60512-3a	> 500 MΩ (500 V DC)
Voltage rating	72V DC	ISO/IEC 11801	-
Input to output resistance	200 mΩ	EN 60512-2-1	< 100 mΩ

**Attenuation**

Attenuation in dB

Frequency (MHz)	Limit (dB) Cat 5	Pair 4/5	Pair 3/6	Pair 1/2	Pair 7/8
1.0	0.10	0.01	0.08	0.03	0.08
4.0	0.10	0.01	0.03	0.03	0.04
10.0	0.13	0.02	0.03	0.04	0.05
16.0	0.16	0.02	0.04	0.04	0.05
20.0	0.18	0.03	0.05	0.05	0.06
31.25	0.22	0.04	0.07	0.06	0.07
62.5	0.32	0.06	0.12	0.10	0.10
100	0.40	0.09	0.20	0.15	0.14

**Attenuation**

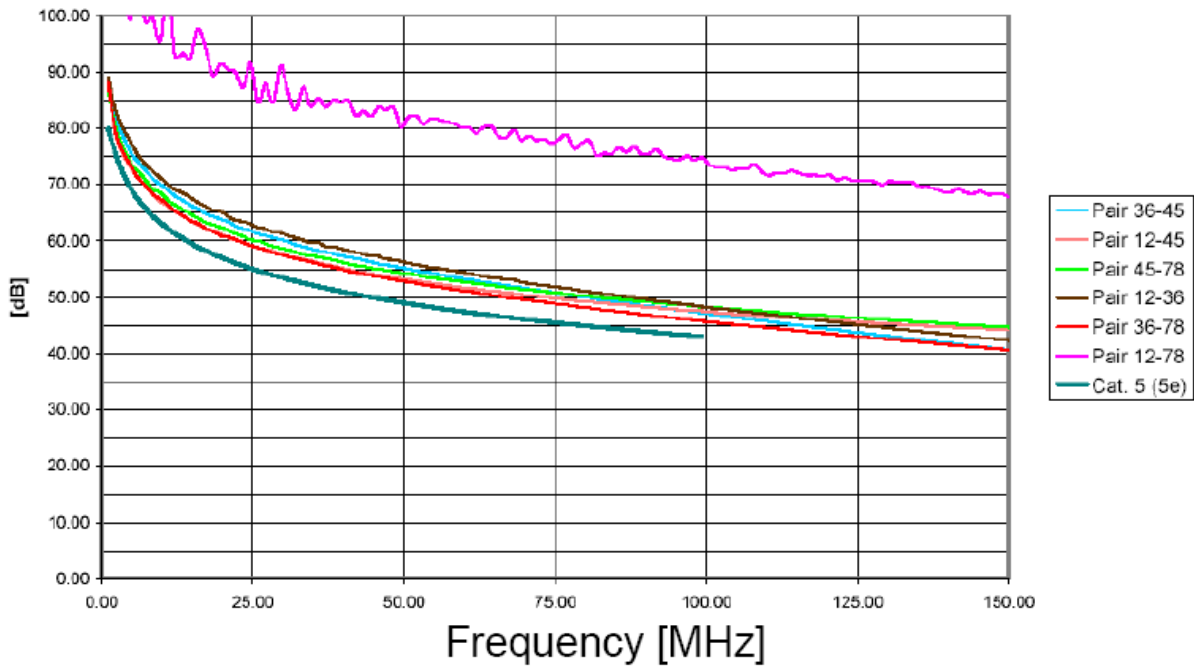


**NEXT**

NEXT (20°C) [dB]

Frequency (MHz)	Limit (dB) Cat 5	Pair 4/5-3/6	Pair 4/5-1/2	Pair 4/5-7/8	Pair 3/6-1/2	Pair 3/6-7/8	Pair 1/2-7/8
1.0	80.0	88.45	87.84	86.94	89.06	88.15	111.31
4.0	71.0	77.56	74.61	75.55	79.09	74.90	101.95
10.0	63.0	69.82	66.85	68.24	70.97	67.20	98.04
16.0	58.9	65.70	62.92	64.05	66.82	63.08	97.55
20.0	57.0	63.75	61.04	62.29	65.09	60.90	91.16
31.25	53.1	59.70	57.20	58.33	60.82	57.18	85.54
62.5	47.1	52.83	51.38	52.38	53.89	50.74	79.54
100	43.0	47.15	47.47	48.29	48.27	45.71	74.15

**NEXT**

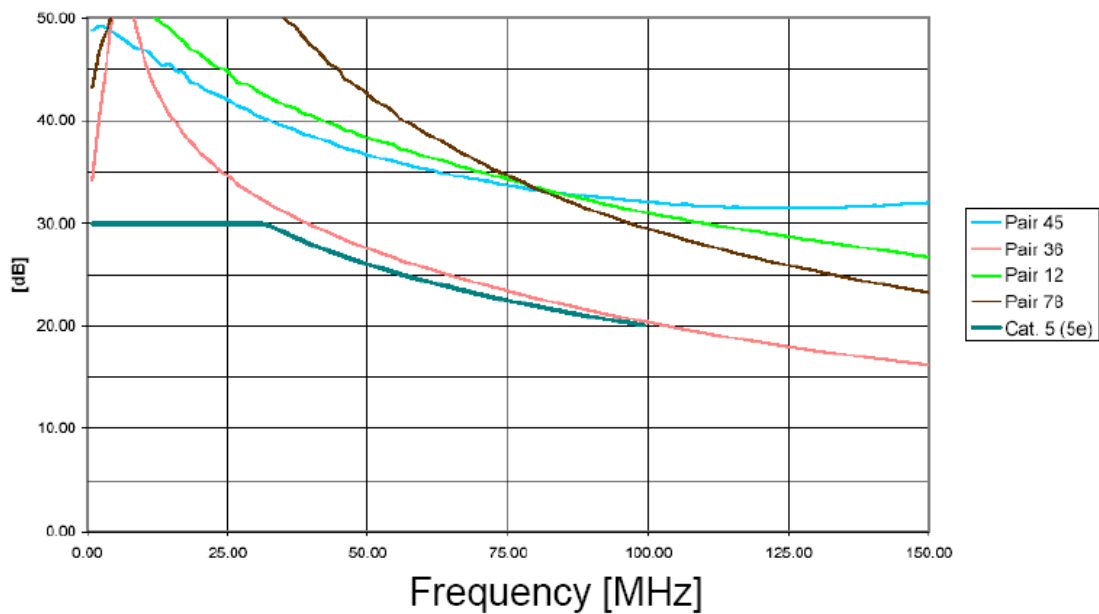


### Return Loss

Return Loss in dB

Frequency (MHz)	Limit (dB) Cat 5	Pair 4/5	Pair 3/6	Pair 1/2	Pair 7/8
1.0	30.0	48.80	34.19	60.54	43.15
4.0	30.0	48.81	47.89	55.74	49.51
10.0	30.0	46.90	46.48	51.68	55.78
16.0	30.0	44.76	39.65	48.18	58.03
20.0	30.0	43.43	37.01	46.51	58.93
31.25	30.0	40.31	32.31	42.61	52.56
62.5	24.1	35.06	25.32	36.22	38.20
100	20.0	32.10	20.37	31.01	29.48

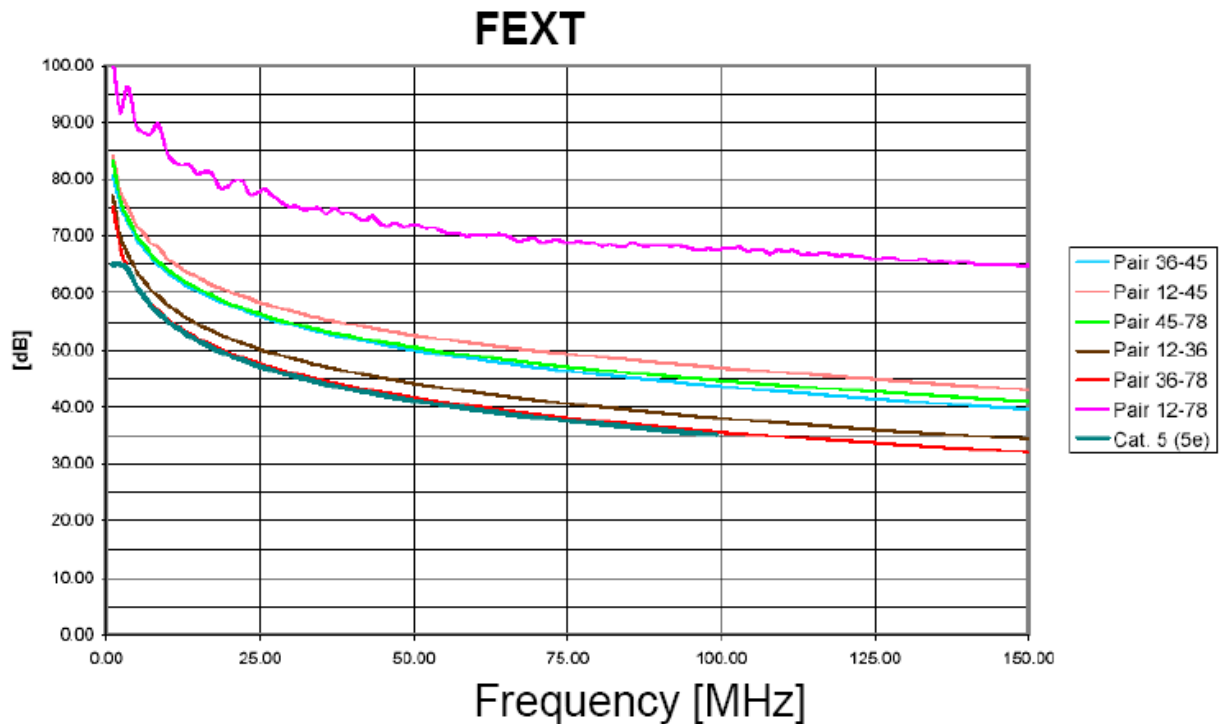
### Return Loss



**FEXT**

FEXT (20°C) [dB]

Frequency (MHz)	Limit (dB) Cat 5	Pair 4/5-3/6	Pair 4/5-1/2	Pair 4/5-7/8	Pair 3/6-1/2	Pair 3/6-7/8	Pair 1/2-7/8
1.0	65.0	80.76	84.14	83.36	77.17	75.24	101.13
4.0	63.1	71.50	73.90	72.12	65.80	63.27	93.55
10.0	55.1	63.68	66.03	64.18	57.97	55.44	84.65
16.0	51.0	59.76	62.10	60.20	53.92	51.44	81.30
20.0	49.1	57.96	60.25	58.14	52.05	49.47	78.93
31.25	45.2	54.18	56.51	54.45	48.25	45.74	75.14
62.5	39.2	48.02	50.78	48.62	42.23	39.74	70.16
100	35.1	43.67	46.92	44.64	38.06	35.63	67.70



## Dimensions

