

# Terminations

## Product description

HUBER+SUHNER Terminations are employed in very different fields of RF and microwave technology and excellently meet the requirements of:

- Design and Engineering
- Test and Measurement
- Build-in items for systems

Terminations are mainly used to terminate transmission lines in their characteristic impedance to avoid RF wave reflections. Reflections also cause distortion of information.



## Features and benefits

- Broadband operationability
- Low and medium power types
- All connectors meet the relevant IEC / MIL / CECC standards
- High repeatability
- Custom designs available on request

## Standard terminations, low power, 50 Ω

| Connector series           | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type    | Article number |                                                                                       |
|----------------------------|-----------------------------|-----------|------------------|----------------|----------------|---------------------------------------------------------------------------------------|
| MCX (male)                 | 2                           | 1.20      | 0.5              | 65 MCX-50-0-1  | 22550162       |  |
| MCX (female)               | 2                           | 1.20      | 0.5              | 65 MCX-50-0-31 | 22550163       |                                                                                       |
|                            |                             |           |                  |                |                |                                                                                       |
| SMA (male)                 | 2                           | 1.25      | 1.0              | 65 SMA-50-0-3  | 22643999       |  |
| SMA (male) <sup>e</sup>    | 6                           | 1.25      | 1.0              | 65 SMA-50-0-20 | 23035247       |                                                                                       |
| SMA (male) <sup>c, e</sup> | 6                           | 1.25      | 1.0              | 65 SMA-50-0-21 | 23037139       |                                                                                       |
| SMA (male)                 | 18                          | 1.25      | 1.0              | 65 SMA-50-0-1  | 22640162       |                                                                                       |
| SMA (female) <sup>e</sup>  | 6                           | 1.15      | 1.0              | 65 SMA-50-0-35 | 23015765       |                                                                                       |
| SMA (female)               | 18                          | 1.25      | 1.0              | 65 SMA-50-0-31 | 22550158       |                                                                                       |
| SMB (male)                 | 4                           | 1.40      | 0.5              | 65 SMB-50-0-1  | 22550111       |  |
| SMB (female)               | 4                           | 1.40      | 0.5              | 65 SMB-50-0-31 | 22640230       |                                                                                       |
|                            |                             |           |                  |                |                |                                                                                       |

<sup>c</sup> = product with chain

<sup>e</sup> = economy design

Detailed specification sheets for each item are available on request.

## Standard terminations, low power, 50 Ω

cont.

| Connector series          | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type     | Article number |                                                                                       |
|---------------------------|-----------------------------|-----------|------------------|-----------------|----------------|---------------------------------------------------------------------------------------|
| SMC (male)                | 4                           | 1.20      | 0.5              | 65 SMC-50-0-1   | 22550113       |    |
| SMC (male) <sup>e</sup>   | 6                           | 1.15      | 1.0              | 65 SMC-50-0-2   | 23038102       |                                                                                       |
| SMC (female)              | 4                           | 1.20      | 0.5              | 65 SMC-50-0-31  | 22550114       |                                                                                       |
| QMA (male) <sup>e</sup>   | 6                           | 1.15      | 1.0              | 65 QMA-50-0-2   | 23024831       |    |
| QMA (male) <sup>c,e</sup> | 6                           | 1.15      | 1.0              | 65 QMA-50-0-3   | 23023110       |                                                                                       |
| QMA (female) <sup>e</sup> | 6                           | 1.15      | 1.0              | 65 QMA-50-0-4   | 23038371       |                                                                                       |
| BMA (female)              | 18                          | 1.45      | 0.5              | 65 BMA-50-0-1   | 22648598       |    |
|                           |                             |           |                  |                 |                |                                                                                       |
|                           |                             |           |                  |                 |                |                                                                                       |
| BNC (male)                | 1                           | 1.10      | 1.0              | 65 BNC-50-0-7   | 22550235       |    |
| BNC (male)                | 2                           | 1.20      | 1.0              | 65 BNC-50-0-1   | 22550004       |                                                                                       |
| BNC (male) <sup>c</sup>   | 2                           | 1.20      | 1.0              | 65 BNC-50-0-2   | 22550141       |                                                                                       |
| BNC (female)              | 2                           | 1.20      | 1.0              | 65 BNC-50-0-31  | 22550010       |                                                                                       |
| BNC (female) <sup>c</sup> | 2                           | 1.20      | 1.0              | 65 BNC-50-0-35  | 22648680       |                                                                                       |
| TNC (male)                | 1                           | 1.10      | 0.5              | 65 TNC-50-0-107 | 22651614       |  |
| TNC (male)                | 1                           | 1.10      | 1.0              | 65 TNC-50-0-7   | 22642741       |                                                                                       |
| TNC (male)                | 2                           | 1.20      | 1.0              | 65 TNC-50-0-1   | 22640680       |                                                                                       |
| TNC (male) <sup>c</sup>   | 2                           | 1.20      | 1.0              | 65 TNC-50-0-5   | 22659509       |                                                                                       |
| TNC (female)              | 2                           | 1.20      | 1.0              | 65 TNC-50-0-31  | 22640683       |                                                                                       |
| N (male)                  | 1                           | 1.10      | 0.3              | 65 N-50-0-7     | 22646079       |  |
| N (male)                  | 2                           | 1.10      | 2.0              | 65 N-50-0-15    | 22650047       |                                                                                       |
| N (male)                  | 2                           | 1.22      | 1.0              | 65 N-50-0-17    | 22659662       |                                                                                       |
| N (male)                  | 4                           | 1.20      | 1.0              | 65 N-50-0-1     | 22550091       |                                                                                       |
| N (male)                  | 6                           | 1.20      | 1.0              | 65 N-50-0-11    | 22550095       |                                                                                       |
| N (male) <sup>e</sup>     | 6                           | 1.20      | 1.0              | 65 N-50-0-51    | 23034002       |                                                                                       |
| N (female)                | 6                           | 1.20      | 1.0              | 65 N-50-0-31    | 22550207       |                                                                                       |
| QN (male) <sup>e</sup>    | 6                           | 1.20      | 1.0              | 65 QN-50-0-1    | 23033699       |  |
|                           |                             |           |                  |                 |                |                                                                                       |
|                           |                             |           |                  |                 |                |                                                                                       |
| 7/16 (male)               | 2                           | 1.20      | 1.0              | 65 716-50-0-3   | 22652596       |  |
| 7/16 (male)               | 4                           | 1.20      | 2.0              | 65 716-50-0-2   | 22648281       |                                                                                       |
| 7/16 (female)             | 4                           | 1.20      | 2.0              | 65 716-50-0-31  | 22648282       |                                                                                       |

<sup>c</sup> = product with chain

<sup>e</sup> = economy design

Detailed specification sheets for each item are available on request.

## Standard terminations, low power, 75 Ω

| Connector series        | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type    | Article number |                                                                                     |
|-------------------------|-----------------------------|-----------|------------------|----------------|----------------|-------------------------------------------------------------------------------------|
| MCX (male)              | 2.0                         | 1.30      | 0.5              | 65 MCX-75-0-1  | 22649865       |  |
| MCX (female)            | 2.0                         | 1.30      | 0.5              | 65 MCX-75-0-31 | 22650762       |                                                                                     |
|                         |                             |           |                  |                |                |                                                                                     |
| BNC (male)              | 1.0                         | 1.10      | 1.0              | 65 BNC-75-0-1  | 22550055       |  |
| BNC (male) <sup>c</sup> | 1.0                         | 1.10      | 1.0              | 65 BNC-75-0-2  | 22550058       |                                                                                     |
| BNC (male)              | 1.0                         | 1.10      | 1.0              | 65 BNC-75-0-7  | 22650006       |                                                                                     |
| BNC (female)            | 1.0                         | 1.10      | 1.0              | 65 BNC-75-0-31 | 22550036       |                                                                                     |
|                         |                             |           |                  |                |                |                                                                                     |
| TNC (male)              | 1.0                         | 1.10      | 1.0              | 65 TNC-75-0-1  | 22543883       |  |
| TNC (female)            | 1.0                         | 1.10      | 1.0              | 65 TNC-75-0-31 | 22550152       |                                                                                     |
|                         |                             |           |                  |                |                |                                                                                     |
| N (male)                | 1.3                         | 1.05      | 1.0              | 65 N-75-0-11   | 22550107       |  |
|                         |                             |           |                  |                |                |                                                                                     |
|                         |                             |           |                  |                |                |                                                                                     |

<sup>c</sup> = product with chain

## Standard terminations, medium power, 50 Ω

6 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type  | Article number |                                                                                       |
|------------------|-----------------------------|-----------|------------------|--------------|----------------|---------------------------------------------------------------------------------------|
| SMA (male)       | 6.0                         | 1.25      | 6                | 6506.19.0001 | 22659462       |  |
| SMA (male)       | 12.4                        | 1.25      | 6                | 6506.19.A    | 22550257       |                                                                                       |
| SMA (female)     | 12.4                        | 1.25      | 6                | 6506.19.B    | 22550256       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| BNC (male)       | 4.0                         | 1.10      | 6                | 6506.01.A    | 22550260       |  |
| BNC (female)     | 4.0                         | 1.10      | 6                | 6506.01.B    | 22550259       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| TNC (male)       | 12.4                        | 1.30      | 6                | 6506.26.A    | 22550255       |  |
|                  |                             |           |                  |              |                |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| N (male)         | 6.0                         | 1.25      | 6                | 6506.17.0001 | 22659464       |  |
| N (male)         | 12.4                        | 1.25      | 6                | 6506.17.A    | 22550258       |                                                                                       |
| N (female)       | 12.4                        | 1.25      | 6                | 6506.17.B    | 22550253       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| 7/16 (male)      | 8.0                         | 1.20      | 6                | 6506.41.A    | 22550272       |  |
| 7/16 (female)    | 8.0                         | 1.20      | 6                | 6506.41.B    | 22550271       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |

Detailed specification sheets for each item are available on request.

## Standard terminations, medium power, 50 $\Omega$

15 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) <sup>z</sup> | SUHNER type | Article number |                                                                                      |
|------------------|-----------------------------|-----------|-------------------------------|-------------|----------------|--------------------------------------------------------------------------------------|
| SMA (male)       | 12.4                        | 1.25      | 15                            | 6515.19.A   | 22544579       |   |
| SMA (female)     | 12.4                        | 1.25      | 15                            | 6515.19.B   | 22544580       |                                                                                      |
|                  |                             |           |                               |             |                |                                                                                      |
| BNC (male)       | 4.0                         | 1.10      | 15                            | 6515.01.A   | 22550273       |   |
| BNC (female)     | 4.0                         | 1.10      | 15                            | 6515.01.B   | 22550265       |                                                                                      |
|                  |                             |           |                               |             |                |                                                                                      |
| N (male)         | 12.4                        | 1.25      | 15                            | 6515.17.A   | 22550264       |   |
| N (female)       | 12.4                        | 1.25      | 15                            | 6515.17.B   | 22550263       |                                                                                      |
|                  |                             |           |                               |             |                |                                                                                      |
| 7/16 (male)      | 8.0                         | 1.20      | 15                            | 6515.41.A   | 22544577       |  |
| 7/16 (female)    | 8.0                         | 1.20      | 15                            | 6515.41.B   | 22544578       |                                                                                      |
|                  |                             |           |                               |             |                |                                                                                      |

<sup>z</sup> = convection cooled

## Standard terminations, medium power, 50 $\Omega$

25 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) <sup>z</sup> | SUHNER type | Article number |                                                                                       |
|------------------|-----------------------------|-----------|-------------------------------|-------------|----------------|---------------------------------------------------------------------------------------|
| SMA (male)       | 2                           | 1.10      | 25                            | 6525.19.AB  | 22643660       |  |
| SMA (male)       | 5                           | 1.20      | 25                            | 6525.19.AA  | 22643659       |                                                                                       |
| SMA (female)     | 5                           | 1.20      | 25                            | 6525.19.BA  | 22643655       |                                                                                       |
|                  |                             |           |                               |             |                |                                                                                       |
| N (male)         | 2                           | 1.10      | 25                            | 6525.17.AB  | 22643785       |  |
| N (male)         | 5                           | 1.20      | 25                            | 6525.17.AA  | 22642248       |                                                                                       |
| N (female)       | 2                           | 1.10      | 25                            | 6525.17.BB  | 22643787       |                                                                                       |
| N (female)       | 5                           | 1.20      | 25                            | 6525.17.BA  | 22643786       |                                                                                       |
|                  |                             |           |                               |             |                |                                                                                       |
| 7/16 (male)      | 2                           | 1.10      | 25                            | 6525.41.AB  | 22643788       |  |
| 7/16 (male)      | 5                           | 1.20      | 25                            | 6525.41.AA  | 23007076       |                                                                                       |
| 7/16 (female)    | 2                           | 1.10      | 25                            | 6525.41.BB  | 22643790       |                                                                                       |
| 7/16 (female)    | 5                           | 1.20      | 25                            | 6525.41.BA  | 23007075       |                                                                                       |

<sup>z</sup> = convection cooled

Detailed specification sheets for each item are available on request.

## Standard terminations, medium power, 50 $\Omega$

50 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) <sup>Y,Z</sup> | SUHNER type  | Article number |                                                                                     |
|------------------|-----------------------------|-----------|---------------------------------|--------------|----------------|-------------------------------------------------------------------------------------|
| N (male)         | 1                           | 1.08      | 50                              | 6550.17.0002 | 22646865       |  |
| N (male)         | 2                           | 1.10      | 50                              | 6550.17.AB   | 22643791       |                                                                                     |
| N (male)         | 5                           | 1.20      | 50                              | 6550.17.AA   | 22641938       |                                                                                     |
| N (female)       | 2                           | 1.10      | 50                              | 6550.17.BB   | 22643793       |                                                                                     |
| 7/16 (male)      | 2                           | 1.10      | 50                              | 6550.41.AB   | 22643795       |  |
| 7/16 (female)    | 2                           | 1.07      | 50                              | 6550.41.0001 | 22659656       |                                                                                     |
| 7/16 (female)    | 2                           | 1.10      | 50                              | 6550.41.BB   | 22643797       |                                                                                     |

<sup>Y</sup> = 50 Watt, if the termination is mounted on a heat sink with a max. thermal resistance ( $R_{th}$ ) of 5K/Watt. Without heat sink these termination are applicable up to 25 Watt.

<sup>Z</sup> = convection cooled

## Standard terminations, medium power, 50 $\Omega$

60 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) <sup>Z</sup> | SUHNER type | Article number |                                                                                       |
|------------------|-----------------------------|-----------|-------------------------------|-------------|----------------|---------------------------------------------------------------------------------------|
| N (male)         | 2                           | 1.10      | 60                            | 6560.17.AB  | 22643799       |  |
| N (male)         | 5                           | 1.20      | 60                            | 6560.17.AA  | 22643798       |                                                                                       |
| N (female)       | 2                           | 1.10      | 60                            | 6560.17.BB  | 22643801       |                                                                                       |
| N (female)       | 5                           | 1.20      | 60                            | 6560.17.BA  | 22643800       |                                                                                       |
| 7/16 (male)      | 2                           | 1.10      | 60                            | 6560.41.AB  | 22643803       |  |
| 7/16 (male)      | 5                           | 1.20      | 60                            | 6560.41.AA  | 23008377       |                                                                                       |
| 7/16 (female)    | 2                           | 1.10      | 60                            | 6560.41.BB  | 22643805       |                                                                                       |
| 7/16 (female)    | 5                           | 1.20      | 60                            | 6560.41.BA  | 23010487       |                                                                                       |

<sup>Z</sup> = convection cooled

## Standard terminations, medium power, 50 $\Omega$

100 Watt

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) <sup>Z</sup> |              |          |                                                                                       |
|------------------|-----------------------------|-----------|-------------------------------|--------------|----------|---------------------------------------------------------------------------------------|
| N (male)         | 3.5                         | 1.25      | 100                           | 6599.17.0001 | 22646862 |  |
|                  |                             |           |                               |              |          |                                                                                       |
|                  |                             |           |                               |              |          |                                                                                       |
|                  |                             |           |                               |              |          |                                                                                       |

<sup>Z</sup> = convection cooled

Detailed specification sheets for each item are available on request.

## Precision terminations, low power, 50 $\Omega$

| Connector series | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type  | Article number |                                                                                       |
|------------------|-----------------------------|-----------|------------------|--------------|----------------|---------------------------------------------------------------------------------------|
| SMA (male)       | 18.0                        | 1.10      | 0.75             | 6500.19.A    | 22645868       |    |
| SMA (female)     | 18.0                        | 1.15      | 0.75             | 6500.19.B    | 22645869       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| BNC (male)       | 4.0                         | 1.12      | 0.5              | 6500.01.0003 | 23000974       |    |
| BNC (female)     | 4.0                         | 1.12      | 0.5              | 6500.01.0002 | 23008378       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| TNC (male)       | 12.4                        | 1.26      | 0.5              | 6500.26.0003 | 22659852       |    |
| TNC (female)     | 12.4                        | 1.26      | 0.5              | 6500.26.0002 | 22659846       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| N (male)         | 18.0                        | 1.08      | 0.5              | 6500.17.A    | 22550203       |    |
| N (female)       | 18.0                        | 1.08      | 0.5              | 6500.17.B    | 22550202       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| PC7              | 18.0                        | 1.07      | 0.5              | 6500.28.A    | 22543740       |   |
|                  |                             |           |                  |              |                |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |
| 7/16 (male)      | 8.0                         | 1.10      | 1.0              | 6500.41.A    | 22650018       |  |
| 7/16 (female)    | 8.0                         | 1.10      | 1.0              | 6500.41.B    | 22650017       |                                                                                       |
|                  |                             |           |                  |              |                |                                                                                       |

## Feed through terminations, low power, 50 $\Omega$ and 75 $\Omega$

| Connector series                    | Frequency range DC to (GHz) | VSWR max. | Power rating (W) | SUHNER type | Article number |                                                                                       |
|-------------------------------------|-----------------------------|-----------|------------------|-------------|----------------|---------------------------------------------------------------------------------------|
| BNC (m/f)                           | 0.5                         | 1.25      | 2.0              | 6701.01.A   | 22543741       |  |
| BNC (m/f)                           | 1.0                         | 1.25      | 0.5              | 6701.01.B   | 22543742       |                                                                                       |
|                                     |                             |           |                  |             |                |                                                                                       |
| N (m/f)                             | 0.5                         | 1.25      | 0.5              | 6701.17.A   | 22644916       |  |
|                                     |                             |           |                  |             |                |                                                                                       |
|                                     |                             |           |                  |             |                |                                                                                       |
| <b>75 <math>\Omega</math> types</b> |                             |           |                  |             |                |  |
| BNC 75 $\Omega$ (m/f)               | 0.4                         | 1.2       | 0.5              | 6701.02.B   | 22550204       |                                                                                       |
|                                     |                             |           |                  |             |                |                                                                                       |

Detailed specification sheets for each item are available on request.