

# Sucoform

The handformable alternative to semi-rigid

## Product description

Sucoform microwave coaxial cables offer distinct mechanical advantages over semi-rigid cables. They are based on the same design as the standard PTFE insulated semi-rigid cables, but have a tin-soaked copper braid for the outer conductor, giving them outstanding hand-formability. These cables combine the excellent characteristics of semi-rigid cables with those of flexible coaxial cables. Thanks to their small bending radii, they allow space saving routing and packaging.



## Product features

- Impedance 50 Ω
- Applicable up to 40 GHz
- Due to the high phase stability over every production run, Sucoform is especially suitable for delay lines
- Good flexibility: easy hand forming without tooling; fits into the smallest systems
- Quick and easy assembly for design and manufacture

## Recommended connectors

|           |  |
|-----------|--|
| SM_47_CU  | MMCX, MCX, SMA, SK                               |
| SM_86     | MCX, MMCX, SMA, SMB, SMC, PC3.5, SK, QMA, TNC, N |
| SM_141    | SMA, PC3.5, QMA, TNC, N, QN                      |
| SM_250-01 | SMA, N, 7/16                                     |
|           | Other connectors available on request            |

## Construction



| Cable     | Inner conductor<br>① | Dielectric<br>② | Outer conductor<br>③ | Outer diameter<br>mm | Screening effectiveness<br>up to 18 GHz<br>dB |
|-----------|----------------------|-----------------|----------------------|----------------------|---|
| SM_47_CU  | CuAg Wire            | PTFE            | Sn soaked Cu braid   | 1.2                  | > 90  |
| SM_86     | StCuAg Wire          | PTFE            | Sn soaked Cu braid   | 2.1                  | > 90  |
| SM_141    | StCuAg Wire          | PTFE            | Sn soaked Cu braid   | 3.6                  | > 90  |
| SM_250-01 | CuAg Wire            | PTFE            | Sn soaked Cu braid   | 6.4                  | > 90  |

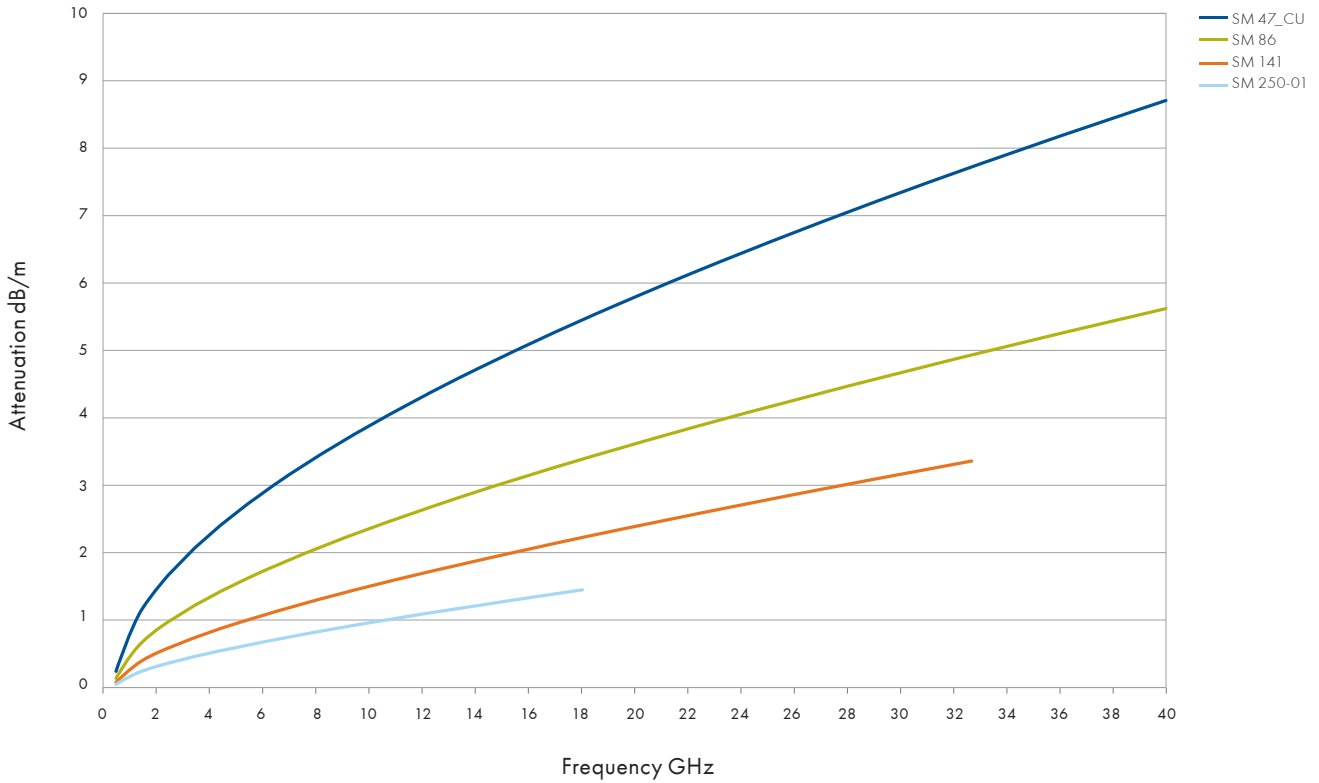
Sucoform cables are available with different jackets, inner conductor materials and impedances.

## Technical data

| Cable     | Item no. | Max. operating frequency | Velocity of propagation | Weight<br>g/m | Min. bending radii |             | Temperature range<br>°C |
|-----------|----------|--------------------------|-------------------------|---------------|--------------------|-------------|-------------------------|
|           |          | GHz                      | %                       |               | static mm          | repeated mm |                         |
| SM_47_CU  | 23033515 | 40                       | 71                      | 6             | 3.18               | n/a         | -65 to +165             |
| SM_86     | 22511613 | 40                       | 71                      | 15            | 6                  | 20          | -65 to +165             |
| SM_141    | 22511925 | 33                       | 71                      | 38            | 8                  | 40          | -65 to +165             |
| SM_250-01 | 84007938 | 18                       | 71                      | 130           | 30                 | 120         | -65 to +165             |

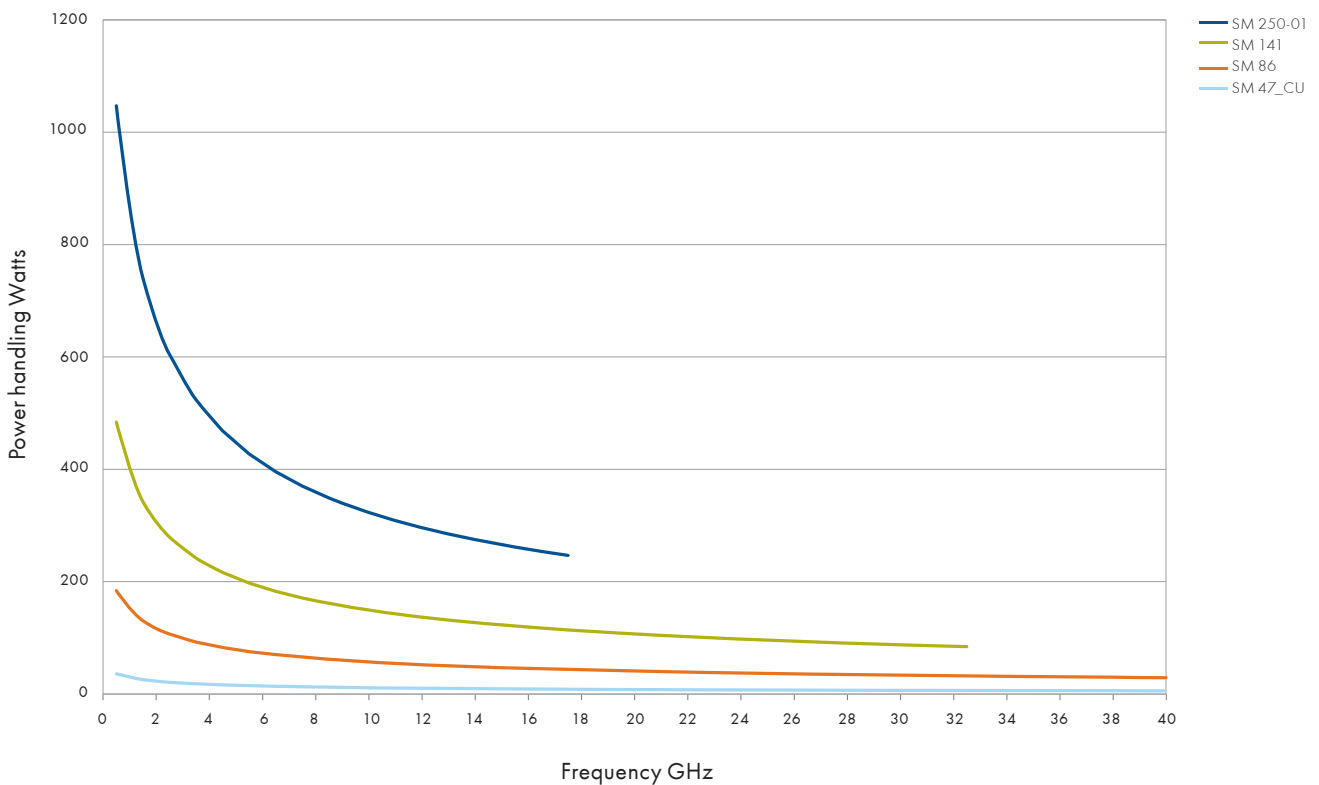
# Sucoform

Attenuation (nominal values at +25 °C ambient temperature)



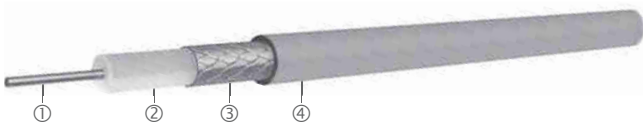
Formstable assemblies

Power handling (maximum values at 25 °C ambient temperature and sea level)



# Sucoform – with protective jacket

## Construction



| Cable         | Inner conductor<br>① | Dielectric<br>② | Outer conductor<br>③ | Jacket<br>④ | Outer diameter<br>mm | Screening effectiveness<br>up to 18 GHz<br>dB |
|---------------|----------------------|-----------------|----------------------|-------------|----------------------|---|
| SM_47_CU_LSFH | CuAg Wire            | PTFE            | Sn soaked Cu braid   | LSFH        | 1.7                  | > 90  |
| SM_86_PE      | StCuAg Wire          | PTFE            | Sn soaked Cu braid   | PE          | 3.2                  | > 90  |
| SM_86_FEP     | StCuAg Wire          | PTFE            | Sn soaked Cu braid   | FEP         | 2.5                  | > 90  |
| SM_141_CU_PE  | CuAg Wire            | PTFE            | Sn soaked Cu braid   | PE          | 4.6                  | > 90  |
| SM_141_CU_FEP | CuAg Wire            | PTFE            | Sn soaked Cu braid   | FEP         | 4.1                  | > 90  |
| SM_250-01_FEP | CuAg Wire            | PTFE            | Sn soaked Cu braid   | FEP         | 6.8                  | > 90  |

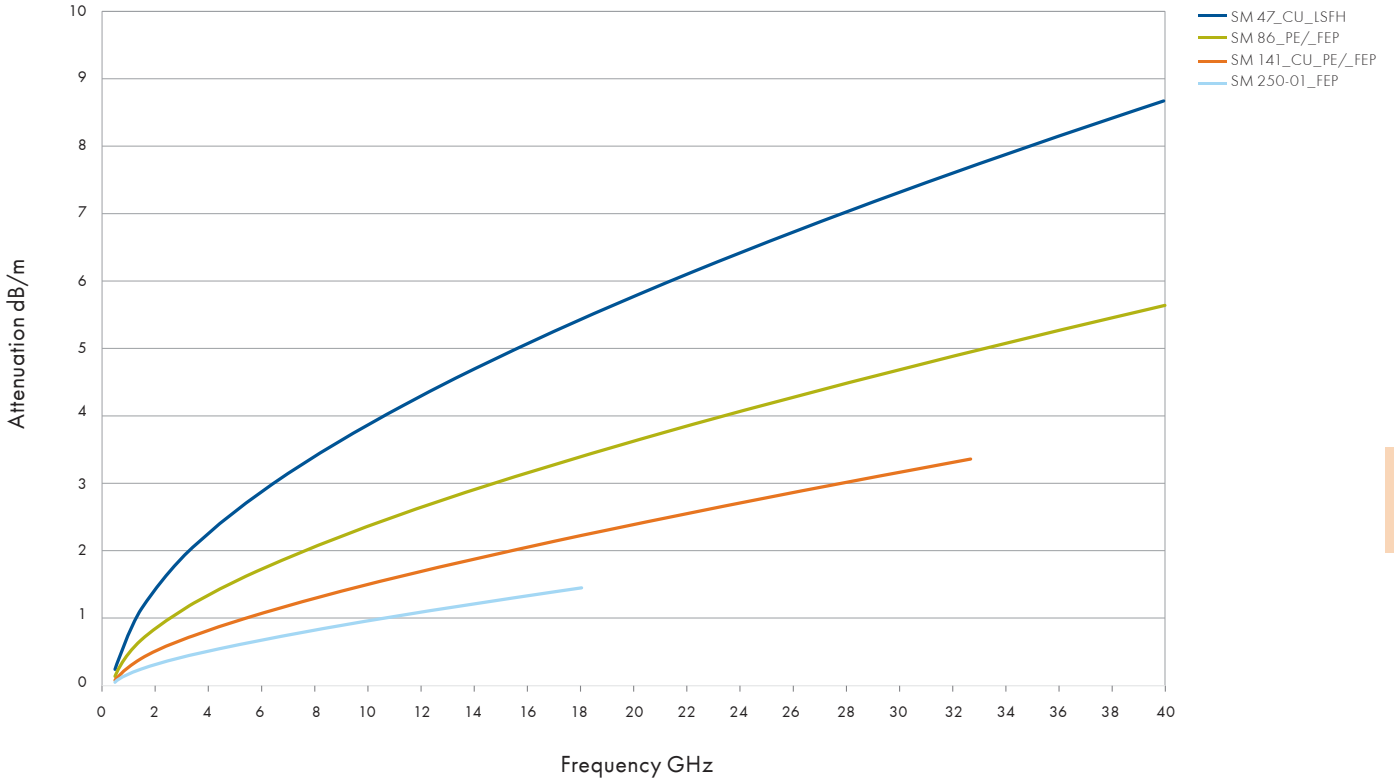
Sucoform cables are available with different inner conductor materials and impedances.

## Technical data

| Cable         | Item no. | Max. operating frequency | Velocity of propagation | Weight<br>g/m | Min. bending radii |             | Temperature range<br>°C |
|---------------|----------|--------------------------|-------------------------|---------------|--------------------|-------------|-------------------------|
|               |          | GHz                      | %                       |               | static mm          | repeated mm |                         |
| SM_47_CU_LSFH | 23035506 | 40                       | 71                      | 7             | 4                  | n/a         | -40 to +85              |
| SM_86_PE      | 22511631 | 40                       | 71                      | 19            | 6                  | 20          | -40 to +85              |
| SM_86_FEP     | 22511942 | 40                       | 71                      | 18            | 6                  | 20          | -65 to +165             |
| SM_141_CU_PE  | 22511639 | 33                       | 71                      | 47            | 8                  | 40          | -40 to +85              |
| SM_141_CU_FEP | 22512256 | 33                       | 71                      | 47            | 8                  | 40          | -65 to +165             |
| SM_250-01_FEP | 84007941 | 18                       | 71                      | 138           | 30                 | 120         | -65 to +165             |

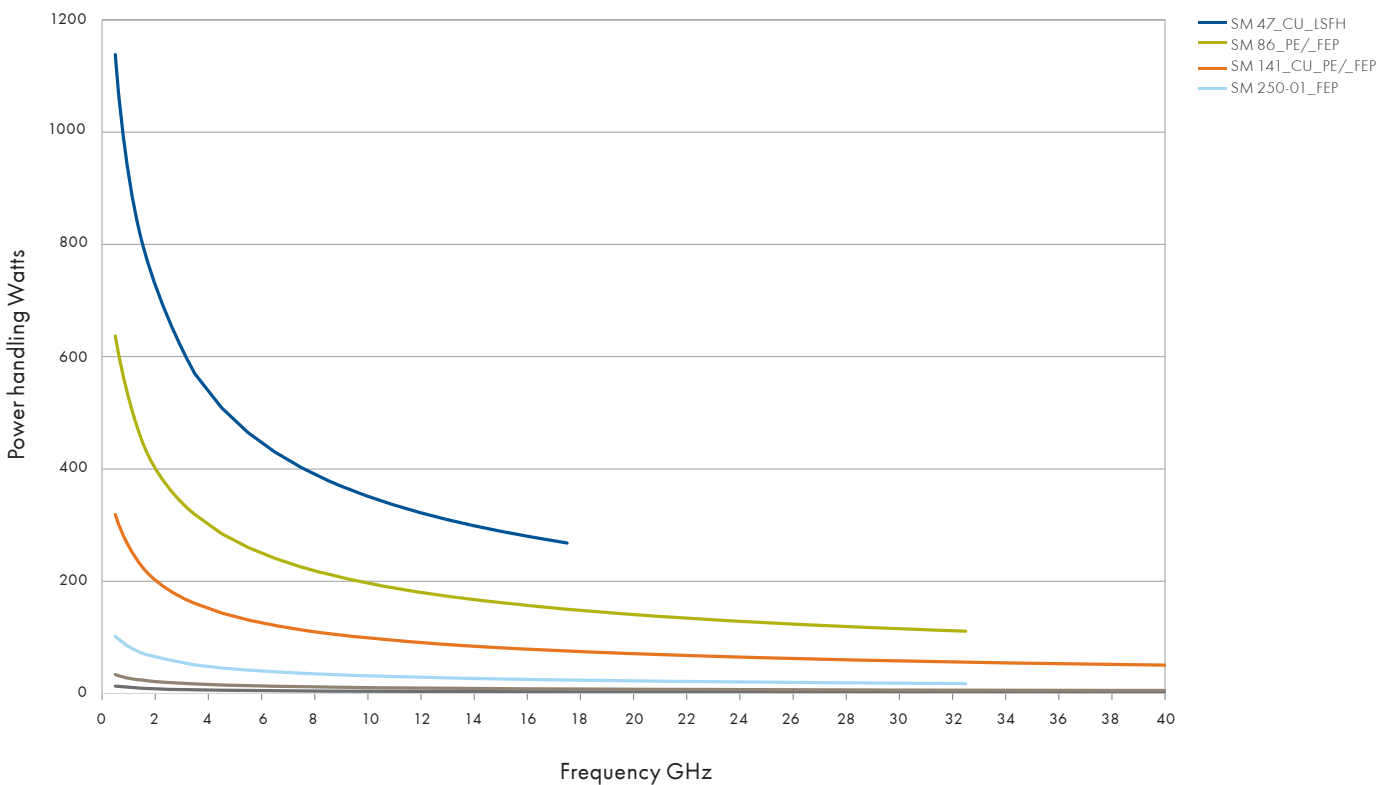
# Sucoform - with protective jacket

Attenuation (nominal values at +25 °C ambient temperature)



Formstable assemblies

Power handling (maximum values at 25 °C ambient temperature and sea level)



# Sucoform

## Available connectors

| Connector | Series, pattern                         | HUBER+SUHNER type        | Cable    | Operating frequency<br>GHz | Item no. |
|-----------|---|--------------------------|----------|----------------------------|----------|
| MCX       | straight cable plug                     | 11_MCX-50-1-14/111_NE    | SM_47_CU | 6                          | 23032081 |
|           | right angle cable plug                  | 16_MCX-50-1-12/111_NE    |          | 6                          | 23024694 |
|           | straight panel bulkhead cable jack      | 24_MCX-50-1-3/111_NE     |          | 6                          | 22641648 |
| MMCX      | straight cable plug                     | 11_MMCX-50-1-3/111_OE    | SM_47_CU | 6                          | 22648893 |
|           | right angle cable plug                  | 16_MMCX-50-1-12/111_OE   |          | 6                          | 84030531 |
|           | right angle cable plug                  | 16_MMCX-50-1-4/111_OE    |          | 6                          | 22649182 |
|           | straight panel bulkhead cable jack      | 24_MMCX-50-1-3/111_OE    |          | 6                          | 22652326 |
| SK        | straight cable plug                     | 11_SK-50-1-2/119_NE      | SM_47_CU | 40                         | 84013232 |
| SMA       | straight cable plug                     | 11_SMA-50-1-2/111_NE     | SM_47_CU | 18                         | 22642388 |
|           | right angle cable plug                  | 16_SMA-50-1-97/19_NE     |          | 18                         | 23024708 |
|           | straight cable jack                     | 21_SMA-50-1-2/111_NE     |          | 18                         | 22642386 |
|           | straight panel bulkhead cable jack      | 24_SMA-50-1-6/111_YH     |          | 18                         | 23025035 |
| MCX       | straight cable plug                     | 11_MCX-50-2-19/111_NE    | SM_86    | 6                          | 23024699 |
|           | right angle cable plug                  | 16_MCX-50-2-104/111_NH-1 |          | 6                          | 23032067 |
|           | right angle cable plug                  | 16_MCX-50-2-104/111_NH   |          | 6                          | 22658277 |
|           | straight panel bulkhead cable jack      | 24_MCX-50-2-3/111_NE     |          | 6                          | 22543580 |
| MMBX      | straight cable plug                     | 11_MMBX-50-2-4/111_NE    | SM_86    | 12.4                       | 84026769 |
|           | right angle cable plug                  | 16_MMBX-50-2-4/111_NE    |          | 12.4                       | 84026740 |
|           | straight panel bulkhead cable jack      | 24_MMBX-50-2-2/111_NH    |          | 12.4                       | 23037876 |
| MMCX      | straight cable plug                     | 11_MMCX-50-2-1/111_OE    | SM_86    | 6                          | 22645297 |
|           | right angle cable plug                  | 16_MMCX-50-2-1/111_OE    |          | 6                          | 22645957 |
|           | straight cable jack                     | 21_MMCX-50-2-1/111_OE    |          | 6                          | 22645290 |
|           | straight panel bulkhead cable jack      | 24_MMCX-50-2-1/111_OE    |          | 6                          | 22645954 |
| N         | straight cable plug                     | 11_N-50-2-15/113_UE      | SM_86    | 18                         | 22660315 |
|           | right angle cable plug                  | 16_N-50-2-9/13_UH        |          | 11                         | 23013729 |
|           | straight cable jack                     | 21_N-50-2-14/133_NE      |          | 18                         | 22642666 |
|           | straight panel bulkhead cable jack      | 24_N-50-2-14/133_NE      |          | 18                         | 22544637 |
|           | straight panel cable jack, flange mount | 25_N-50-2-14/133_NE      |          | 18                         | 22641303 |
| PC3.5     | straight cable plug                     | 11_PC35-50-2-4/199_UE    | SM_86    | 33                         | 84009440 |
|           | straight cable jack                     | 21_PC35-50-2-4/199_UE    |          | 33                         | 84009419 |
|           | straight panel bulkhead cable jack      | 24_PC35-50-2-2/199_UE    |          | 33                         | 84009405 |
| QMA       | straight cable plug                     | 11_QMA-50-2-3/133_NE     | SM_86    | 6                          | 23017704 |
|           | right angle cable plug                  | 16_QMA-50-2-3/133_NE     |          | 6                          | 23017666 |
|           | straight panel bulkhead cable jack      | 24_QMA-50-2-1/111_NE     |          | 6                          | 23017742 |
| SK        | straight cable plug                     | 11_SK-50-2-56/119_NE     | SM_86    | 40                         | 84013230 |
|           | straight cable jack                     | 21_SK-50-2-58/199_NE     |          | 40                         | 84019664 |
| SMA       | straight cable plug                     | 11_SMA-50-2-15/111_NE    | SM_86    | 18                         | 22544545 |
|           | straight cable plug                     | 11_SMA-50-2-110/133_NE   |          | 18                         | 84130715 |
|           | right angle cable plug                  | 16_SMA-50-2-43/133_NE    |          | 18                         | 22641953 |
|           | right angle cable plug                  | 16_SMA-50-2-100/199_NH   |          | 26.5                       | 23018813 |

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| Connector | Series, pattern                         | HUBER+SUHNER type      | Cable     | Operating frequency<br>GHz | Item no. |
|-----------|---|------------------------|-----------|----------------------------|----------|
| SMA       | straight cable jack                     | 21_SMA-50-2-15/111_NE  | SM_86     | 18                         | 22544549 |
|           | straight panel bulkhead cable jack      | 24_SMA-50-2-15/111_NE  |           | 18                         | 22544532 |
|           | straight panel bulkhead cable jack      | 24_SMA-50-2-41/133_NE  |           | 18                         | 22641381 |
| SMB       | straight cable plug                     | 11_SMB-50-2-13/111_NE  | SM_86     | 4                          | 22543362 |
|           | right angle cable plug                  | 16_SMB-50-2-23/111_NE  |           | 4                          | 22644079 |
|           | straight panel bulkhead cable jack      | 24_SMB-50-2-13/111_NE  |           | 4                          | 22640822 |
| SMC       | straight cable plug                     | 11_SMC-50-2-13/111_NE  | SM_86     | 10                         | 22543363 |
|           | right angle cable plug                  | 16_SMC-50-2-25/111_NE  |           | 10                         | 22644126 |
|           | straight panel bulkhead cable jack      | 24_SMC-50-2-13/111_NE  |           | 10                         | 22640297 |
| TNC       | straight cable plug                     | 11_TNC-50-2-20/103_NE  | SM_86     | 11                         | 22642519 |
|           | straight panel bulkhead cable jack      | 24_TNC-50-2-31/133_NE  |           | 11                         | 23001721 |
| N         | straight cable plug                     | 11_N-50-3-13/113_NE    | SM_141    | 11                         | 22542083 |
|           | straight cable plug                     | 11_N-50-3-51/133_NE    |           | 18                         | 22543919 |
|           | right angle cable plug                  | 16_N-50-3-15/133_NE    |           | 11                         | 22648832 |
|           | straight cable jack                     | 21_N-50-3-51/19_NE     |           | 18                         | 22543922 |
|           | straight panel bulkhead cable jack      | 24_N-50-3-51/19_NE     |           | 18                         | 22642344 |
|           | straight panel cable jack, flange mount | 25_N-50-3-9/133_NE     |           | 11                         | 22543952 |
| PC3.5     | straight cable plug                     | 11_PC35-50-3-4/199_UE  | SM_141    | 33                         | 84009380 |
|           | straight cable jack                     | 21_PC35-50-3-3/199_UE  |           | 33                         | 84009382 |
|           | straight panel bulkhead cable jack      | 24_PC35-50-3-2/199_UE  |           | 33                         | 84009383 |
| QMA       | straight cable plug                     | 11_QMA-50-3-3/133_NE   | SM_141    | 6                          | 23017695 |
|           | right angle cable plug                  | 16_QMA-50-3-3/133_NE   |           | 6                          | 23017693 |
|           | straight panel bulkhead cable jack      | 24_QMA-50-3-3/111_NE   |           | 6                          | 23017683 |
| QN        | straight cable plug                     | 11_QN-50-3-3/113_NE    | SM_141    | 11                         | 23033393 |
|           | right angle cable plug                  | 16_QN-50-3-3/13_NE     |           | 11                         | 23033268 |
|           | straight panel bulkhead cable jack      | 24_QN-50-3-3/13_NE     |           | 11                         | 23033423 |
| SMA       | straight cable plug                     | 11_SMA-50-3-77/119_NH  | EZ_141    | 18                         | 84005524 |
|           | straight cable plug                     | 11_SMA-50-3-235/133_NE |           | 18                         | 84130698 |
|           | right angle cable plug                  | 16_SMA-50-3-3/111_NE   |           | 18                         | 22640073 |
|           | right angle cable plug                  | 16_SMA-50-3-13/133_NE  |           | 18                         | 84130707 |
|           | straight cable jack                     | 21_SMA-50-3-15/111_NE  |           | 18                         | 22544550 |
|           | straight panel bulkhead cable jack      | 24_SMA-50-3-15/111_NE  |           | 18                         | 22641153 |
| TNC       | straight cable plug                     | 11_TNC-50-3-29/103_NE  | EZ_141    | 11                         | 22641997 |
|           | right angle cable plug                  | 16_TNC-50-3-24/13_NE   |           | 11                         | 84021420 |
|           | straight panel bulkhead cable jack      | 24_TNC-50-3-30/133_NH  |           | 11                         | 23001723 |
| 7/16      | straight cable plug                     | 11_716-50-5-6/003_Y    | SM_250-01 | 7.5                        | 84008435 |
|           | straight panel cable jack, flange mount | 25_716-50-5-17/000_Y   |           | 7.5                        | 84008881 |
| N         | straight cable plug                     | 11_N-50-5-18/103_NH    | SM_250-01 | 11                         | 84008445 |
|           | right angle cable plug                  | 16_N-50-5-7/13_-H      |           | 7.5                        | 21000191 |
| SMA       | straight cable plug                     | 11_SMA-50-5-1/111_NE   | SM_250-01 | 18                         | 22642399 |