

Specialty Cables and Wires  
by fluoropolymer dielectric technology



# High Performance Coaxial Cables



JIMCOM

Innovative products of excellent quality play a key role in many high-tech applications - for example in telecom, automotive, military etc.

Flexibility, low attenuation values and high shielding effectiveness make JIMCOM cable systems a world class product.

### ● Low loss coaxial cables

Expanded PTFE taping dielectric type

- Double (spiral strip + braid) shielded type
- Triple (braid + spiral strip + braid) shielded type

High foamed PTFE extruding dielectric type

- Double (spiral strip + braid) shielded type
- Triple (braid + spiral strip + braid) shielded type

### ● Semi-rigid, semi-flexible cables

Semi-flexible coaxial cable

- Tin soaked types without jacket
- Tin soaked types with jacket

Semi-rigid coaxial cable

- Tin coated copper tube type
- Tin coated aluminum tube type
- Bare copper tube type

### ● RG cables

- Single (braid) shielded type
- Double (braid+braid,spiral strip+braid) type
- Triple shielded type  
(braid + Spiral strip + braid) type

### ● UL & MIL spec wire & cable



JIMCOM supplies a complete line of high temperature , high performance coax cables to meet MIL -C-17 specification for military, commercial and industrial application. Our cables are manufactured in accordance with the most recent revision of the MIL-C-17 specification.

### **Solid and stranded conductors**

Bare copper, Bare nickel(Grade A),  
Nickel-plated copper, Nickel-plated high strength copper alloy, Nickel-plated steel,  
Nickel-plated copper-clad steel,  
Silver-plated high strength copper alloy,  
Silver-plated copper steel, Tin-plated copper,  
Oxygen-free nickel-plated copper,  
Oxygen-free silver-plated copper,  
Tin overcoat copper

### **Shield materials**

Nickel-plated copper wire,  
Nickel-plated steel wire,  
Silver-plated copper flat wire  
Silver-plated copper-clad steel wire,  
Aluminum/polyester tape,  
Aluminum/polyimide tape

### **Insulation & jacketing materials**

Ethylene/terafluoroethylene copolymer (ETF),  
Ethylene/chlorotrifluoroethylene copolymer  
Flame retardant PVC (FRPVC),  
Fluorinated ethylene propylene (FEP),  
Polyvinylchloride (PVC), Polyethylene,  
Polyetheretherketone (PEEK), Polyimide,  
Polytetrafluoroethylene (PTFE)  
Polyurethanes, Polyvinylidene fluoride (PVDF),  
Silicone rubbers,  
Terafluoroethylene/perfluoroalkoxy copolymer,  
Thermoplastic elastomers (TPE)



# Low loss coaxial cables

## PTFE- tape dielectric types

### ■ Double (spiral strip-braid) shielded type

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (Strand or solid)               |
| Dielectric       | Expanded PTFE -Taping                                |
| Inner shield     | Flat silver plated copper strip or Flat copper strip |
| Outer braid      | Round silver plated copper                           |
| Jacket           | FEP (Fluoroethylene)                                 |



| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. | Bend radius Min. | Max. Attenuation (db/m) |          |          |           |           |
|----------|------------------|--------------------|-----------------|--------------|------------------|-------------------------|----------|----------|-----------|-----------|
|          |                  |                    |                 |              |                  | at 400MHz               | at 1 GHz | at 3 GHz | at 10 GHz | at 18 GHz |
| VLLS130  | 50               | 0.81               | 2.29            | 3.30         | 16.5             | 0.30                    | 0.46     | 0.82     | 1.50      | 1.97      |
| VLLS142  |                  | 1.29               | 3.63            | 4.95         | 25.4             | 0.21                    | 0.33     | 0.56     | 0.98      | 1.31      |
| VLLS205  |                  | 1.40               | 3.81            | 5.21         | 25.4             | 0.17                    | 0.26     | 0.43     | 0.82      | 1.12      |
| VLLS290  |                  | 2.26               | 6.22            | 7.34         | 38.1             | 0.11                    | 0.18     | 0.31     | 0.62      | 0.85      |
| VLLS314  |                  | 2.34               | 6.30            | 7.87         | 38.1             | 0.11                    | 0.18     | 0.31     | 0.62      | 0.85      |

### ■ Triple (braid - spiral strip - braid) shielded type

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (Strand or solid) |
| Dielectric       | Expand PTFE -Taping                    |
| Inner braid      | Round silver plated copper             |
| Interlayer       | Aluminum polyester or polyimide tape   |
| Outer braid      | Round silver plated copper             |
| Jacket           | FEP (Fluoroethylene)                   |



| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. | Bend radius Min. | Max. Attenuation (db/m) |          |          |           |           |
|----------|------------------|--------------------|-----------------|--------------|------------------|-------------------------|----------|----------|-----------|-----------|
|          |                  |                    |                 |              |                  | at 400MHz               | at 1 GHz | at 3 GHz | at 10 GHz | at 18 GHz |
| VLL142   | 50               | 0.72               | 1.37            | 4.95         | 25.4             | 0.21                    | 0.33     | 0.56     | 0.98      | 1.31      |
| VLL235   |                  | 1.45               | 4.06            | 5.97         | 30.5             | 0.16                    | 0.26     | 0.46     | 0.88      | 1.21      |
| VLL335   |                  | 2.26               | 6.35            | 8.51         | 43.2             | 0.11                    | 0.18     | 0.31     | 0.62      | 0.85      |
| VLL450   |                  | 3.38               | 9.14            | 11.40        | 57.2             | 0.08                    | 0.12     | 0.23     | 0.44      |           |

## Expanded PTFE- extrude dielectric types

### ■ Double (spiral strip-braid) shielded type

#### SLLS series

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (Strand or solid)               |
| Dielectric       | High foamed PTFE -Extruding                          |
| Inner shield     | Flat silver plated copper strip or Flat copper strip |
| Outer braid      | Round silver plated copper                           |
| Jacket           | FEP (Fluoroethylene)                                 |

#### VLD series

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (Strand or solid) |
| Dielectric       | High foamed PTFE -Extruding            |
| Inner shield     | copper/PE overlapping                  |
| Outer braid      | Round silver plated copper             |
| Jacket           | FEP (Fluoroethylene)                   |

High foamed PTFE dielectric



### ■ Triple (braid - spiral strip - braid) shielded type

#### SLS series

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (Strand or solid) |
| Dielectric       | High foamed PTFE - Extruding           |
| Inner braid      | Round silver plated copper             |
| Interlayer       | Aluminum polyester or polyimide tape   |
| Outer braid      | Round silver plated copper             |
| Jacket           | FEP (Fluoroethylene)                   |



| Part No. | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. | Part No. | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. | Part No. | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. |
|----------|--------------------|-----------------|--------------|----------|--------------------|-----------------|--------------|----------|--------------------|-----------------|--------------|
| SLLS130  | 0.81               | 2.32            | 3.55         | VLD130   | 0.81               | 2.32            | 3.60         | SLS130   | 0.81               | 2.28            | 3.80         |
| SLLS142  | 0.95               | 2.80            | 4.05         | VLD142   | 0.95               | 2.80            | 3.90         | SLS142   | 0.95               | 2.80            | 4.40         |
| SLLS355  | 1.20               | 3.55            | 5.10         | VLD355   | 1.20               | 3.55            | 4.90         | SLS355   | 1.20               | 3.55            | 5.18         |
| SLLS455  | 1.40               | 4.00            | 5.50         | VLD455   | 1.40               | 4.00            | 5.25         | SLS455   | 1.40               | 4.00            | 5.70         |
| SLLS555  | 1.93               | 5.65            | 7.20         | VLD555   | 1.93               | 5.65            | 6.25         | SLS555   | 1.93               | 5.65            | 7.30         |
| SLLS755  | 2.30               | 6.75            | 8.45         | VLD755   | 2.30               | 6.75            | 8.10         | SLS755   | 2.30               | 6.75            | 8.50         |

# Semi-flexible and semi-rigid coaxial cables

## Semi-flexible coaxial cables

### Tin soaked type without jacket

Center Conductor Silver plated copper clad steel or SPC  
 Dielectric Solid PTFE  
 Outer layer Tinn soaked on tin plated copper



| Part No. | Impedance (ohms) | Conductor Dia. | Dielectric Dia. | Overall Dia. | Bend radius Min. | Max. Attenuation (db/m) |          |           |           |           | Cut-off Frequency (GHz) |
|----------|------------------|----------------|-----------------|--------------|------------------|-------------------------|----------|-----------|-----------|-----------|-------------------------|
|          |                  |                |                 |              |                  | at 0.5GHz               | at 1 GHz | at 10 GHz | at 18 GHz | at 20 GHz |                         |
| VSF047   | 50               | 0.29           | 0.84            | 1.19         | 3.2              | 0.92                    | 1.31     | 3.93      | 5.45      | 5.78      | 108                     |
| VSF085   |                  | 0.53           | 1.65            | 2.15         | 6.0              | 0.49                    | 0.72     | 2.40      | 3.40      | 3.62      | 64                      |
| VSF141   |                  | 0.94           | 2.95            | 3.58         | 8.0              | 0.26                    | 0.39     | 1.52      | 2.23      |           | 34                      |
| VSF250   |                  | 1.63           | 5.31            | 6.35         | 30               | 0.17                    | 0.25     | 0.97      | 1.45      |           | 19                      |

### Tin soaked type with jacket

Center Conductor Silver plated copper clad steel or SPC  
 Dielectric Solid PTFE  
 Inner layer Tin soaked on tin plated copper  
 Jacket (optional) FEP or PE or PVC



| Part No.  | Impedance (ohms) | Conductor Dia.(mm) | Dielectric Dia. | Inner layer Dia. | Overall Dia. | Max. Attenuation (db/m) |          |           |           |           | Cut-off Frequency (GHz) |
|-----------|------------------|--------------------|-----------------|------------------|--------------|-------------------------|----------|-----------|-----------|-----------|-------------------------|
|           |                  |                    |                 |                  |              | at 0.5GHz               | at 1 GHz | at 10 GHz | at 18 GHz | at 20 GHz |                         |
| VSF047FEP | 50               | 0.29               | 0.94            | 1.19             | 1.59         | 0.92                    | 1.31     | 3.93      | 5.45      | 5.78      | 108                     |
| VSF085FEP |                  | 0.53               | 1.65            | 2.15             | 2.85         | 0.49                    | 0.72     | 2.40      | 3.40      | 3.62      | 64                      |
| VSF141FEP |                  | 0.94               | 2.95            | 3.58             | 4.10         | 0.26                    | 0.39     | 1.52      | 2.23      |           | 34                      |
| VSF250FEP |                  | 1.63               | 5.31            | 6.35             | 6.90         | 0.17                    | 0.25     | 0.97      | 1.45      |           | 19                      |

## Semi-rigid coaxial cables

Center Conductor Silver plated copper clad steel  
 Dielectric Solid PTFE  
 Outer layer (optional) Tin plated copper or Tin plated aluminum or Bare copper tube

| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Dielectric Dia. | Overall Dia. | Bend radius Min. | Max. Attenuation (db/m) |          |           |           |           | Cut-off Frequency (GHz) |
|----------|------------------|--------------------|-----------------|--------------|------------------|-------------------------|----------|-----------|-----------|-----------|-------------------------|
|          |                  |                    |                 |              |                  | at 0.5GHz               | at 1 GHz | at 10 GHz | at 15 GHz | at 20 GHz |                         |

Outer layer : Tin plate copper



|          |    |      |      |      |      |      |      |      |      |      |     |
|----------|----|------|------|------|------|------|------|------|------|------|-----|
| VSR047SC | 50 | 0.29 | 0.94 | 1.19 | 3.2  | 0.92 | 1.31 | 4.27 | 4.80 | 6.23 | 108 |
| VSR085SC |    | 0.51 | 1.68 | 2.20 | 3.2  | 0.43 | 0.62 | 2.25 | 2.86 | 3.41 | 64  |
| VSR141SC |    | 0.92 | 2.98 | 3.58 | 4.8  | 0.26 | 0.37 | 1.43 | 1.86 | 2.25 | 34  |
| VSR250SC |    | 1.63 | 5.31 | 6.35 | 10.0 | 0.14 | 0.25 | 1.08 | 1.57 |      | 19  |

Outer layer : Tin plate aluminum



|         |    |      |      |      |      |      |      |      |      |      |     |
|---------|----|------|------|------|------|------|------|------|------|------|-----|
| VSR047A | 50 | 0.29 | 0.94 | 1.19 | 3.2  | 0.92 | 1.31 | 3.93 | 5.45 | 5.78 | 108 |
| VSR085A |    | 0.51 | 1.68 | 2.20 | 3.2  | 0.49 | 0.72 | 2.40 | 3.40 | 3.62 | 64  |
| VSR141A |    | 0.92 | 2.98 | 3.58 | 4.8  | 0.26 | 0.39 | 1.52 | 2.23 |      | 34  |
| VSR250A |    | 1.63 | 5.31 | 6.35 | 10.0 | 0.17 | 0.25 | 0.97 | 1.45 |      | 19  |

Outer layer : Bare copper tube



|         |    |      |      |      |      |      |      |      |      |      |     |
|---------|----|------|------|------|------|------|------|------|------|------|-----|
| VSR047C | 50 | 0.29 | 0.94 | 1.19 | 3.2  | 0.92 | 1.31 | 3.93 | 5.45 | 5.78 | 108 |
| VSR085C |    | 0.51 | 1.68 | 2.20 | 3.2  | 0.49 | 0.72 | 2.40 | 3.40 | 3.62 | 64  |
| VSR141C |    | 0.92 | 2.98 | 3.58 | 4.8  | 0.26 | 0.39 | 1.52 | 2.23 |      | 34  |
| VSR250C |    | 1.63 | 5.31 | 6.35 | 10.0 | 0.17 | 0.25 | 0.97 | 1.45 |      | 19  |

## RG cable types

### Single shielded cables

|                  |   |
|------------------|---|
| Center Conductor | Silver plated copper clad steel (Strand)            |
| Dielectric       | Solid PTFE  |
| Inner braid      | Silver plated copper (SC) or Tin plated copper (TC) |
| Jacket           | FEP (Fluoroethylene)                                |



| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Insulation Dia. | Overall Dia. | Max. Attenuation (db/m) |            |            |            |
|----------|------------------|--------------------|-----------------|--------------|-------------------------|------------|------------|------------|
|          |                  |                    |                 |              | at 100 MHz              | at 1.2 GHz | at 2.0 GHz | at 2.5 GHz |
| VRG178SC | 50               | 0.31               | 0.84            | 1.83         | 0.46                    | 1.62       | 2.11       | 2.36       |
| VRG316SC |                  | 0.51               | 1.52            | 2.50         | 0.24                    | 0.92       | 1.30       | 1.45       |
| VRG180   |                  | 0.31               | 2.59            | 3.58         | 0.21                    | 0.65       | 0.99       | 1.11       |
| VRG303   |                  | 0.94               | 2.97            | 4.32         | 0.13                    | 0.40       | 0.61       | 0.69       |
| VRG302SC | 75               | 0.64               | 3.70            | 5.15         | 0.11                    | 0.39       | 0.52       | 0.59       |
| VRG179SC |                  | 0.31               | 1.60            | 2.54         | 0.28                    | 0.85       | 1.28       | 1.44       |

### Double shielded cables

#### Braid - braid type

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper clad steel (Strand) |
| Dielectric       | Solid PTFE                               |
| Inner braid      | Round silver plated copper               |
| Outer braid      | Round silver plated copper               |
| Jacket           | FEP (Fluoroethylene)                     |



| Part No.   | Impedance (ohms) | Conductor Dia.(mm) | Insulation Dia. | Overall Dia. | at 100MHz | Max. Attenuation (db/m) |          |         |
|------------|------------------|--------------------|-----------------|--------------|-----------|-------------------------|----------|---------|
|            |                  |                    |                 |              |           | at 1.2 GHz              | at 3 GHz | at 6GHz |
| VRG316SCSC | 50               | 0.51               | 1.52            | 2.90         | 0.38      | 0.98                    | 1.66     | 2.12    |
| VRG142SCSC |                  | 0.94               | 2.97            | 4.95         | 0.18      | 0.51                    | 0.88     | 1.36    |
| VRG400SCSC |                  | 1.00               | 2.95            | 4.95         | 0.15      | 0.54                    | 0.95     | 1.51    |
| VRG393     |                  | 2.40               | 7.25            | 9.90         | 0.08      | 0.36                    | 0.70     | 1.21    |
| VRG304     | 75               | 1.50               | 4.70            | 7.10         | 0.09      | 0.32                    | 0.43     | 0.49    |
| VRG179SCSC |                  | 0.31               | 1.60            | 3.00         | 0.28      | 0.98                    | 1.28     | 1.44    |

#### Spiral strip - braid type

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (SPC) or Silver plated copper clad steel (SCCS) |
| Dielectric       | Solid PTFE   |
| Inner layer      | Spiral strip of silver plated copper strip                           |
| Outer braid      | Round silver plated copper   |
| Jacket           | FEP (Fluoroethylene)   |



| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Insulation Dia. | Overall Dia. | at 400MHz | Max. Attenuation (db/m) |          |           |
|----------|------------------|--------------------|-----------------|--------------|-----------|-------------------------|----------|-----------|
|          |                  |                    |                 |              |           | at 1GHz                 | at 10GHz | at 18 GHz |
| VRG401SS | 50               | 1.69               | 5.31            | 7.00         | 0.15      | 0.29                    | 1.20     | 1.46      |
| VRG402SS |                  | 0.94               | 2.97            | 4.14         | 0.26      | 0.41                    | 1.47     | 2.10      |
| VRG405SS |                  | 0.51               | 1.63            | 2.64         | 0.46      | 0.75                    | 2.56     | 3.57      |
| VRG750SS | 75               | 0.29               | 1.63            | 2.54         | 0.46      | 0.74                    | 1.37     | 1.62      |

### Triple shielded cables

|                  |  |
|------------------|--|
| Center Conductor | Silver plated copper (SPC) or Silver plated copper clad steel (SCCS) |
| Dielectric       | Solid PTFE   |
| Inner braid      | Flat silver plated copper strip or Round silver plated copper        |
| Interlayer       | Aluminum polyimide polyester tape                                    |
| Outer braid      | Round silver plated copper   |
| Jacket           | FEP (Fluoroethylene)   |



| Part No. | Impedance (ohms) | Conductor Dia.(mm) | Insulation Dia. | Overall Dia. | at 400MHz | Max. Attenuation (db/m) |          |           |
|----------|------------------|--------------------|-----------------|--------------|-----------|-------------------------|----------|-----------|
|          |                  |                    |                 |              |           | at 1GHz                 | at 10GHz | at 18 GHz |
| VSB316   | 50               | 0.51               | 1.52            | 2.48         | 0.54      | 0.88                    | 3.04     | 4.57      |
| VSB142   |                  | 0.94               | 2.98            | 4.95         | 0.23      | 0.38                    | 1.45     | 2.08      |
| VSB400   |                  | 1.00               | 2.95            | 4.95         | 0.26      | 0.39                    | 1.49     | 2.11      |
| VSB304   |                  | 1.50               | 4.70            | 7.10         | 0.18      | 0.98                    | 1.26     | 1.78      |
| VSB393   |                  | 2.40               | 7.24            | 9.90         | 0.12      | 0.20                    | 0.82     |           |

# Teflon wire & cable

## UL & CSA Hookup/Lead wires



| Insulation material  | UL serial no.  |
|----------------------|--|
| PTEF                 | 1164 1180 1198 1199 1212 1213 1659 1815  |
| FEP                  | 1226 1227 1330 1331 1332 1333  |
| ETFE                 | 1643 1644 1671 10125 10126 10109 10086   |
| PFA                  | 1709 1726 1727   |
| Silicone rubber      | SFF-1,3068 SEW-1,3122 SFF-2 3069,3100 3101,3278 SF-2,3074 3075,3172 32313 3139 3367 3530 |
| Ceramic & fiberglass | 5315 5331 5288   |
| Mica & fiberglass    | 5128 5107  |

## MIL spec - single conductor wires

| Insulation material      | MIL No.  |
|--------------------------|--|
| Extruded TFE             | M16878/4, /5, /6, /23, /25, /27<br>NEMA HP# Types E, EE, ET, EN, EEN, ETN<br>M22759/9, /10, /11, /12, /20, /21, /22, /23 |
| Extruded FEP             | M16878/11, /12, /13  |
| Extruded silicone rubber | Mm16878/7, /8, /29, /30, /31, /32  |
| Extruded ETFE            | M22759/16, /17, /18, /19 M81822/6, /13, /13-V  |
| Mineral filled TFE       | M22759/5, /6, /7, /8   |
| Wrapped TFE              | M16878/20, /22, /22, /24, /26, /28, /34, /35   |



## MIL spec - multi conductor Cables



| Product No.              | Remark  |
|--------------------------|---|
| MIL-DTL-27500 TE-14      | M22759/16 primary conductors                      |
| MIL-DTL-27500 type RC-06 | M22759/11 primary conductors, wrapped PTFE jacket |
| MIL-DTL-27500 type RC-09 | M22759/11 primary conductors, wrapped FEP jacket  |
| Type SJT                 | Commercial primary conductors type RC-06          |
| Type SE                  | Commercial primary conductors type RC-09          |

## Multi Teflon insulation core cables

- High temperature Databus cable
- Superflex shielded pair cable
- Interconnection cable of BTS
- Power supply cable of transceiver unit





# High Performance Coaxial Cables



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