

## *SMA Hand-Formable Fixed Length Cable Assemblies for RF/Microwave Applications*



Emerson Network Power Connectivity Solutions has added to its Johnson® product line a series of SMA Hand-Formable, fixed-length cable assemblies for RF/Microwave applications.

These Hand-Formable cable assemblies are an excellent alternative to semi-rigid cables which are more costly and less flexible during early stages of design and effectively eliminate additional tooling charges.

In conjunction with our popular Johnson® brand of connectors on each end, these SMA Hand-Formable cable assemblies are constructed of a silver-plated, copper covered steel conductor, with an additional copper-tin composite braid foil. When RF interference isn't an option, these cables provide 100% shielded cable coverage assuring an outstanding VSWR and low insertion loss of up to 18 GHz.

Available in a variety of lengths off-the-shelf, these Hand-Formable SMA cable assemblies offer users a high quality, low cost solution. As with all other RF cable assemblies provided by Johnson®, these assemblies are also available in custom lengths upon request.

### **Key Features & Benefits**

- Constructed with Johnson® Premium SMA Connectors
- Assembled with 50 Ohm Hand-Formable Microwave Cable
- 100% Shielded Cable Coverage
- Available in .086 & .141 cable diameters
- Off-the-Shelf Availability
- Low-cost alternative to Custom-made cables
- Excellent VSWR to 18 GHz for Microwave applications



| Part No.     | Cable Assembly           | Conn. 1            | Conn. 2            | Length* |
|--------------|--------------------------|--------------------|--------------------|---------|
| 415-0081-003 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 3 in.   |
| 415-0081-004 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 4 in.   |
| 415-0081-005 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 5 in.   |
| 415-0081-006 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 6 in.   |
| 415-0081-007 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 7 in.   |
| 415-0081-008 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 8 in.   |
| 415-0081-012 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 12 in.  |
| 415-0081-018 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 18 in.  |
| 415-0081-024 | Hand-Formable .086 Cable | SMA Plug, Straight | SMA Plug, Straight | 24 in.  |
| 415-0082-003 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 3 in.   |
| 415-0082-004 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 4 in.   |
| 415-0082-005 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 5 in.   |
| 415-0082-006 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 6 in.   |
| 415-0082-007 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 7 in.   |
| 415-0082-008 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 8 in.   |
| 415-0082-012 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 12 in.  |
| 415-0082-018 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 18 in.  |
| 415-0082-024 | Hand-Formable .141 Cable | SMA Plug, Straight | SMA Plug, Straight | 24 in.  |

\*Ref Plane to Ref Plane

## Electrical Ratings

| Part No.     | Length (inches) | Nominal Electrical Delay (ns) | Insertion Loss (dB Max) Vs Frequency (GHz) |        |        |        |         |          | VSWR (MAX) Vs Frequency (GHz) |        |          |
|--------------|-----------------|-------------------------------|--|--------|--------|--------|---------|----------|-------------------------------|--------|----------|
|              |                 |                               | 0 to 1                                     | 1 to 2 | 2 to 4 | 4 to 6 | 6 to 12 | 12 to 18 | 0 to 1                        | 1 to 2 | 2 to 18  |
| 415-0081-003 | 3.00±.05        | 0.36                          | 0.12                                       | 0.17   | 0.24   | 0.29   | 0.41    | 0.51     | 1.06                          | 1.10   | 1.1+.01f |
| 415-0081-004 | 4.00±.05        | 0.49                          | 0.14                                       | 0.20   | 0.29   | 0.35   | 0.49    | 0.60     |                               |        |          |
| 415-0081-005 | 5.00±.10        | 0.61                          | 0.17                                       | 0.23   | 0.33   | 0.40   | 0.57    | 0.70     |                               |        |          |
| 415-0081-006 | 6.00±.10        | 0.73                          | 0.19                                       | 0.26   | 0.38   | 0.46   | 0.65    | 0.79     |                               |        |          |
| 415-0081-007 | 7.00±.10        | 0.85                          | 0.21                                       | 0.30   | 0.42   | 0.51   | 0.72    | 0.89     |                               |        |          |
| 415-0081-008 | 8.00±.10        | 0.97                          | 0.23                                       | 0.33   | 0.47   | 0.57   | 0.80    | 0.98     |                               |        |          |
| 415-0081-012 | 12.00±.15       | 1.46                          | 0.32                                       | 0.45   | 0.65   | 0.79   | 1.11    | 1.36     |                               |        |          |
| 415-0081-018 | 18.00±.15       | 2.19                          | 0.46                                       | 0.64   | 0.92   | 1.12   | 1.58    | 1.93     |                               |        |          |
| 415-0081-024 | 24.00±.15       | 2.92                          | 0.59                                       | 0.83   | 1.19   | 1.45   | 2.04    | 2.49     |                               |        |          |
| 415-0082-003 | 3.00±.05        | 0.36                          | 0.09                                       | 0.13   | 0.19   | 0.24   | 0.34    | 0.43     | 1.06                          | 1.10   | 1.1+.01f |
| 415-0082-004 | 4.00±.05        | 0.49                          | 0.10                                       | 0.15   | 0.22   | 0.27   | 0.39    | 0.49     |                               |        |          |
| 415-0082-005 | 5.00±.10        | 0.61                          | 0.12                                       | 0.17   | 0.24   | 0.30   | 0.44    | 0.56     |                               |        |          |
| 415-0082-006 | 6.00±.10        | 0.73                          | 0.13                                       | 0.18   | 0.27   | 0.34   | 0.49    | 0.62     |                               |        |          |
| 415-0082-007 | 7.00±.10        | 0.85                          | 0.14                                       | 0.20   | 0.30   | 0.37   | 0.54    | 0.69     |                               |        |          |
| 415-0082-008 | 8.00±.10        | 0.97                          | 0.15                                       | 0.22   | 0.32   | 0.40   | 0.59    | 0.75     |                               |        |          |
| 415-0082-012 | 12.00±.15       | 1.46                          | 0.20                                       | 0.29   | 0.43   | 0.54   | 0.79    | 1.01     |                               |        |          |
| 415-0082-018 | 18.00±.15       | 2.19                          | 0.27                                       | 0.39   | 0.59   | 0.74   | 1.09    | 1.40     |                               |        |          |
| 415-0082-024 | 24.00±.15       | 2.92                          | 0.35                                       | 0.50   | 0.75   | 0.94   | 1.39    | 1.79     |                               |        |          |

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