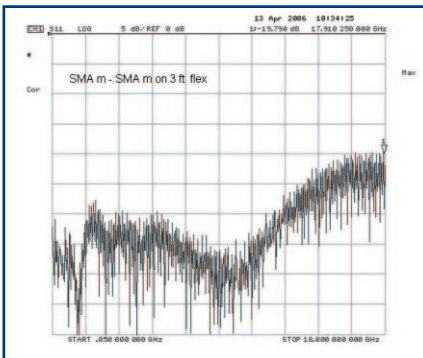


# Rosenberger® RFlex® Cables

## PERFORMANCE AND VALUE FOR YOUR DAY-TO-DAY TEST APPLICATIONS.

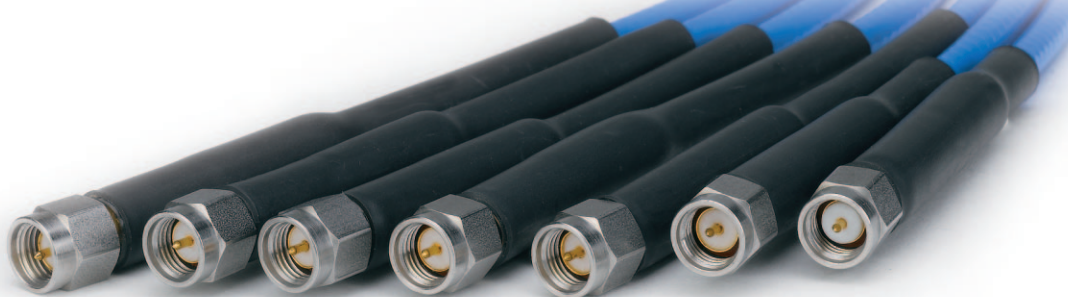
### Features and Benefits

- Microwave test cable performance at a fraction of the cost
- Excellent performance over a broad frequency range: -20dB return loss (typ.) at DC to 18 GHz (SMA.m-SMA.m)
- Rosenberger's superior-shielded cable is cost effective and allows relative shielding of -100 dB (min)
- RoHS compliant
- Rosenberger connectors feature gold-plated center contacts, passivated stainless steel coupling nuts, and PTFE dielectric
- Unique over-molded strain relief is exceptionally rugged and durable
- Temperature range: -55°C to +125°C
- Rosenberger RTK Flex 402 cable provides maximum flexibility



|           | OAL<br>in FT. | Part #<br>RoHS<br>Compliant | IL (dB)<br>Typ<br>NOTE 1 | RL (dB)<br>Typ<br>NOTE 2 |
|-----------|---------------|-----------------------------|--------------------------|--------------------------|
| SMAm-SMAm | 1.5           | L72-448-457                 | 0.8                      | 28                       |
|           | 2.0           | L72-448-610                 | 1.0                      | 28                       |
|           | 3.0           | L72-448-915                 | 1.5                      | 28                       |
|           | 4.0           | L72-448-1220                | 1.7                      | 28                       |
|           | 6.0           | L72-448-1830                | 3.0                      | 28                       |
| Nm-SMAm   | 2.0           | L72-449-610                 | 1.0                      | 26                       |
|           | 3.0           | L72-449-915                 | 1.5                      | 26                       |
|           | 4.0           | L72-449-1220                | 1.7                      | 26                       |
|           | 6.0           | L72-449-1830                | 3.0                      | 26                       |
|           | 15            | L72-449-4570                | 7.3                      | 26                       |
| Nm-Nm     | 2.0           | L72-450-610                 | 1.0                      | 26                       |
|           | 3.0           | L72-450-915                 | 1.5                      | 26                       |
|           | 6.0           | L72-450-1830                | 3.0                      | 26                       |
|           | 15            | L72-450-4570                | 7.3                      | 26                       |
|           | 20            | L72-450-6100                | 9.4                      | 26                       |
|           | 25            | L72-450-7620                | 11.7                     | 26                       |
| SMAf-SMAm | 3.0           | L72-451-915                 | 1.5                      | 25                       |
| SMAf-Nm   | 2.0           | L72-454-610                 | 1.0                      | 25                       |
|           | 3.0           | L72-454-915                 | 1.5                      | 25                       |
|           | 6.0           | L72-454-1830                | 3.0                      | 25                       |
| SMAm-TNCm | 1.5           | L72-452-457                 | 0.8                      | 18                       |
|           | 2.0           | L72-452-610                 | 1.0                      | 18                       |
|           | 3.0           | L72-452-915                 | 1.5                      | 18                       |
|           | 4.0           | L72-452-1220                | 1.7                      | 18                       |
|           | 6.0           | L72-452-1830                | 3.0                      | 18                       |

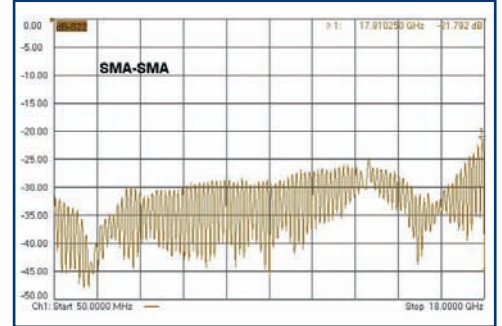
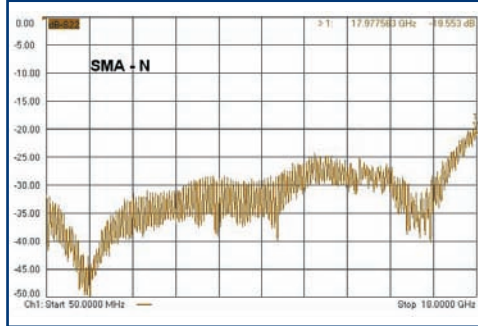
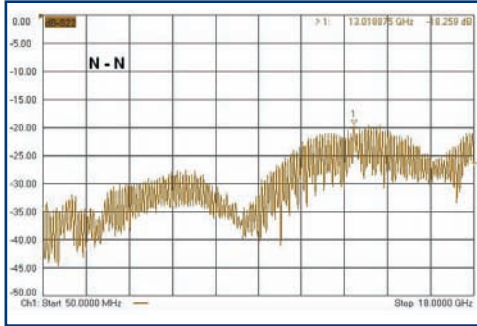
**Note 1** – Insertion Loss in dB (Typ.) at mid-band  
**Note 2** – Return Loss in dB (Typ.) at mid-band.





# Rosenberger® RFlex® Cables

# Specifications



## ELECTRICAL SPECIFICATIONS-RTK Flex 402

|                                                             |                           |
|-------------------------------------------------------------|---------------------------|
| IMPEDANCE, NOMINAL                                          | 50 OHMS                   |
| OPERATING FREQUENCY (GHz)                                   | 18                        |
| CAPACITANCE NOMINAL                                         | 29.4 pF/ft                |
| VELOCITY OF PROPAGATION, NOMINAL                            | 70.0 %                    |
| RELATIVE SHIELDING                                          | -110.0 dB MIN.            |
| INSULATION RESISTANCE                                       | 1000 MEGOHMS MIN.         |
| DIELECTRIC WITHSTANDING VOLTAGE                             | 1000 VRMS MIN.            |
| ELECTRICAL DELAY, NOMINAL                                   | 1.43 ns/ft or 120 ps/INCH |
| PULSE RF POWER                                              | 1000 WATTS MAX            |
| (INTO A 50 OHM SYSTEM, WITH DUTY CYCLE LESS THAN CW RATING) |                           |

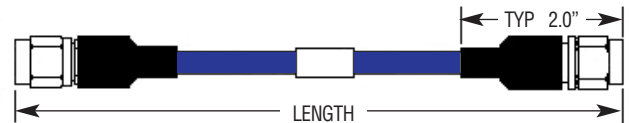
|                       |      |      |      |      |      |       |
|-----------------------|------|------|------|------|------|-------|
| FREQUENCY (GHz)       | 1    | 2    | 4    | 8    | 12   | 18    |
| MAX. CW (WATTS)       | 290  | 195  | 154  | 72   | 60   | 48    |
| PHASE STABILITY (DEG) | 0.50 | 1.00 | 2.00 | 5.00 | 8.00 | 10.00 |
| LOSS STABILITY (dB)*  | 0.05 | 0.05 | 0.10 | 0.20 | 0.30 | 0.40  |

\*CABLE FORMED AND STRAIGHTENED 90 DEGREES ON A 4" RADIUS

## MECHANICAL SPECIFICATIONS RTK Flex 402

|                           |                       |             |
|---------------------------|-----------------------|-------------|
| CABLE MAX. DIAMETER       | 0.163 INCHES          | 4.14 mm     |
| MIN. ONE TIME BEND RADIUS | 1.00 INCHES           | 2.54 cm     |
| PREFERRED BEND RADIUS     | 4.00 INCHES           | 10.20 cm    |
| CONNECTOR RETENTION       | 25 POUNDS MIN.        | 111 N MIN   |
| TEMPERATURE RANGE         | -55 to +125 DEGREES C |             |
| MATING TORQUE             | 7-10 INCH POUNDS      | .8-1.13 N-m |
| CONNECTOR INTERFACE       | MIL-STD-348 HYBRID    |             |

## N. SMA. TNC



## MATERIALS AND FINISHES RTK Flex 402

| DESCRIPTION      | MATERIAL                | FINISH OR COLOR |
|------------------|-------------------------|-----------------|
| CABLE JACKET     | FEP                     | BLUE            |
| MARKER           | MIL-I-23053             | BLACK or WHITE  |
| BOOTS            | ATUM                    | BLACK           |
| CONTACTS         | Brass or BeCu           | GOLD PLATED     |
| INSULATORS       | PTFE                    | NONE            |
| CONNECTOR BODIES | Brass or BeCu           | GOLD PLATED     |
| CONNECTOR NUTS   | STAINLESS STEEL         | PASSIVATED      |
| GASKET           | ZZ-R-765 SILICON RUBBER |                 |

| PART NUMBER  | CONNECTOR TYPE | LENGTH INCHES | (+ -) LENGTH INCHES | LENGTH cm | (+ -) LENGTH mm | TYP RETURN LOSS IN dB AT FREQ. (IN GHz) UP TO 2 | TYP RETURN LOSS IN dB AT FREQ. (IN GHz) UP TO 8 | TYP RETURN LOSS IN dB AT FREQ. (IN GHz) UP TO 18 | TYP INSERTION LOSS IN dB AT FREQ. (IN GHz) UP TO 2 | TYP INSERTION LOSS IN dB AT FREQ. (IN GHz) UP TO 8 | TYP INSERTION LOSS IN dB AT FREQ. (IN GHz) UP TO 18 |
|--------------|----------------|---------------|---------------------|-----------|-----------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------------|----------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|
| L72-448-305  | SMA M-SMA M    | 12            | 0.25                | 30.5      | 6.35            | 30                                              | 27                                              | 18                                               | 0.20                                               | 0.54                                               | 0.90                                                |
| L72-448-457  | SMA M-SMA M    | 18            | 0.25                | 45.7      | 6.35            | 30                                              | 27                                              | 18                                               | 0.34                                               | 0.74                                               | 1.14                                                |
| L72-448-610  | SMA M-SMA M    | 24            | 0.25                | 61.0      | 6.35            | 30                                              | 27                                              | 18                                               | 0.45                                               | 0.97                                               | 1.51                                                |
| L72-448-915  | SMA M-SMA M    | 36            | 0.50                | 91.5      | 12.70           | 30                                              | 27                                              | 18                                               | 0.63                                               | 1.37                                               | 2.13                                                |
| L72-448-1220 | SMA M-SMA M    | 48            | 0.50                | 122.0     | 12.70           | 30                                              | 27                                              | 18                                               | 0.81                                               | 1.77                                               | 2.75                                                |
| L72-448-1830 | SMA M-SMA M    | 72            | 0.75                | 183.0     | 19.05           | 30                                              | 27                                              | 18                                               | 1.18                                               | 2.56                                               | 3.98                                                |
| L72-449-610  | N M- SMA M     | 24            | 0.25                | 61.0      | 6.35            | 28                                              | 24                                              | 17                                               | 0.49                                               | 0.92                                               | 1.37                                                |
| L72-449-915  | N M- SMA M     | 36            | 0.50                | 91.5      | 12.70           | 28                                              | 24                                              | 17                                               | 0.67                                               | 1.32                                               | 1.99                                                |
| L72-449-1220 | N M- SMA M     | 48            | 0.50                | 122.0     | 12.70           | 28                                              | 24                                              | 17                                               | 0.86                                               | 1.71                                               | 2.61                                                |
| L72-449-1830 | N M- SMA M     | 72            | 0.75                | 183.0     | 19.05           | 28                                              | 24                                              | 17                                               | 1.22                                               | 2.44                                               | 3.72                                                |
| L72-449-4570 | N M- SMA M     | 180           | 1.50                | 457.0     | 38.10           | 28                                              | 24                                              | 17                                               | 3.66                                               | 7.32                                               | 11.17                                               |
| L72-450-610  | N M- N M       | 24            | 0.25                | 61.0      | 6.35            | 28                                              | 24                                              | 17                                               | 0.47                                               | 0.90                                               | 1.35                                                |
| L72-450-915  | N M- N M       | 36            | 0.50                | 91.5      | 12.70           | 28                                              | 24                                              | 17                                               | 0.65                                               | 1.29                                               | 1.97                                                |
| L72-450-1830 | N M- N M       | 72            | 0.75                | 183.0     | 19.05           | 28                                              | 24                                              | 17                                               | 0.83                                               | 1.69                                               | 3.99                                                |
| L72-450-4570 | N M- N M       | 180           | 1.50                | 457.0     | 38.10           | 28                                              | 24                                              | 17                                               | 3.12                                               | 6.33                                               | 9.71                                                |
| L72-450-6100 | N M- N M       | 240           | 2.00                | 610.0     | 50.80           | 28                                              | 24                                              | 17                                               | 4.17                                               | 8.44                                               | 12.95                                               |
| L72-450-7620 | N M- N M       | 280           | 2.50                | 762.0     | 63.50           | 28                                              | 24                                              | 17                                               | 4.87                                               | 9.85                                               | 15.11                                               |
| L72-451-915  | SMA F- SMA M   | 36            | 0.50                | 91.5      | 12.70           | 28                                              | 24                                              | 18                                               | 0.69                                               | 1.40                                               | 2.20                                                |
| L72-454-610  | SMA F- N M     | 24            | 0.25                | 61.0      | 6.35            | 28                                              | 24                                              | 17                                               | 0.48                                               | 0.98                                               | 1.63                                                |
| L72-454-915  | SMA F- N M     | 36            | 0.50                | 91.5      | 12.70           | 28                                              | 24                                              | 17                                               | 0.71                                               | 1.38                                               | 2.19                                                |
| L72-454-1830 | SMA F- N M     | 72            | 0.75                | 183.0     | 19.05           | 28                                              | 24                                              | 17                                               | 1.21                                               | 2.65                                               | 4.05                                                |
| L72-452-457  | SMA M- TNC M   | 18            | 0.25                | 45.7      | 6.35            | 23                                              | 18                                              | 15                                               | 0.37                                               | 0.69                                               | 1.10                                                |
| L72-452-610  | SMA M- TNC M   | 24            | 0.25                | 61.0      | 6.35            | 23                                              | 18                                              | 15                                               | 0.49                                               | 0.92                                               | 1.48                                                |
| L72-452-915  | SMA M- TNC M   | 36            | 0.50                | 91.5      | 12.70           | 23                                              | 18                                              | 15                                               | 0.67                                               | 1.32                                               | 2.18                                                |
| L72-452-1220 | SMA M- TNC M   | 48            | 0.50                | 122.0     | 12.70           | 23                                              | 18                                              | 15                                               | 0.89                                               | 1.71                                               | 2.80                                                |
| L72-452-1830 | SMA M- TNC M   | 72            | 0.75                | 183.0     | 19.05           | 23                                              | 18                                              | 15                                               | 1.22                                               | 2.45                                               | 3.98                                                |