

# FLEX TEST Test Cable

50Ω 3FT DC to 40 GHz

## TMP40-3FT-KMKM+



CASE STYLE: RJ2516-3

| Connectors  | Model           |
|-------------|-----------------|
| 2.92mm Male | TMP40-3FT-KMKM+ |

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

|                                   |                 |                 |
|-----------------------------------|-----------------|-----------------|
| Operating Temperature             | -55°C to +105°C |                 |
| Storage Temperature               | -55°C to +125°C |                 |
| Power Handling at 25°C, Sea Level | 102W at 6 GHz   | 47W at 26.5 GHz |
|                                   | 57W at 18 GHz   | 37W at 40 GHz   |

Permanent damage may occur if any of these limits are exceeded.

### Features

- Useful over temperature range, -55°C to 105°C
- low insertion loss
- stainless steel 40 GHz connector for long mating-cycle life
- triple shield cable for excellent shielding effectiveness
- good amplitude and phase stability vs flexing over frequency
- 40 GHz connector mates with 2.92 mm, K\*, 3.5mm, SMA

### Applications

- military and defense applications
- research & development labs
- environmental & temperature test chambers

### Electrical Specifications at 25°C

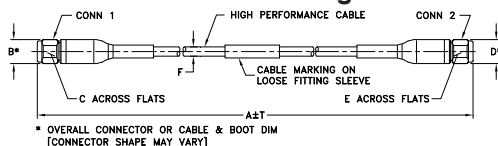
| Parameter       | Condition (GHz) | Min. | Typ. | Max. | Units |
|-----------------|-----------------|------|------|------|-------|
| Frequency Range |                 | DC   |      | 40   | GHz   |
| Length          |                 |      | 3    |      | FT    |
| Insertion Loss  | DC - 6          | —    | 1.0  | 1.1  | dB    |
|                 | 6 - 18          | —    | 1.6  | 1.9  |       |
|                 | 18 - 26.5       | —    | 2.1  | 2.4  |       |
| Return Loss     | DC - 6          | 20   | 24   | —    | dB    |
|                 | 6 - 18          | 17   | 22   | —    |       |
|                 | 18 - 26.5       | 16   | 17   | —    |       |
|                 | 26.5 - 40       | 15   | 17   | —    |       |

\*K Connector is a trademark of Anritsu  
Custom sizes available, consult factory.

### Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |             |
|-----------------|---------------------|------------------|-------------|
|                 |                     | 2.92mm Male      | 2.92mm Male |
| 100             | 0.11                | 42.5             | 41.6        |
| 2000            | 0.52                | 43.3             | 41.7        |
| 4000            | 0.73                | 32.5             | 31.6        |
| 6000            | 0.89                | 29.1             | 29.3        |
| 10000           | 1.12                | 34.4             | 33.4        |
| 15000           | 1.37                | 44.4             | 39.1        |
| 18000           | 1.51                | 47.2             | 48.0        |
| 20000           | 1.60                | 30.7             | 29.5        |
| 26000           | 1.86                | 34.8             | 28.1        |
| 28000           | 1.93                | 30.3             | 28.3        |
| 30000           | 1.99                | 28.5             | 29.8        |
| 32000           | 2.07                | 27.8             | 30.7        |
| 36000           | 2.22                | 23.5             | 24.3        |
| 38000           | 2.28                | 25.3             | 30.9        |
| 40000           | 2.34                | 27.2             | 25.1        |

### Outline Drawing

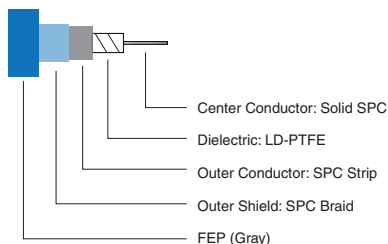


\* OVERALL CONNECTOR OR CABLE & BOOT DIM [CONNECTOR SHAPE MAY VARY]

### Outline Dimensions (inch/mm)

|        | A    | B    | C    | D    | E    | F     | T       | wt |
|--------|------|------|------|------|------|-------|---------|----|
| Feet   | 0.42 | .312 | 0.42 | .312 | .142 |       |         |    |
| Meters | 10.7 | 7.92 | 10.7 | 7.92 | 3.6  | +0/-0 | +2.0/-0 | 59 |

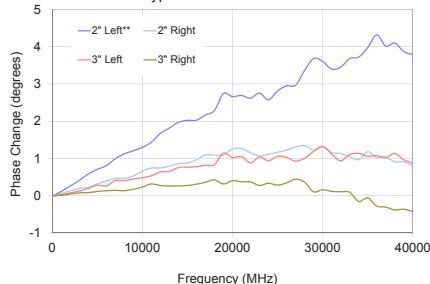
### Cable Construction



#### Product Guarantee

Mini-Circuits® will repair or replace your test cable at its option if the connector attachment falls within six months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.

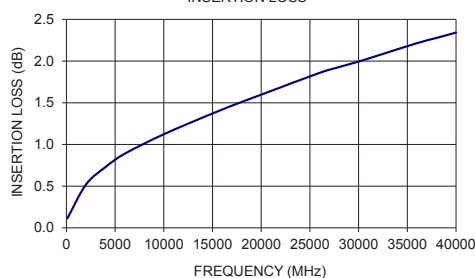
### Typical Phase vs Flexure\*



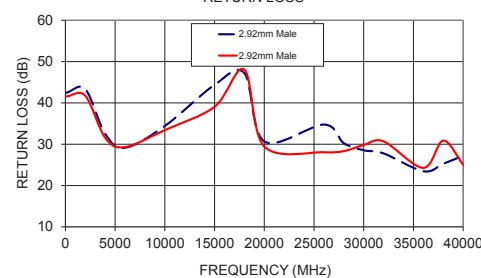
\* Typical phase change over flexure performed on TMP40-3FT-KMKM+ by wrapping cable 360° around 2" and 3" radii mandrels referenced to normalized straight position.

\*\* Setup is flipped and measurement is repeated.

### TMP40-3FT-KMKM+ INSERTION LOSS



### TMP40-3FT-KMKM+ RETURN LOSS



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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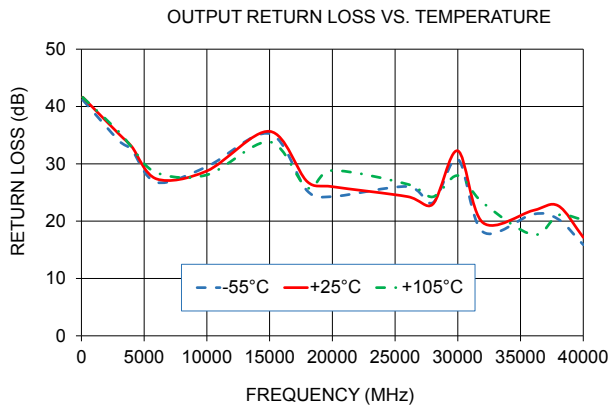
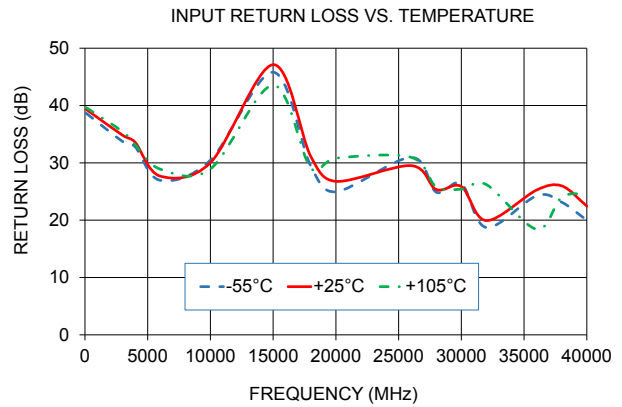
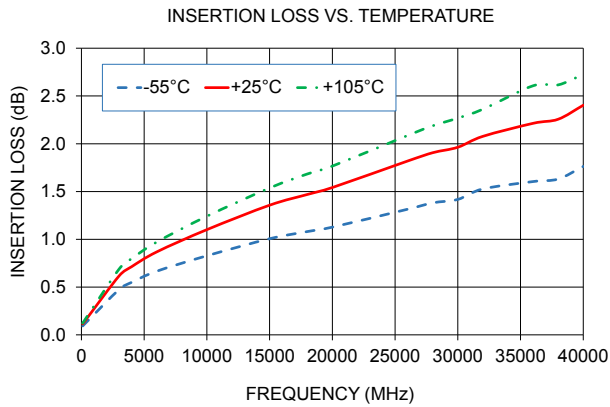


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M166076  
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AG/CP/AM  
180517  
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## Typical Performance vs. Temperature

| Frequency (MHz) | Insertion Loss (dB) |       |        | Input Return Loss (dB) |       |        | Output Return Loss (dB) |       |        |
|-----------------|---------------------|-------|--------|------------------------|-------|--------|-------------------------|-------|--------|
|                 | -55°C               | +25°C | +105°C | -55°C                  | +25°C | +105°C | -55°C                   | +25°C | +105°C |
| 100             | 0.09                | 0.11  | 0.12   | 38.6                   | 39.3  | 39.6   | 41.2                    | 41.6  | 41.6   |
| 3000            | 0.47                | 0.62  | 0.69   | 33.7                   | 34.8  | 35.4   | 34.0                    | 35.2  | 35.6   |
| 4000            | 0.55                | 0.71  | 0.80   | 32.8                   | 33.6  | 33.2   | 32.5                    | 33.0  | 32.9   |
| 6000            | 0.67                | 0.87  | 0.97   | 27.0                   | 27.7  | 28.9   | 26.8                    | 27.4  | 28.4   |
| 10000           | 0.83                | 1.10  | 1.24   | 30.5                   | 30.0  | 28.9   | 29.5                    | 28.8  | 28.1   |
| 15000           | 1.01                | 1.36  | 1.54   | 45.8                   | 47.1  | 43.5   | 35.3                    | 35.7  | 33.8   |
| 18000           | 1.08                | 1.47  | 1.68   | 29.4                   | 31.1  | 29.1   | 25.3                    | 26.9  | 25.8   |
| 20000           | 1.13                | 1.54  | 1.77   | 25.0                   | 26.8  | 30.8   | 24.3                    | 26.0  | 28.8   |
| 26000           | 1.31                | 1.82  | 2.09   | 30.9                   | 29.5  | 31.0   | 26.0                    | 24.3  | 26.4   |
| 28000           | 1.38                | 1.91  | 2.19   | 24.9                   | 25.4  | 25.8   | 23.2                    | 22.9  | 24.2   |
| 30000           | 1.42                | 1.96  | 2.27   | 26.4                   | 25.9  | 25.4   | 30.8                    | 32.3  | 28.0   |
| 32000           | 1.53                | 2.08  | 2.36   | 18.7                   | 19.9  | 26.2   | 18.1                    | 19.7  | 23.2   |
| 36000           | 1.60                | 2.21  | 2.61   | 24.3                   | 25.3  | 18.4   | 21.2                    | 21.9  | 17.6   |
| 38000           | 1.63                | 2.26  | 2.62   | 23.1                   | 26.0  | 24.0   | 20.3                    | 22.7  | 21.0   |
| 40000           | 1.76                | 2.40  | 2.73   | 20.0                   | 22.5  | 24.6   | 15.9                    | 17.2  | 20.2   |



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