

# Test Cable

50Ω 1M DC to 40 GHz

## TMP40-1M-KMKM+



CASE STYLE: RJ2516-3.28

Connectors	Model
2.92mm Male	TMP40-1M-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,	102W at	6 GHz
Sea Level	57W at	18 GHz
	47W at	26.5 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

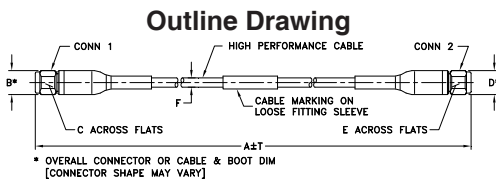
### Applications

- 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			1		M
Insertion Loss	DC - 6	—	1.0	1.3	dB
	6 - 18	—	1.7	2.1	
	18 - 26.5	—	2.1	2.6	
Return Loss	26.5 - 40	—	2.6	3.4	dB
	DC - 6	20	26	—	
	6 - 18	17	23	—	
Return Loss	18 - 26.5	16	20	—	dB
	26.5 - 40	15	17	—	

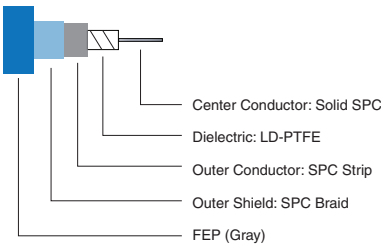
\*K Connector is a trademark of Anritsu  
Custom sizes available, consult factory.



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	T	wt
Feet	Meters				Inch	MM	grams
3.28	1.00	0.42	.312	0.42	.312	.142	61
		10.7	7.92	10.7	7.92	3.6	+39/-0
							+10.0/-0

### Cable Construction

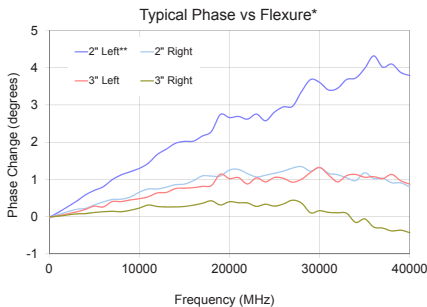


**Product Guarantee**

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 Performance Data

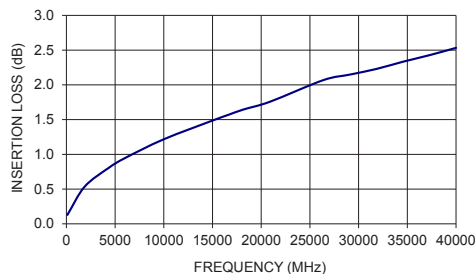
Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		2.92mm Male	2.92mm Male
100	0.13	48.8	40.9
1870	0.53	34.9	35.1
4350	0.81	39.3	38.9
6000	0.95	32.3	31.9
10000	1.22	35.0	36.1
15360	1.50	34.7	35.3
16680	1.57	30.8	32.2
18200	1.65	31.8	36.9
20920	1.76	31.3	40.3
26370	2.07	20.5	20.1
29100	2.15	25.3	23.3
31820	2.23	29.5	30.9
34550	2.33	26.7	36.7
37270	2.43	30.4	37.0
40000	2.53	26.2	28.4



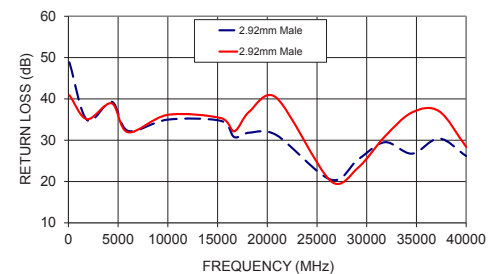
\* Typical phase change over flexure performed on TMP40-3FT-KMKM+ by wrapping cable 360° around 2" and 3" radii mandrels referenced to normalized straight position.

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

TMP40-1M-KMKM+  
INSERTION LOSS



TMP40-1M-KMKM+  
RETURN LOSS



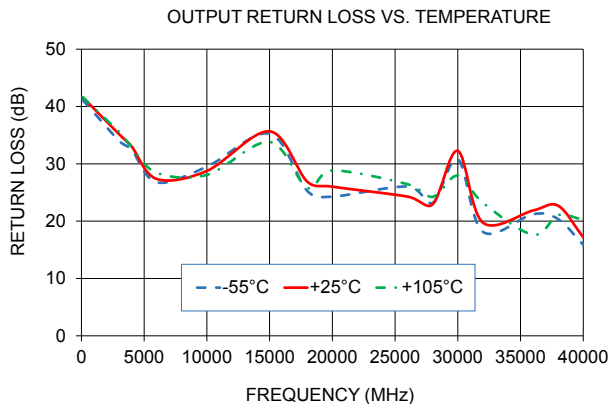
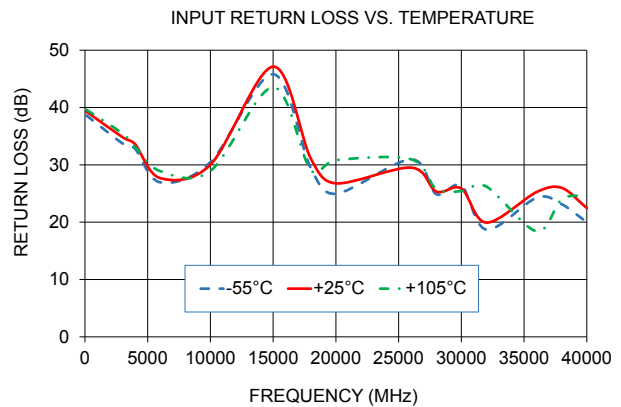
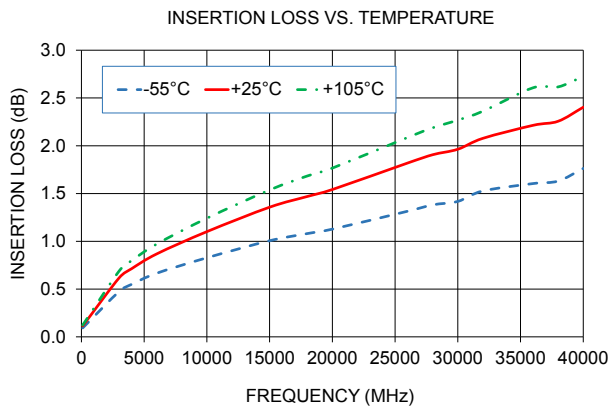
**Notes**

- 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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## 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

\* Typical performance over temperature performed on TMP40-3FT-KMKM+.



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