

TC-205 Low loss, Low cost

Series Number	
TC-205	
High Frequency Test Cables	Precision Type



Measuring cable with excellent cost performance. Features low loss with the highest level of dielectric loss. Ensures stable transmission under severe conditions such as temperature environment. Stable loss/reflection/phase when cable is bent. Low phase change vs. temperature. triple-shielded for high shielding performance.

Mechanical Characteristics

Outer Diameter/Coating	5.21mm	FEP Lite Blue
Center Conductor	1.29mm	Silver plated copper, Single
Insulator	3.91mm	Low density PTFE
Outer Conductor1	Silver plated copper tape	
Outer Conductor2	Aluminum / Kapton Tape	
Outer Conductor3	Silver plated copper, Braided	
Operating temperature	-40°C~+135°C (Typ. -55°C~+200°C)	
Bending radius (min.)	Inner R25.4mm	
Mass	63g/m	

Electrical Characteristics

Impedance	50 Ω
DC Resistance	13.2 Ω /km
Withstand voltage	DC1500V
Allowable power (typ)	750W@1GHz / 291W@6GHz
Shield Characteristics	> 100dB
Wavelength shortening rate	76%
Frequency(Max.)	27GHz
Insertion Loss (typ)	0.28dB/m(@1GHz) / 0.63dB/m(@5GHz)
VSWR (typ)	1.10 (SMA)、1.20 (N)、1.10(3.5mm)
Phase vs Bending (typ)	0.3° @6GHz, 0.6° @10GHz (Inner 20mm, 90-degree bend)
Phase vs Temperature (typ)	1500PPM(Max.) (-35°C~+135°C)

Applicable Connectors and Models

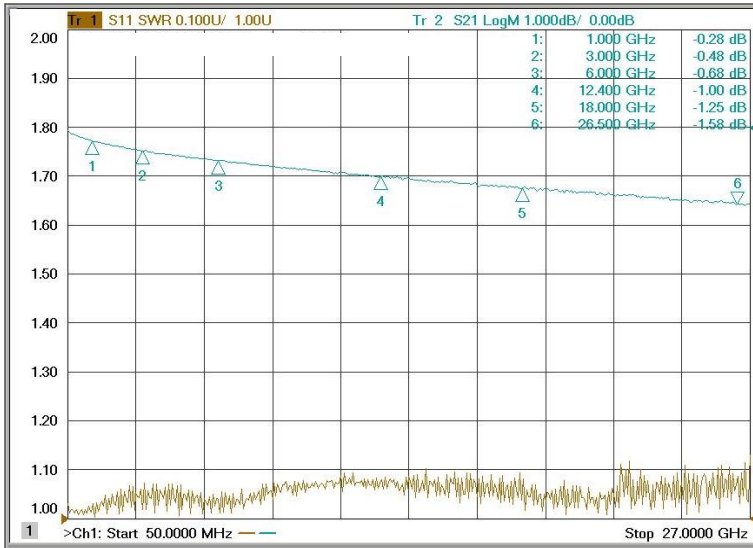
①	TC	-	205	-	SP	-	NP	-	□□□□	-	△△	⑥
	①		②		③		④		⑤			⑥
			Cable Type		Connector1		Connector2		Length			Option
									⑤ L (mm)			
					③		④					
①	TC	RoHS compliant *Non-RoHS requests are negotiable.										
②	205	Cable Type										
③ ④	SP	SMA(P)	~18GHz (~26.5G ※)									
	SJ	SMA(J)	~18GHz (~26.5G ※)									
	SLP	SMAL(P)	~18GHz									
	SP90	90° SWEEP SMA(P)	~18GHz									
	NP	N(P)	~18GHz									
	3.5P	3.5mm(P)	~26.5GHz									
	3.5J	3.5mm(J)	~26.5GHz									
⑤	□□□□	Cable length (mm)										
⑥	No entry	Standard Specification										
	26.5G	Frequency ~26.5GHz ※	Only SMA(P) and SMA(J)									

In the case of standard specifications, ⑥ is not required to be filled in.

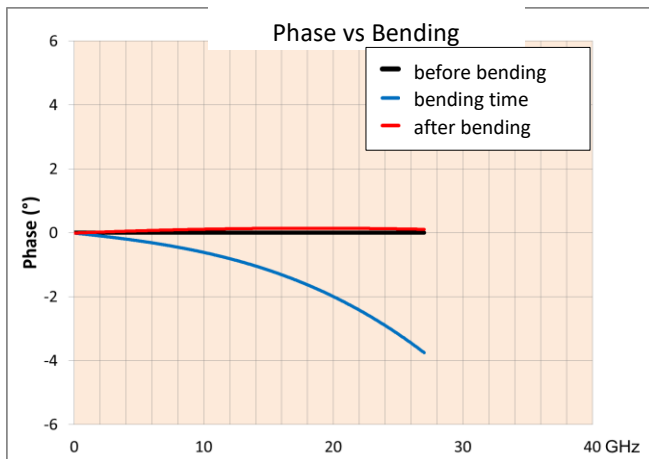
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Measured data

Model : TC-205-SP-SP-1000-26.5G
 (SMAP-SMAP L=1m ~26.5GHz)



GHz	(Typ)	(Typ)
	I.L.(dB)	VSWR(U)
1	-0.28	1.01
2	-0.39	1.06
3	-0.48	1.02
4	-0.56	1.07
5	-0.63	1.06
6	-0.68	1.04
7	-0.74	1.02
8	-0.80	1.05
9	-0.84	1.08
10	-0.90	1.07
11	-0.94	1.07
12	-1.00	1.07
13	-1.04	1.06
14	-1.09	1.06
15	-1.12	1.09
16	-1.17	1.06
17	-1.22	1.04
18	-1.25	1.04
19	-1.25	1.05
20	-1.32	1.02
21	-1.37	1.01
22	-1.38	1.04
23	-1.43	1.04
24	-1.48	1.09
25	-1.50	1.01
26	-1.54	1.08
26.5	-1.58	1.09



These are reference values for phase change with a bending radius of 20 mm and a 90-degree bend. Reproducibility is good because the amount of change when bending is small and it returns to the original state on bending back.

Actual Applications

- Network analyzers, spectrum analyzers, and other measurement cables
- Wireless communication measurements for cellular carriers.
- Antenna connection.
- ~K band (~26 GHz)

Custom Cases

- We can also produce various custom products other than standard specifications in terms of performance, connectors, cable lengths, etc.
- Phase and electrical length management.

The data, etc. shown in the catalog are representative values and are not guaranteed.