

Superconducting Semi-Rigid coaxial cable



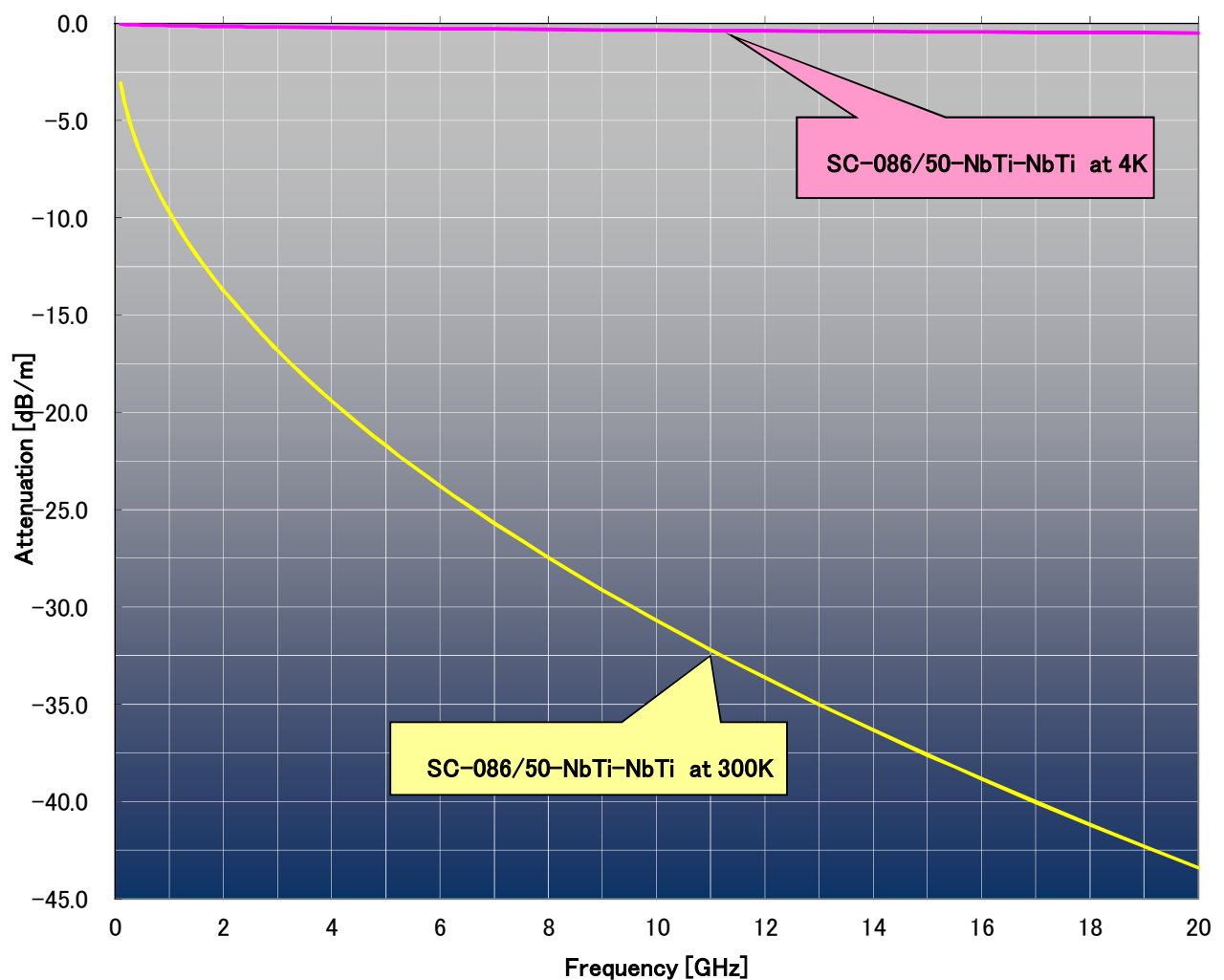
Features

Superconducting semi-rigid coaxial cable uses **Niobium Titanium** and **Niobium** as center and outer conductors.

Variety of cable size meets your specific research and development purposes.



Superconducting properties



Specifications

Part number		SC-086/50-NbTi-NbTi	SC-119/50-NbTi-NbTi	SC-160/50-NbTi-NbTi	
◇ Structure/Material					
Outer conductor	Diameter [mm]	0.90 +0.02/-0.04	1.19 ±0.0254	1.6 ± 0.0254	
	Material	Niobium Titanium	Niobium Titanium	Niobium Titanium	
Dielectric	Diameter [mm]	0.66 ± 0.0254	0.94 ± 0.0254	1.05 ± 0.0254	
	Material	PTFE	PTFE	PTFE	
Center conductor	Diameter [mm]	0.203 ± 0.013	0.287 ± 0.013	0.32 ± 0.013	
	Material	Niobium Titanium	Niobium Titanium	Niobium Titanium	
◇ Thermal conductivity at 4K [W·cm/K]		4.63E-06	7.54E-06	1.66E-05	
◇ Electrical properties					
Characteristic impedance [Ω]		50±3.0	50±2.5	50±2.5	
Voltage withstanding VRMS(60Hz)		2000	2000	2000	
Max. operating frequency [GHz]		154	108	97	
Capacitance (Average) [pF/m]		96.2	95.2	95.6	
Attenuation [dB/m] at 300K and 4K	FRQ.	300K	4K	300K	4K
	0.5GHz	6.8	Less than 0.5dB	5.5	4.3
	1.0GHz	9.6		7.8	6.1
	5.0GHz	21.6		17.3	13.7
	10.0GHz	30.5		24.5	19.4
	20.0GHz	43.1		34.7	27.5
◇ Mechanical properties					
Max. operating temperature [°C]		90	90	90	
Min. inside bend radius [mm]		5	5	6.4	
Max. length [m]		1	1	1	

Part number		SC-219/50-NbTi-NbTi	SC-219/50-Nb-Nb		
◇ Structure/Material					
Outer conductor	Diameter [mm]	2.19 ± 0.0254	2.19 ± 0.0254		
	Material	Niobium Titanium	Niobium		
Dielectric	Diameter [mm]	1.67 ± 0.0254	1.67 ± 0.0254		
	Material	PTFE	PTFE		
Center conductor	Diameter [mm]	0.51 ± 0.013	0.51 ± 0.013		
	Material	Niobium Titanium	Niobium		
◇ Thermal conductivity at 4K [W·cm/K]		2.64E-05	4.83E-04		
◇ Electrical properties					
Characteristic impedance [Ω]		50±2.0	50±2.0		
Voltage withstanding VRMS(60Hz)		2500	2500		
Max. operating frequency [GHz]		61	61		
Capacitance (Average) [pF/m]		95.2	95.2		
Attenuation [dB/m] at 300K and 4K	FRQ.	300K	4K	300K	4K
	0.5GHz	2.7	Less than 0.3dB	1.3	Less than 0.3dB
	1.0GHz	3.9		1.8	
	5.0GHz	8.6		4.1	
	10.0GHz	12.2		5.8	
	20.0GHz	17.3		8.3	
◇ Mechanical properties					
Max. operating temperature [°C]		100	100		
Min. inside bend radius [mm]		10	10		
Max. length [m]		1	2		



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