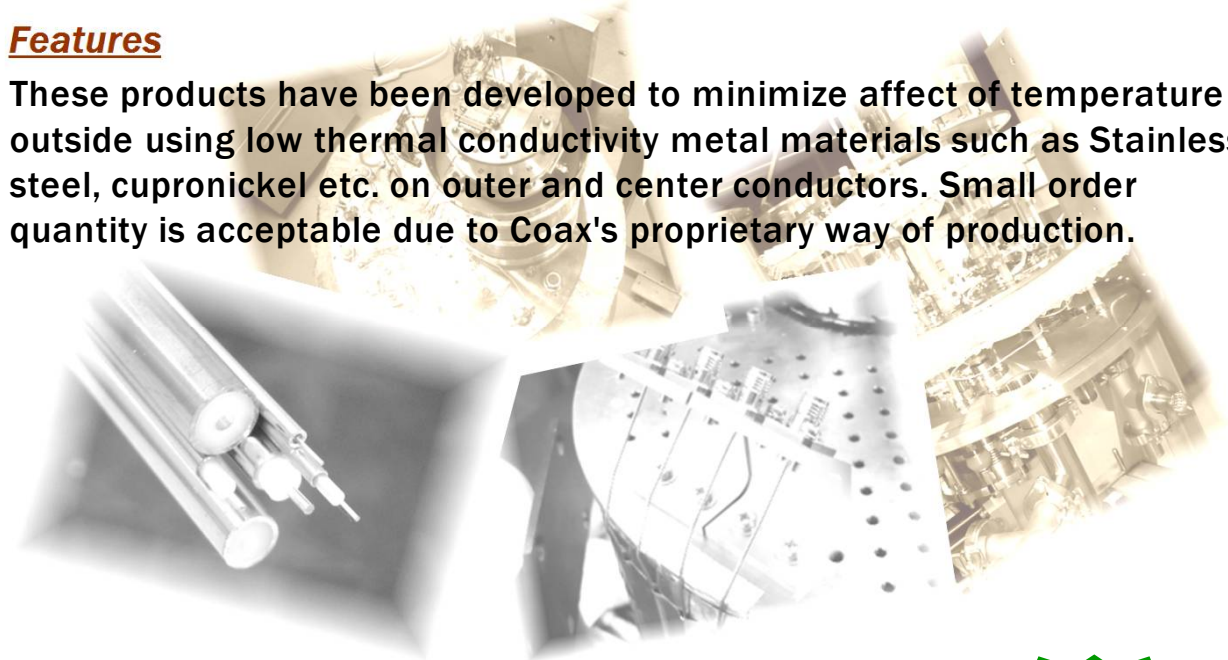


# Semi-Rigid Cryogenic cable



## Features

These products have been developed to minimize affect of temperature outside using low thermal conductivity metal materials such as Stainless-steel, cupronickel etc. on outer and center conductors. Small order quantity is acceptable due to Coax's proprietary way of production.



## Specifications



Part number		SC-033/50-SS-SS	SC-033/50-CN-CN	SC-119/50-PBC-PBC			
◇ Structure/Material		<b>Non-magnetic</b>					
Outer conductor	Diameter±0.0254[mm]	0.33	0.33	1.19			
	Material	304 Stainless steel	Cupronickel	Phosphor Bronze			
Dielectric	Diameter±0.0254[mm]	0.26	0.26	0.94			
	Material	PTFE	PTFE	PTFE			
Center conductor	Diameter±0.013[mm]	0.08	0.08	0.287			
	Material	304 Stainless steel	Cupronickel	Phosphor Bronze			
◇ Thermal conductivity at 4K [W · cm/K]		1.1E-06	1.4E-06	5.8E-05			
◇ Electrical properties							
Characteristic impedance [Ω]		50±3.0	50±3.0	50±2.5			
Voltage withstanding VRMS(60Hz)		500	500	2000			
Max. operating frequency [GHz]		392	392	108			
Capacitance (Average) [pF/m]		96.2	96.2	96.2			
Attenuation [dB/m] at 300K and 4K	FRQ.	300K	4K	300K	4K	300K	4K
	0.5GHz	18.9	11.8	13.7	10.3	2.3	1.8
	1.0GHz	26.8	16.8	19.3	14.6	3.2	2.5
	5.0GHz	60.0	37.4	43.3	32.5	7.2	5.7
	10.0GHz	84.9	53.0	61.3	46.0	10.3	8.0
	20.0GHz	120.2	74.9	86.9	65.1	14.8	11.3
◇ Mechanical properties							
Max. operating temperature [°C]		100	100	100			
Min. inside bend radius [mm]		1.5	1.3	3.2			
Standard length [m]		1	1	2			

Part number		SC-086/50-CN-CN	SC-086/50-B-B	SC-086/50-SS-SS			
◇ Structure/Material		<b>Non-magnetic</b>					
Outer conductor	Diameter±0.0254[mm]	0.86	0.86	0.86			
	Material	Cupronickel	Beryllium copper	304 Stainless steel			
Dielectric	Diameter±0.0254[mm]	0.66	0.66	0.66			
	Material	PTFE	PTFE	PTFE			
Center conductor	Diameter±0.013[mm]	0.203	0.203	0.203			
	Material	Cupronickel	Beryllium copper	304 Stainless steel			
◇ Thermal conductivity at 4K [W·cm/K]		9.8E-06	5.1E-05	7.4E-06			
◇ Electrical properties							
Characteristic impedance [Ω]		50±2.5	50±3.0	50±2.5			
Voltage withstanding VRMS(60Hz)		2000	2000	2000			
Max. operating frequency [GHz]		154	154	154			
Capacitance (Average) [pF/m]		95.2	96.2	95.2			
Attenuation [dB/m] at 300K and 4K	FRQ.	<b>300K</b>	<b>4K</b>	<b>300K</b>	<b>4K</b>	<b>300K</b>	<b>4K</b>
	0.5GHz	5.4	4.1	2.3	1.8	7.3	4.7
	1.0GHz	7.7	5.7	3.3	2.5	10.3	6.6
	5.0GHz	17.1	12.8	7.4	5.6	23.0	14.8
	10.0GHz	24.3	18.1	10.6	7.9	32.7	20.9
	20.0GHz	34.6	25.7	15.2	11.2	46.4	29.5
◇ Mechanical properties							
Max. operating temperature [°C]		100	100	100			
Min. inside bend radius [mm]		3.2	3.2	3.2			
Standard length [m]		2	2	2			

Part number		SC-119/50-B-B	SC-219/50-SS-SS	SC-219/50-CN-CN			
◇ Structure/Material		<b>Non-magnetic</b>					
Outer conductor	Diameter±0.0254[mm]	1.19	2.19	2.19			
	Material	Beryllium copper	304 Stainless steel	Cupronickel			
Dielectric	Diameter±0.0254[mm]	0.94	1.67	1.67			
	Material	PTFE	PTFE	PTFE			
Center conductor	Diameter±0.013[mm]	0.287	0.51	0.51			
	Material	Beryllium copper	304 Stainless steel	Cupronickel			
◇ Thermal conductivity at 4K [W·cm/K]		9.1E-05	4.3E-05	6.3E-05			
◇ Electrical properties							
Characteristic impedance [Ω]		50±2.5	50±1.5	50±1.5			
Voltage withstanding VRMS(60Hz)		2000	2500	2500			
Max. operating frequency [GHz]		108	61	61			
Capacitance (Average) [pF/m]		95.6	95.2	95.2			
Attenuation [dB/m] at 300K and 4K	FRQ.	<b>300K</b>	<b>4K</b>	<b>300K</b>	<b>4K</b>	<b>300K</b>	<b>4K</b>
	0.5GHz	1.6	1.3	3.0	1.9	2.4	1.6
	1.0GHz	2.3	1.8	4.2	2.6	3.4	2.3
	5.0GHz	5.1	4.0	9.4	5.9	7.6	5.1
	10.0GHz	7.3	5.6	13.5	8.3	10.8	7.2
	20.0GHz	10.5	7.9	19.2	11.7	15.5	10.2
◇ Mechanical properties							
Max. operating temperature [°C]		100	125	125			
Min. inside bend radius [mm]		3.2	6.4	3.2			
Standard length [m]		2	2	2			

