

ABSOLUTE COAX Series

The **Absolute Coax series** of cables are designed specifically to meet the requirements for EMC testing. Each industry has requirements that are unique. EMC is no different. Absolute EMC has gone through the selection process to only offer the best performance quality and value. Taking away the need to spend hours searching and looking through specs and manufacturers to find what you hope is the best value. 3 options are available fitting most EMC applications.

Tabular insertion loss data supplied electronically with each cable!

Absolute Coax A (AB-A) • Cost Effective • Ultra-Flexible • Double Shielded Outer Conductor

Offering an excellent cost-performance ratio. Its use can cover up to 18GHz. It is ideal for short lengths and interconnection where losses are not so important. A great choice for applications with medium power and low frequency.

Absolute Coax B (AB-B) • Ultra Low Loss • Low VSWR • Super Flexible • Light Weight • High Frequency

Ultra-Low loss coax for use up to 40GHz. This coax is ideally suited for high-frequency emissions testing above 18GHz.

Absolute Coax C (AB-C) • Ultra Low Loss • Low VSWR • Super Flexible • Light Weight • High Power

Best ultra-low loss coax Ideal for high power handling and for low-loss applications up to 18GHz. If above 18GHz is not required, this is the best coax with the best performance available.

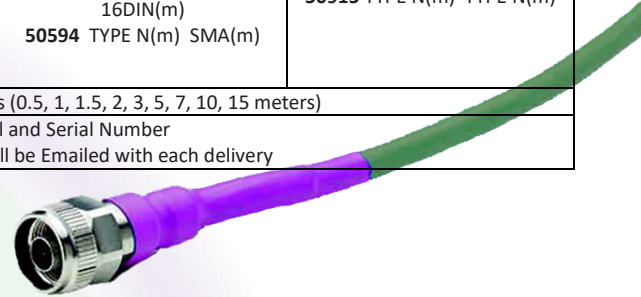
Absolute Coax D (AB-D) • Ultra Low Loss • Low VSWR • Super Flexible • Light Weight

Best ultra-low loss coax Ideal for low low-loss applications up to 6GHz. If applications do not require over 6GHz & very high power, this is the best coax with the best performance available.

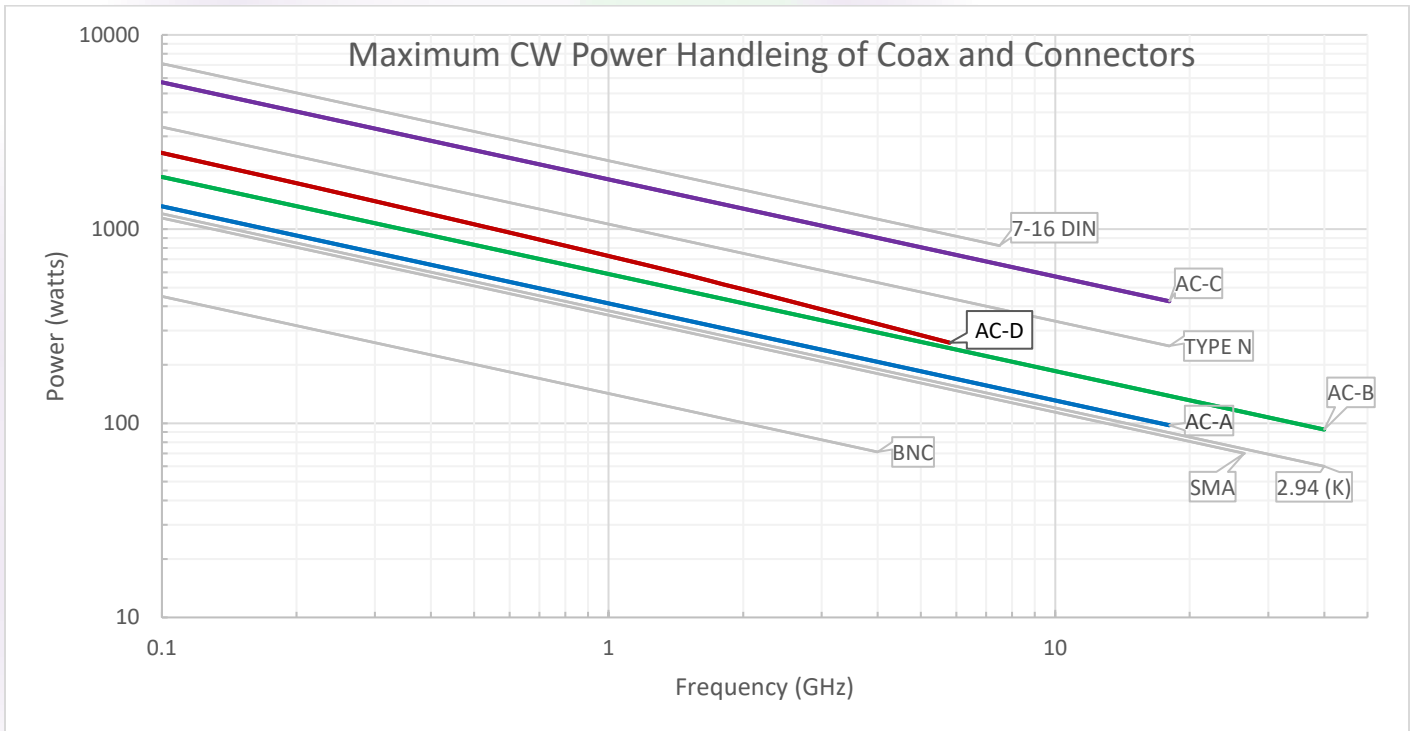
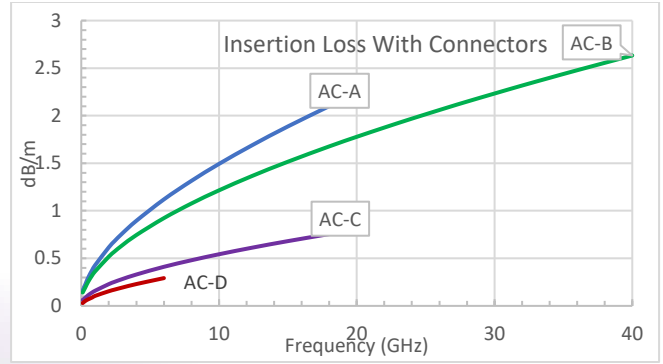
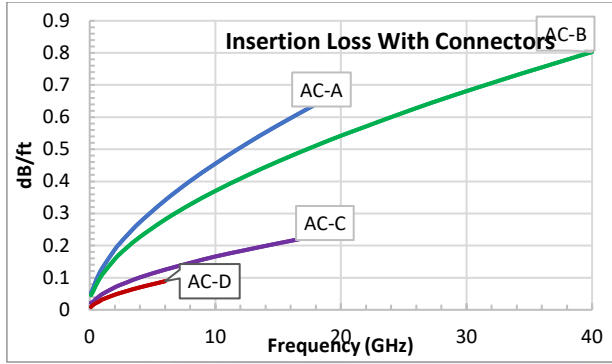
Specification	AC-A	AC-B	AC-C	AC-D
Maximum Frequency	18 GHz	40 GHz	18 GHz	6 GHz
Impedance	50 Ω nominal	50 Ω nominal	50 Ω nominal	50 Ω nominal
Max Power @ 1GHz	410 Watts	590 Watts	1800 Watts	750 Watts
Shielding Effectiveness	-90 dB minimum (cable only)	-110 dB minimum (cable only)	,-110 dB minimum (cable only)	,-90 dB minimum (cable only)
Dielectric Withstanding Voltage	3.0 kV at 60 Hz	7.0 kV at 60 Hz	15.0 kV at 60 Hz	8 kV at 60 Hz
Capacitance	29 pF/ft (95.1 pF/m)	24.0 pF/ft (78.7 pF/m)	24.0 pF/ft (78.7 pF/m)	23.4 pF/ft (76.6 pF/m)
Finished Outer Diameter	0.163 in (0.414 cm)	0.144 in (0.366 cm)	0.310 in (0.787 cm)	0.59 in (1.5 cm)
Static Bend Radius	0.8 in (2.032 cm)	0.75 in (1.905 cm)	1.75 in (4.445 cm)	1.5 in (3.81 cm)
Weight with Standard Jacket/Armor	0.03 lbs/ft (0.048 kg/m)	0.02 lbs/ft (0.028 kg/m)	0.09 lbs/ft (0.134 kg/m)	0.165 lbs/ft (0.25 kg/m)
Operating Temp. Range	,-85 to 392° F (-65 to 200° C)	,-85 to 392° F (-65 to 200° C)	,-85 to 392° F (-65 to 200° C)	,-40 to 185° F (-40 to 85° C)
Inner Conductor	Solid Ag-plated Cu-clad Steel	Solid Ag-plated Cu	Solid Ag-plated Cu	Stranded BC
Dielectric	PTFE	PTFE Tape	PTFE Tape	Foam Polyethylene

Specification	AC-A	AC-B	AC-C	AC-D
Outer Conductor	Ag-plated Cu Flat Braid/ Ag-plated Cu Round Braid	Ag-plated Cu Strip/ Ag-plated Cu Flat Braid	Ag-plated Cu Strip/ Ag-plated Cu Flat Braid	Aluminum Tape Tinned Copper Braid
Finish	FEP (Fluorinated ethylene propylene)	FEP (Fluorinated ethylene propylene)	FEP (Fluorinated ethylene propylene)	Thermoplastic Elastomer
Color	Green Jack with Purple Strain Reliefs	Green Jack with Purple Strain Reliefs	Green Jack with Purple Strain Reliefs	Green Jack with Purple Strain Reliefs
Part # Standard Connectors*	50591 SMA(m) SMA(m) 50592 TYPE N(m) TYPE N(m) 50593 BNC(m) BNC(m) 50595 TYPE N(m) SMA(m)	50583 SMA 2.4(m) SMA 2.4(m) 50586 SMA 2.92/K(m) SMA 2.92/K(m) 50587 SMA 3.5(m) SMA 3.5(m) 50588 SMA(m) SMA(m) 50914 TYPE N(m) TYPE N(m) 50916 TYPE N(m) SMA(m)	50589 TYPE N(m) TYPE N(m) 50590 7-16DIN(m) 7- 16DIN(m) 50594 TYPE N(m) SMA(m)	50915 TYPE N(m) TYPE N(m)
Standard Lengths*	19, 39, 59, 79, 118, 197, 276, 393, 590 inches (0.5, 1, 1.5, 2, 3, 5, 7, 10, 15 meters)			
Included in delivery	Coax imprinted with Model and Serial Number S Parameter (loss/attenuation) data will be Emailed with each delivery			

*other connectors and lengths are available



Frequency		AC-A				AC-B				AC-C				AC-D				Conn. Loss dB	
GHz	Band	Attenuation w/conn.		Power CW	VSWR	Attenuation w/conn.		Power CW	VSWR	Attenuation w/conn.		Power CW	VSWR	Attenuation w/conn.		Power CW	VSWR		
		dB/ft	dB/m	Watts		dB/ft	dB/m	Watts		dB/ft	dB/m	Watts		dB/ft	dB/m	Watts		dB/ft	dB/m
0.1	UHF	0.052	0.162	1310	1.1	0.046	0.14	1856	1.1	0.022	0.063	5700	1.1	0.009	0.030	2500	1.1	0.003	
0.3		0.07	0.228	756		0.06	0.196	1072		0.026	0.086	3291		0.016	0.052	1500		0.006	
0.5		0.091	0.297	586		0.077	0.254	830		0.034	0.112	2549		0.021	0.069	1100		0.009	
0.8		0.116	0.379	463		0.098	0.323	656		0.043	0.142	2015		0.027	0.089	800		0.012	
1	L	0.13	0.427	414	1.15	0.11	0.362	587	1.15	0.049	0.159	1802	1.15	0.032	0.105	710	1.15	0.014	
2	0.188	0.616	293	0.158		0.518	415	0.07		0.229	1275	0.047		0.154	490	0.024			
2.4	S	0.207	0.679	267		0.174	0.57	379		0.077	0.252	1164		0.052	0.171	430		0.027	
3	0.233	0.765	239	0.195		0.64	339	0.086		0.283	1041	0.059		0.194	390	0.032			
4	C	0.273	0.895	207	1.2	0.227	0.745	293	1.2	0.101	0.33	901	1.2	0.07	0.230	320	1.2	0.040	
6		0.341	1.12	169		0.281	0.923	240		0.125	0.411	736		0.089	0.292	250		0.055	
8	X	0.401	1.315	146	1.25	0.328	1.077	208	1.25	0.146	0.48	637	1.25				1.25	0.070	
10		0.455	1.493	131		0.37	1.215	186		0.166	0.543	570						0.084	
12.4		0.515	1.689	118		0.416	1.366	167		0.186	0.612	512						0.101	
15	Ku	0.575	1.887	107	1.3	0.462	1.516	152	1.3	0.207	0.681	465	1.3				1.3	0.118	
18		0.64	2.1	98		0.511	1.677	138		0.23	0.755	425						0.139	
20	K				1.35	0.542	1.778	131	1.35				1.35				1.35	0.152	
22						0.571	1.875	125										0.165	
24		Typical Insertion Loss dB = (Attenuation)(Length) + 2(Conn. Loss)				0.6	1.969	120											0.178
26.5						0.635	2.082	114											0.194
28	Ka				1.4	0.655	2.148	111	1.4				1.4				1.4	0.204	
30						0.681	2.233	107										0.217	
32						0.706	2.317	104										0.230	
34						0.731	2.398	101										0.243	
36						0.755	2.478	98										0.265	
40	V				1.5	0.803	2.633	93	1.5									0.281	
		$(0.12357 \times \sqrt{\text{freq GHz}}) + (0.00643 \times \text{freq GHz})$				$(0.1073 \times \sqrt{\text{freq GHz}}) + (0.0031 \times \text{freq GHz})$				$(0.04687 \times \sqrt{\text{freq GHz}}) + (0.00173 \times \text{freq GHz})$				$(0.009066 \times \sqrt{\text{freq GHz}}) + (0.0000312 \times \text{freq GHz})$					



- 1) Power limitations of the coax assembly is a combination of the coax and connector. Whichever is the lower power rating will be the rating of the assembly.
 - i) For example: If selecting an AC-C coax with Type N connectors the assembly will be limited by the Type N connectors power rating.
- 2) Frequency coverage of the coax assembly is limited by the connector or the Coax whichever has a lower frequency range.
 - i) For example: If selecting an AC-C coax with 7-16 DIN connectors the frequency will be limited by the connector at 7.5GHz. The Power will be limited to the rating of the Coax since it is lower than the connector.



Ordering Information:

50591-118
[Part #] - [length in inches]

Part #	AC-A	AC-B	AC-C	AC-D
Part #	50591 SMA(m) SMA(m)	50583 SMA 2.4(m) SMA 2.4(m)	50589 TYPE N(m) TYPE N(m)	50915 TYPE N(m) TYPE N(m)
Standard	50592 TYPE N(m) TYPE N(m)	50586 SMA 2.92/K(m) SMA 2.92/K(m)	50590 7-16DIN(m) 7-16DIN(m)	50915 TYPE N(m) TYPE N(m)
Connectors	50593 BNC(m) BNC(m)	50587 SMA 3.5(m) SMA 3.5(m)	50594 TYPE N(m) SMA(m)	50915 TYPE N(m) TYPE N(m)
	50595 TYPE N(m) SMA(m)	50588 SMA(m) SMA(m)		
		50914 TYPE N(m) TYPE N(m)		
		50916 TYPE N(m) SMA(m)		

Standard Lengths :

19 in = 0.5 m	79 in = 2 m	276 in = 7 m
39 in = 1 m	118 in = 3 m	393 in = 10 m
59 in = 1.5 m	197 in = 5 m	590 in = 15 m

(other lengths are available, please specify the required length)

Example:

AC-A with SMA, 2 meters long, is **50591-79**

AC-C with Type N to SMA, 5 meters long, is **50594-197**

