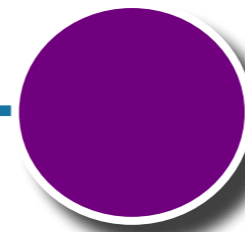


Focus on



Couplers



The Directional and Hybrid couplers offered by AA MCS are designed for both commercial and military applications. Models are available in connectorized SMA, BNC, Type N, TNC (option) packages, depending on the frequency. All units are designed and manufactured to ensure statistical control of important parameters such as insertion loss and input/output return loss, with power up to more than 1 kWatt.

Uni-Directional Couplers

Part Number	Bandwidth (GHz)	Coupling (dB)	Frequency sensitivity (dB) Max	Main Line Insertion Loss* (dB) Max	Directivity (dB) Min	VSWR Max
30 WATTS						
NARROW BAND						
AAMCS-UDC-470M-870M-6dB-Nf	0.47-0.87	6±0.5	±0.70	1.60	20	1.20
AAMCS-UDC-470M-870M-10dB-Nf		10±1	±0.70	0.80	20	1.20
AAMCS-UDC-1G-2G-6dB-Sf	1 - 2	6±1	±0.70	1.80	20	1.20
AAMCS-UDC-1G-2G-10dB-Sf		10±1	±0.75	0.65	20	1.20
AAMCS-UDC-1G-2G-20dB-Sf		20±1	±0.75	0.25	20	1.20
AAMCS-UDC-2G-4G-6dB-Sf	2 - 4	6±1	±0.70	1.80	20	1.30
AAMCS-UDC-2G-4G-10dB-Sf		10±1	±0.75	0.65	20	1.30
AAMCS-UDC-2G-4G-20dB-Sf		20±1	±0.75	0.25	20	1.30
AAMCS-UDC-2G-6G-6dB-Sf	2 - 6	6±1	±0.70	1.80	15	1.30
AAMCS-UDC-2G-6G-10dB-Sf		10±1	±0.75	0.90	15	1.30
AAMCS-UDC-2G-6G-20dB-Sf		20±1	±0.75	0.45	15	1.30
AAMCS-UDC-4G-8G-6dB-Sf	4 - 8	6±1	±0.70	1.80	20	1.35
AAMCS-UDC-4G-8G-10dB-Sf		10±1	±0.75	0.80	20	1.35
AAMCS-UDC-4G-8G-20dB-Sf		20±1	±0.75	0.40	20	1.35
AAMCS-UDC-12.4G-18G-10dB-Sf	12.4 - 18	6±1	±0.50	2.00	15	1.40
AAMCS-UDC-12.4G-18G-10dB-Sf		10±1	±0.50	1.10	15	1.40
AAMCS-UDC-12.4G-18G-20dB-Sf		20±1	±0.50	0.70	12	1.40
BROADBAND						
AAMCS-UDC-0.5G-2G-6dB-Sf	0.5 - 2	6±1	±0.70	1.80	20	1.20
AAMCS-UDC-0.5G-2G-10dB-Sf		10±1	±0.75	0.75	20	1.20
AAMCS-UDC-0.5G-2G-20dB-Sf		20±1	±0.75	0.35	20	1.20
AAMCS-UDC-1G-3.5G-6dB-Sf	1 - 3.5	6±1	±0.75	1.80	22	1.20
AAMCS-UDC-1G-3.5G-10dB-Sf		10±1	±0.50	0.70	22	1.20
AAMCS-UDC-1G-3.5G-20dB-Sf		20±1	±0.50	0.35	23	1.20
AAMCS-UDC-1G-4G-6dB-Sf	1 - 4	6±1	±0.75	1.80	20	1.20
AAMCS-UDC-1G-4G-10dB-Sf		10±1	±0.50	0.80	17 (Typ 20)	1.30
AAMCS-UDC-1G-4G-20dB-Sf		20±1	±0.50	0.40	17 (Typ 20)	1.30
AAMCS-UDC-2G-8G-6dB-Sf	2 - 8	6±0.5	±0.50	1.80	18	1.30
AAMCS-UDC-2G-8G-10dB-Sf		10±1	±0.50	1.00	18	1.30
AAMCS-UDC-2G-8G-20dB-Sf		20±1	±0.50	0.60	18	1.30
AAMCS-UDC-6G-18G-6dB-Sf	6 - 18	6±1	±0.50	2.00	15	1.40
AAMCS-UDC-6G-18G-10dB-Sf		10±1.3	±0.50	1.20	15	1.40
AAMCS-UDC-6G-18G-20dB-Sf		20±1.3	±0.50	0.70	12	1.40

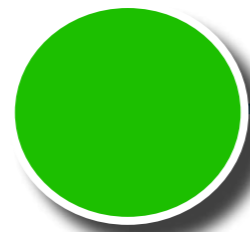
Uni-Directional Couplers

Part Number	Bandwidth (GHz)	Coupling (dB)	Frequency sensitivity (dB) Max	Main Line Insertion Loss* (dB) Max	Directivity (dB) Min	VSWR Max
ULTRA BROADBAND						
AAMCS-UDC-0.5G-8G-10dB-Sf	0.5 - 8	10±1	±1.00	1.30	18	1.30
AAMCS-UDC-0.5G-8G-20dB-Sf		20±1	±1.00	0.90	18	1.30
AAMCS-UDC-1G-12.4G-10dB-Sf	1 - 12.4	10±1.1	±0.80	1.50	15	1.50
AAMCS-UDC-1G-12.4G-20dB-Sf		20±1.1	±0.80	1.10	15	1.50
AAMCS-UDC-2G-18G-6dB-Sf	2 - 18	6±0.5	±0.50	2.40	12	1.40
AAMCS-UDC-2G-18G-10dB-Sf		10±1.1	±0.50	1.30	12	1.40
AAMCS-UDC-2G-18G-20dB-Sf		20±1.1	±0.50	1.10	12	1.40
AAMCS-UDC-0.5G-18G-10dB-Sf	0.5 - 18	10±1.1	±1.00	1.30	0.5-12.4G: 15 12.4-18G: 12	1.50
AAMCS-UDC-0.5G-18G-20dB-Sf		20±1.1	±1.00	1.30	0.5-12.4G: 15 12.4-18G: 12	1.50
AAMCS-UDC-0.5G-26,5G-10dB-Sf	0.5 - 26.5	10±1.2	0.5-6 : +1,5/-1 6-26.5G : ±2	1.80	0.5-6 : 20 6-18 : 15 6-26.5G : 10(typ12)	0.5-6 : 1.20 6-18 : 1.45 6-26.5G : 1.50
AAMCS-UDC-0.5G-26,5G-20dB-Sf	0.5 - 26.5	20±1.2	0.5-6 : +1,5/-1 6-26.5G : ±2	1.50	0.5-6 : 20 6-18 : 13 6-26.5G : 10(typ12)	0.5-6 : 1.20 6-18 : 1.45 6-26.5G : 1.50
AAMCS-UDC-1G-22G-10dB-Sf	1 - 22	10±1.2	±0.80	1.50	1-12G : 15 12-20G : 13 20-22G : 12	main : 1.35 coupled : 1.50
AAMCS-UDC-10G-40G-8dB-2.9f	10 - 40	8±1.1	±0.40	1.70	10-20G: 12 20-40G: 10	1.70
AAMCS-UDC-10G-40G-10dB-2.9f		10±0.7	±0.40	1.70	10	1.70
AAMCS-UDC-1G-40G-10dB-2.9f	1 - 40	10±1.5	±1.30	2.60	1-20G: 14 20-40G: 10	1.70(Typ1.5)
AAMCS-UDC-1G-44G-10dB-2.9f	1 - 44	10±1.5	±1.30	1-40 : 2.60 40-44: 2.80	1-20G: 14 20-44G: 10	1.70 (typ1.5)
250 WATTS						
AAMCS-UDC-470M-870M-6dB-250W-Nf	0.47 - 0.87	6±0.5	±0.70	1.50	20	1.20
AAMCS-UDC-470M-870M-10dB-250W-Nf		10±0.5	±0.70	0.80	20	1.20
AAMCS-UDC-470M-870M-30dB-250W-Nf-BNCf		30±1.25	±0.70	0.15	23	1.15
1000 WATTS						
AAMCS-UDC-470M-870M-6dB-1KW-7/16f	0.47 - 0.87	6±0.5	±0.70	1.50	20	1.20

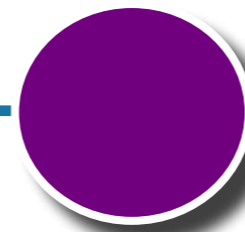
*Including coupling loss

Nf connectors also available on some product

Other coupling values and frequency bandwidth available on request



Focus on



Couplers



Bi-Directional Couplers

Part Number	Bandwidth (MHz)	Coupling (dB)		Frequency Sensitivity	Insertion Loss (dB) Max	Directivity (dB) Min	VSWR Max		Main line-Forward / Reverse
		Forward	Reverse				Main line	Coupled line	
50 WATTS									
AAMCS-BDC-170M-230M-28dB-36dB-Nf-Sf	170 - 230	28±1	36 ±1	±1.50	0.15	23	1.10	1.10	Nf - Sf
AAMCS-BDC-0.5G-1G-20dB-20dB-Nf-Nf	500 - 1000	20±1.25	20 ±1.25	±0.75	0.50	20	1.30	1.30	Nf - Nf
AAMCS-BDC-225M-400M-29,25dB-Nf	225 - 400	29.25	35.25	±1.25	0.15	26	1.10	1.15	Nf - Sf
250 WATTS									
AAMCS-BDC-470M-862M-29,25dB-35,25dB-Nf-Sf	470 - 862	29.25	35.25	±1.25	0.15	26	1.10	1.15	Nf - Sf
500 WATTS									
AAMCS-BDC-800M-1600M-30dB-Nf	800 - 1600	30±1	10 ± 1	± 1.00	0.90	20	1.20	1.20	Nf - Nf

Other coupling values and frequency bandwidth available on request



90° Power Hybrid Couplers

Part Number	Bandwidth (GHz)	Nominal coupling (dB)	Insertion loss (dB) Max	Amplitude balance (dB) Max	Phase balance (deg) Max	Isolation (dB) Min	VSWR Max
30 WATTS							
NARROW BAND							
AAMCS-PHD-300M-500M-30W-Sf	0.30 - 0.50	3	0,5	±0.5	±3	20	1.20
AAMCS-PHD-470M-860M-30W-Nf	0.47 - 0.87	3	0.5	±1	±3	20	1.20
AAMCS-PHD-870M-2200M-30W-Sf	0.87 - 2.2	3	0.5	±0.5	±2.5	18	1.20
AAMCS-PHD-1G-2.7G-30W-Sf	1 - 2.7	3	0.5	±0.5	±2.5	18	1.20
AAMCS-PHD-2G-4G-30W-Sf	2 - 4	3	0.6	±0.6	±5	20	1.20
AAMCS-PHD-4G-8G-30W-Sf	4 - 8	3	0.7	±0.6	±5	20	1.20
BROADBAND							
AAMCS-PHD-1G-4G-30W-Sf	1 - 4	3	0.6	±0.8	±5	17	1.35
AAMCS-PHD-10G-26.5G-30W-Sf	10 - 26,5	3	1.5	±0.6	±7	15	1.60
ULTRA BROADBAND							
AAMCS-PHD-0.5G-4G-30W-Sf	0.50 - 4	3	1.5	±1.8	±6	17	1.40
AAMCS-PHD-2G-18G-30W-Sf	2 - 18	3	1.4	±1.3	±10	17	1.35
250 WATTS							
AAMCS-PHD-470M-860M-250W-Nf	0.47-0.87	3	0,15	±0.5	±3	23	1.15
1 000 WATTS							
AAMCS-PHD-470M-860M-1KW-7/16f	0.47-0.87	3	0,15	±0.50	±5	23	1.15

Amplitude Balance & phase balance are the ratio between any two output in dB or deg respectively

180° Power Hybrid Couplers

Part Number	Bandwidth (GHz)	Nominal coupling (dB)	Insertion loss (dB) Max	Amplitude balance (dB) Max	Phase balance (deg) Max	Isolation (dB) Min	VSWR Max
30 WATTS							
NARROW BAND							
AAMCS-PHD180-1G-2G-30W-Sf	1 - 2	3	0.8	±0.8	±10	17	1.40
AAMCS-PHD180-2G-4G-30W-Sf	2 - 4	3	0.8	±0.8	±10	17	1.50
AAMCS-PHD180-4G-8G-30W-Sf	4 - 8	3	0.8	±0.8	±10	17	1.50
BROADBAND							
AAMCS-PHD180-2G-8G-30W-Sf	2 - 8	3	1.10	±0.5	±10	17	1.40
ULTRA BROADBAND							
AAMCS-PHD180-2G-18G-30W-Sf	2 - 18	3	2.3	±0.8	±15	15	1.70

Amplitude Balance & phase balance are the ratio between any two output in dB or deg respectively