



Directional Coupler Selection Guide

INTRODUCTION

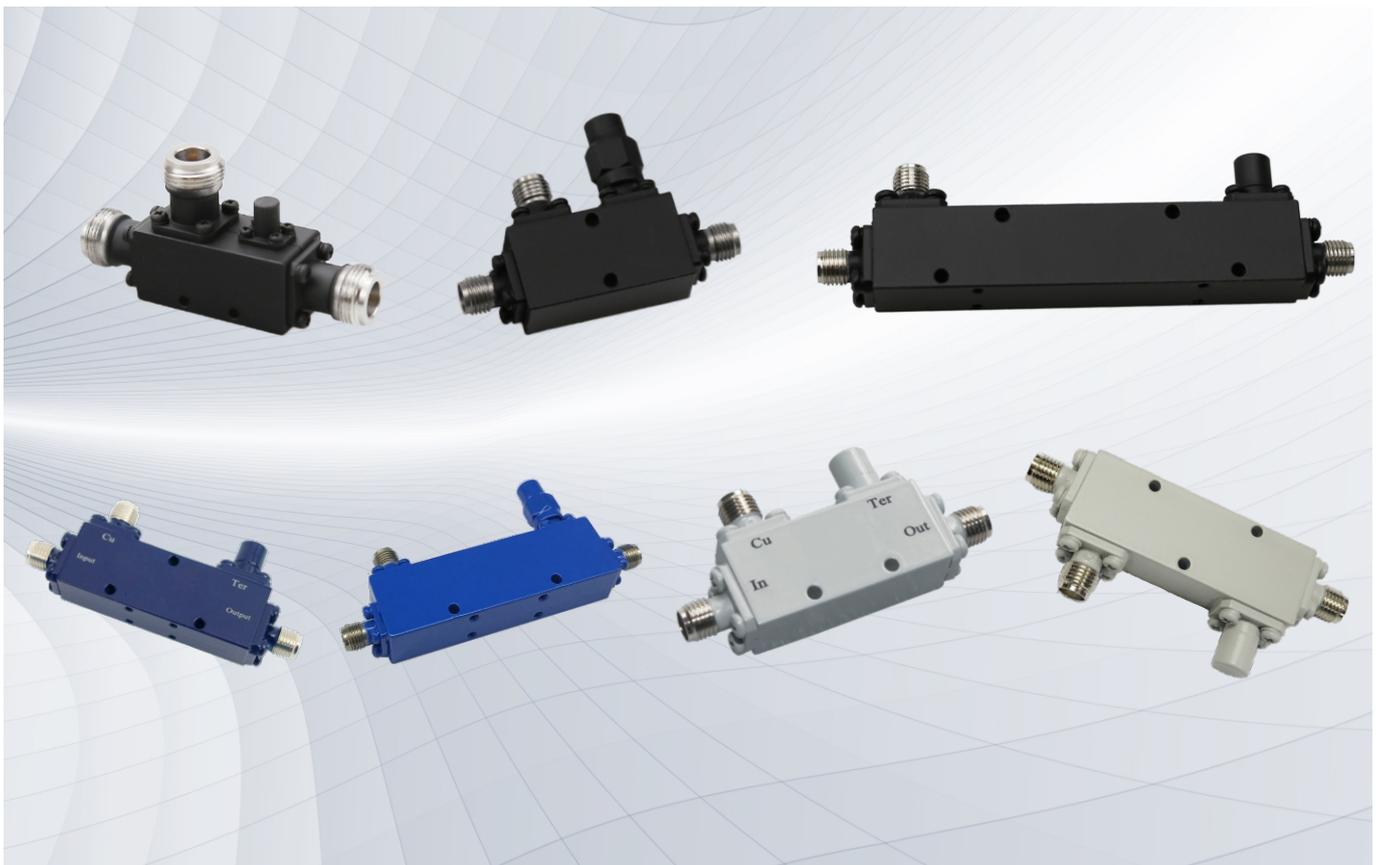
Directional coupler is a four-port passive device with an input port, an output port, a coupling signal port, and an internal termination port. Directional coupler is used to couple the energy of microwave signals and output a certain amount of coupling for monitoring purposes.

Our directional couplers are characterized by high frequency up to 45 GHz, broadband operation up to 40 octaves, high directivity, high power handling, high isolation, low insertion loss, etc.

The shelf products offered by Sainty-Tech are serialized and standardized according to standard frequency bands, making prompt response, fast delivery and competitive price possible.

All units can be used for a variety of different RF applications from signal sampling to signal generation and signal injection, such as Radar Systems, Communication Systems, Receivers Systems, etc.

There are various connector options: SMA, BNC, Type N, TNC, 1.85mm, 2.4mm, 2.92mm. Customized design is also available upon request.



Directional Coupler

Part Number	Low Freq. (GHz)	High Freq. (GHz)	Coupling (dB)	Max.I.L. (dB)	VSWR Max.	Coupling Accuracy (\pm dB)	Freq. Sensitivity (\pm dB)	Min. Directivity (dB)	Power (W)	Connector Type	Datasheet
DC1600006000MA	0.0002	6	16	3.0	1.50	-	-	27 ⁽¹⁾	1	SMA	
DC2000100050GB	0.1	0.5	20	0.4	1.25	1.0	1.0	20	20	N	
DC1000200600GA	0.2	6	10	1.0	1.30	-	1.0	18	50	SMA	
DC1000402650GA	0.4	26.5	10	2.2	1.60	0.8	1.2	10	20	SMA	
DC2000402650GA	0.4	26.5	20	1.7	1.60	0.8	1.2	10	20	SMA	
DC2000500275GN	0.5	2.75	20	0.5	1.25	1.0	0.8	20	30	N	
DC1000500600GA	0.5	6	10	1.2	1.20	1.0	0.7	18	50	SMA	
DC1500500600GA	0.5	6	15	0.7	1.30	1.0	0.7	18	50	SMA	
DC2000500600GA	0.5	6	20	0.5	1.25	1.0	1.0	18	50	SMA	
DC3000500600GA	0.5	6	30	0.7	1.20	1.0	1.0	18	50	SMA	
DC1600500600GA	0.5	6	16	3.0	1.50	-	-	30	1	SMA	
DC1000500800GA	0.5	8	10	1.8	1.30	1.0	1.0	16	30	SMA	
DC1000501800GA	0.5	18	10	1.9	1.60	1.0	1.0	10	50	SMA	
DC1000501800GB	0.5	18	10	2.5	1.45	1.0	1.2	12	20	SMA	
DC1000501800GN	0.5	18	10	2.3	1.60	1.0	1.0	10	50	N	
DC2000501800GA	0.5	18	20	1.3	1.60	1.0	1.0	10	50	SMA	
DC2000501800GN	0.5	18	20	1.5	1.60	1.0	1.0	10	50	N	
DC3000501800GA	0.5	18	30	1.2	1.60	1.0	1.0	10	50	SMA	
DC3000501800GN	0.5	18	30	1.2	1.60	1.0	1.0	10	60	N	
DC1300502650GC	0.5	26.5	13	2.1	1.60	1.0	1.5	10	20	SMA	
DC1000502650GB	0.5	26.5	10	2.1	1.60	1.0	1.5	10	20	SMA	
DC2000502650GB	0.5	26.5	20	1.7	1.60	1.0	1.5	10	20	SMA	
DC1000502650GC	0.5	26.5	10	2.8	1.70	1.6	0.6	10	30	SMA	
DC2000520600GB	0.52	6	20	0.5	1.25	1.0	1.0	22	50	SMA	
DC1000600400GA	0.6	4	10	0.4	1.30 ⁽²⁾	0.8	0.8	18	50	SMA	
DC3000600600GA	0.6	6	30	0.6	1.2@3G 1.3@6G	1.0	1.0	15	50	SMA	
DC0600700270GA	0.7	2.7	6	1.9	1.20	1.0	1.0	20	30	SMA	
DC1000800170GA	0.8	1.7	10	0.8	1.20	1.0	0.6	22	20	SMA	
DC2000800170GA	0.8	1.7	20	0.4	1.20	1.0	0.6	22	20	SMA	
DC2000800250GN	0.8	2.5	20	0.4	1.25	1.0	1.0	20	60	N	
DC3000800250GB	0.8	2.5	30	0.4	1.25	1.0	0.7	20	60	N	
DC2000802650GA	0.8	26.5	20	1.7	1.60	0.7	1.0	10	20	SMA	

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DC3500900900GN	0.9	9	35	0.5	1.50	1.0	1.0	15	250	N	
DC1000950215GN	0.95	2.15	10	0.8	1.30	1.0	1.0	18	20	N	
DC5001000200GA	1	2	50	0.4	1.30	1.0	0.5	12	20	SMA	
DC1001000400GA	1	4	10	0.9	1.20	1.0	0.7	20	50	SMA	
DC2001000400GA	1	4	20	0.4	1.20	1.0	0.7	20	50	SMA	
DC3001000800GA	1	8	30	0.6	1.20	1.0	1.0	20	50	SMA	
DC1001001800GB	1	18	10	1.4	1.50	1.0	0.9	12	25	SMA	
DC1001001800GH	1	18	10	1.4	1.40	0.7	1.0	15	20	SMA	
DC1301001800GH	1	18	13	1.2	1.40	0.7	1.0	15	20	SMA	
DC1601001800GN	1	18	16	1.3	1.60	1.0	1.0	15	20	N	
DC1601001800GH	1	18	16	1.0	1.40	0.5	1.0	15	20	SMA	
DC2001001800GA	1	18	20	0.9	1.60	1.0	1.0	12	50	SMA	
DC3001001800GA	1	18	30	1.0	1.60	1.0	1.0	12	50	SMA	
DC1001002650GA	1	26.5	10	1.6	1.60	1.0	1.0	10	20	SMA	
DC1001002650GH	1	26.5	10	1.6	1.60	0.7	1.0	13	20	SMA	
DC1301002650GH	1	26.5	13	1.4	1.60	0.7	1.0	13	20	SMA	
DC1601002650GH	1	26.5	16	1.2	1.60	0.5	1.0	13	20	SMA	
DC2001002650GA	1	26.5	20	1.6	1.60	1.0	1.0	10	20	SMA	
DC2001002650GH	1	26.5	20	1.6	1.60	0.5	1.0	13	20	SMA	
DC3001002650GA	1	26.5	30	1.6	1.80	1.0	1.0	10	30	SMA	
DC1001004000GH1	1	40	10	3.0	1.60	1.0	1.0	10	20	2.92mm	
DC1301004000GA	1	40	13	2.0	1.5@1-20G 1.8@20-40G	1.0	1.3	10	20	2.92mm	
DC2001004000GH1	1	40	20	2.2	1.60	1.0	1.0	10	20	2.92mm	
DC1001004000GB	1	40	10	2.5	1.80	1.0	1.2	10	20	2.92mm	
DC2001004000GB	1	40	20	2.0	1.60	1.0	1.0	10	30	2.92mm	
DC2001004000GC	1	40	20	1.9	1.70	0.7	1.0	10	20	2.92mm	
DC2001004000GD	1	40	20	1.6	1.60	1.0	1.0	10	20	2.92mm	
DC3001004000GB	1	40	30	2.0	1.60	1.0	1.0	10	30	2.92mm	
DC1301005000GA	1	50	13	3.5	1.80	1.0	1.6	8	50	2.4mm	
DC3002000240GN	2	2.4	30	0.4	1.30	0.8	0.8	20	30	N	
DC3002000300GA	2	3	30	0.4	1.20	1.0	0.6	20	50	SMA	
DC3002000600GA	2	6	30	0.4	1.20	1.0	1.0	20	50	SMA	

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DC1302000800GA	2	8	13	0.5	1.20	1.0	1.0	20	50	SMA	
DC4002000800GA	2	8	40	0.4	1.30	1.0	1.0	15	30	SMA	
DC1002000800GA	2	8	10	0.5	1.20	1.0	1.0	20	50	SMA	
DC3002000800GN	2	8	30	0.4	1.30	1.0	1.0	18	50	N	
DC2002001200GN	2	12	20	0.5	1.35	1.0	1.0	16	400@2-6G 300@8-12G	N	
DC1002001200GN	2	12	10	1.2	1.50	1.0	1.0	12	30	N	
DC1002001800GB	2	18	10	0.7	1.50	1.0	0.7	12	50	SMA	
DC1002001800GA	2	18	10	1.2	1.50	1.0	1.0	12	50	SMA	
DC1002001800GD	2	18	10	1.3	1.40	0.6	0.7	15	20	SMA	
DC1002001800GH	2	18	10	1.2	1.40	0.5	1.0	15	20	SMA	
DC1302001800GH	2	18	13	1.0	1.40	0.5	1.0	15	20	SMA	
DC1602001800GA	2	18	16	0.8	1.50	1.0	1.0	12	50	SMA	
DC1602001800GH	2	18	16	0.8	1.40	0.5	1.0	15	20	SMA	
DC2002001800GA	2	18	20	0.7	1.50	1.0	1.0	12	50	SMA	
DC2002001800GH	2	18	20	0.6	1.40	0.5	1.0	15	20	SMA	
DC2002001800GN	2	18	20	0.8	1.50	1.0	1.0	12	30	N	
DC3002001800GA	2	18	30	0.7	1.50	1.0	1.0	10	50	SMA	
DC3002001800GN	2	18	30	0.7	1.50	1.0	1.0	12	50	N	
DC4002001800GN	2	18	40	1.0	1.60	1.0	1.0	10	30	TNC/N	
DC1002002650GH	2	26.5	10	1.3	1.60	0.5	1.0	13	20	SMA	
DC1302002650GH	2	26.5	13	1.0	1.60	0.5	1.0	13	20	SMA	
DC1002004000GB	2	40	10	2.5	1.60	1.0	1.0	10	30	2.92mm	
DC1002004000GH	2	40	10	2.0	1.60	0.5	1.0	11	20	2.92mm	
DC1302004000GH	2	40	13	1.8	1.60	0.5	1.0	11	20	2.92mm	
DC1602004000GH	2	40	16	1.5	1.60	0.5	1.0	11	20	2.92mm	
DC2002004000GB	2	40	20	1.8	1.60	1.0	1.0	10	30	2.92mm	
DC2002004000GH	2	40	20	1.4	1.60	0.5	1.0	11	20	2.92mm	
DC3002004000GB	2	40	30	1.8	1.60	1.0	1.0	10	30	2.92mm	
DC2002005000GH	2	50	20	1.5	1.80	0.5	1.0	10	20	2.4mm	
DC1002005200GC	2	52	10	3.5	1.60	1.0	1.0	10	30	1.85mm	
DC5002020212GN	2.025	2.125	50	0.4	1.30	1.0	0.5	20	50	N	
DC1002200230GN	2.2	2.3	10	0.4	1.25	1.0	0.5	20	50	N	

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DC3002200230GA	2.2	2.3	30	0.5	1.20	0.8	0.7	20	30	N	
DC3002200230GN	2.2	2.3	30	0.4	1.25	1.0	0.5	20	50	N	
DC4002200230GN	2.2	2.3	40	0.4	1.30	1.0	0.7	15	50	N	
DC1002400720GA	2.4	7.2	10	0.4	1.50	1.0	1.0	17	60	SMA	
DC0603700710GA	3.7	7.1	6	1.8	1.20	0.3	0.5	18	30	SMA	
DC1003700710GA	3.7	7.1	10	0.8	1.20	0.3	0.5	20	30	SMA	
DC0604000600GA	4	6	6	1.7	1.20	1.0	0.5	20	30	SMA	
DC1004000600GA	4	6	10	0.8	1.20	1.0	0.5	20	30	SMA	
DC1504000600GA	4	6	15	0.4	1.20	1.0	1.0	20	50	SMA	
DC1004000800GB	4	8	10	0.3	1.25	1.25	0.75	20	50	SMA	
DC3004000800GB	4	8	30	0.3	1.25	1.25	0.75	20	50	SMA	
DC0604001800GA	4	18	6	2.1	1.50	1.0	0.8	12	50	SMA	
DC1004001800GA	4	18	10	1.1	1.50	1.0	0.8	12	50	SMA	
DC1004001800GN	4	18	10	1.4	1.50	1.0	0.7	12	50	N	
DC2004001800GA	4	18	20	0.6	1.50	1.0	0.8	12	50	SMA	
DC3004001800GA	4	18	30	0.5	1.50	1.0	1.0	12	50	SMA	
DC1006001800GH	6	18	10	1.0	1.40	0.5	0.5	15	20	SMA	
DC1306001800GH	6	18	13	0.8	1.40	0.5	0.5	15	20	SMA	
DC1606001800GH	6	18	16	0.8	1.40	0.9	0.5	15	20	SMA	
DC2006001800GH	6	18	20	0.6	1.40	0.5	0.5	15	20	SMA	
DC3006001800GA	6	18	30	0.6	1.50	1.0	0.7	12	50	SMA	
DC3006001800GH	6	18	30	0.5	1.40	0.5	0.8	15	20	SMA	
DC4006001800GA	6	18	40	1.0	1.50	1.0	1.0	10	30	SMA	
DC1006002650GH	6	26.5	10	1.3	1.60	0.5	0.6	13	20	SMA	
DC1306002650GH	6	26.5	13	1.0	1.60	0.5	0.6	13	20	SMA	
DC1606002650GH	6	26.5	16	0.9	1.60	0.5	0.6	13	20	SMA	
DC2006002650GH	6	26.5	20	0.7	1.50	1.0	1.0	12	20	SMA	
DC2006002650GN	6	26.5	20	0.8	1.60	0.5	0.6	13	20	SMA	
DC3006002650GH	6	26.5	30	0.8	1.60	0.5	0.6	13	20	SMA	
DC1006004000GH	6	40	10	1.5	1.60	0.5	0.7	11	20	2.92mm	
DC1506800700GB	6.8	7	15	0.5	1.20	0.5	0.5	20	30	2.92mm	
DC2007001240GB	7	12.4	20	0.3	1.30	1.0	0.5	17	50	SMA	

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DC3007500850GN	7.5	8.5	30	0.4	1.30	0.8	0.5	16	30	N	
DC3008004000GA	8	40	30	1.2	1.60	1.2	1.0	14	20	2.92mm	
DC3008004000GB	8	40	30	1.6	1.60	1.0	1.0	10	30	2.92mm	
DC1010005000GA	10	50	10	1.8	1.80	0.7	0.8	10	14	2.4mm	
DC2012001800GA	12	18	20	0.6	1.50	1.0	1.0	15	20	SMA	
DC1012004000GA	12	40	10	1.3	1.60	1.0	1.0	10	20	2.92mm	
DC1012401800GA	12.4	18	10	1.2	1.50	1.0	1.0	14	50	SMA	
DC1016002300GA	16	23	10	1.5	1.50	1.0	0.8	12	20	SMA	
DC2016002300GA	16	23	20	0.8	1.50	1.0	0.8	13	20	SMA	
DC3018002400GB	18	24	30	1.0	1.50	1.0	0.6	10	20	2.92mm	
DC1018002650GA	18	26.5	10	0.6	1.50	1.0	0.8	10	30	SMA	
DC2018002650GA	18	26.5	20	1.0	1.50	1.0	1.0	10	30	SMA	
DC3018004000GB	18	40	30	1.6	1.60	1.0	1.0	10	20	2.92mm	
DC1026504000GB	26.5	40	10	2.1	1.65	1.0	0.7	10	30	2.92mm	
DC2026504000GB	26.5	40	20	1.6	1.80	1.0	0.8	10	30	2.92mm	
DC2027002950GA	27	29.5	20	1.0	1.60	1.0	0.6	10	20	2.92mm	
DC1027003100GA	27	31	10	1.4	1.50	1.0	0.7	12	10	2.92mm	
DC1027003100GAH	27	31	10	1.8	1.60	1.0	1.0	10	10	2.92mm	
DC2027003100GA	27	31	20	1.2	1.60	1.0	0.6	11	30	2.92mm	
DC1030004500GA	30	45	10	1.8	1.80	0.8	0.8	10	15	2.4mm	

Remarks :

[1] 27min@ 200MHz-6GHz , 20typ@ 200KHz-200MHz

[2] Max VSWR Primary=1.25 , Max VSWR Secondary=1.3



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