

DIRECTIONAL COUPLERS

High Power, 6.7 to 40 dB Coupling
5 kHz to 4.6 GHz



ZK30-BD
Case GW1052



ZK30
Case FL905



ZEDC
Case V37



ZFDC, Z30
Case K18



ZFBDC
ZFDC-20-1H
Case J17



ZFBDC20
Case JD1252



ZNDC
Case FM587

MODEL PREFIX	FREQUENCY (MHz) f_L - f_U	COUPLING (dB) Typ.		MAINLINE LOSS (dB)						DIRECTIVITY (dB)						VSWR (:1) Typ.	POWER INPUT, W	
		Nom.	Flatness	Typ.	L Max.	M Max.	U Max.	Typ.	L Max.	Typ.	L Min.	M Min.	U Min.	Typ.	L Min.		L Max.	MU Max.

DIRECTIONAL COUPLERS 50 Ω

ZADC-6-2G-5W	800-2000	6.7 $\pm$ 1.0	$\pm$ 1.3	1.6	1.9	1.6	1.9	1.6	1.9	25	17	25	17	25	17	1.15	5.0	5.0
ZK30-9-4	5-1200	8.9 $\pm$ 0.5	$\pm$ 0.1	1.10	1.4	1.1	1.4	1.3	1.8	21	19	20	15	16	12	1.20	0.5	1.0
ZADC-10-17	1000-1700	9.8 $\pm$ 0.5	$\pm$ 1.0	0.8	1.3	0.8	1.3	0.8	1.3	25	17	25	17	25	17	1.20	5.0	5.0
ZADC-10-10	800-1000	10 $\pm$ 0.6	$\pm$ 1.0	0.8	1.2	0.8	1.2	0.8	1.2	22	17	22	17	22	17	1.16	5.0	5.0
ZADC-10-17W	800-1900	10.2 $\pm$ 1.0	$\pm$ 1.5	0.8	1.3	0.8	1.3	0.8	1.3	24	14	24	14	24	14	1.20	5.0	5.0
ZFDC-10-1	1-500	10.5 $\pm$ 0.25	$\pm$ 0.6	1.00	1.3	0.8	1.1	1.0	1.3	32	25	33	25	22	15	1.20	1.5	3.0
ZFDC-10-2	10-1000	10.75 $\pm$ 0.5	$\pm$ 0.5	1.50	2.0	1.2	1.8	1.5	2.0	35	28	30	25	27	20	1.50	1.5	3.0
ZFDC-10-5	1-2000	10.8 $\pm$ 0.5	$\pm$ 0.5	1.20	1.9	1.2	1.8	1.8	2.5	38	25	30	18	22	18	1.30	0.5	0.5
ZFDC-10-6	0.005-20	11 $\pm$ 0.5	$\pm$ 0.5	0.40	1.2	0.4	0.8	0.4	1.0	40	30	40	30	35	25	1.30	1.5	3.0
ZFDC-10-22	1-750	11 $\pm$ 0.5	$\pm$ 0.5	1.10	1.9	1.2	1.7	1.4	1.9	35	30	25	20	25	20	1.25	1.0	2.0
ZEDC-10-2B	1-1000	11 $\pm$ 0.5	$\pm$ 0.75	1.30	1.8	1.5	1.8	1.5	1.8	35	30	30	20	18	13	1.30	1.5	3.0
ZEDC-10-21	1-1000	11 $\pm$ 0.5	$\pm$ 0.5	1.20	2.1	1.2	1.7	1.60	2.0	40	30	30	25	20	20	1.20	1.0	2.0
ZDC-10-1	0.5-500	11.5 $\pm$ 0.5	$\pm$ 0.6	0.85	1.3	0.6	1.0	0.85	1.3	32	25	32	25	22	15	1.20	1.5	3.0
ZMDC-10-1	0.5-500	11.5 $\pm$ 0.5	$\pm$ 0.6	0.85	1.3	0.6	1.0	0.85	1.3	32	25	32	25	22	15	1.20	1.5	3.0
ZK30-12-4	5-1000	12.0 $\pm$ 0.5	$\pm$ 0.3	0.70	1.0	0.75	1.0	0.90	1.2	35	28	25	20	20	13	1.15	0.5	1.0
ZK30-13-4	5-1200	13.0 $\pm$ 0.5	$\pm$ 0.3	0.60	0.9	0.7	1.1	0.90	1.5	21	18	19	15	15	10	1.15	0.5	1.0
ZNDC-13-2G	800-2000	13.0 $\pm$ 0.5	$\pm$ 0.35	0.8	1.3	0.8	1.3	0.8	1.3	20	14	20	14	20	14	1.20	3.0	3.0
ZFDC-15-6	0.03-35	15 $\pm$ 0.5	$\pm$ 0.5	0.30	0.6	0.2	0.4	0.30	0.6	38	30	35	25	28	20	1.15	2.0	4.0
ZEDC-15-2B	1-1000	15 $\pm$ 0.5	$\pm$ 0.5	0.50	1.4	0.8	1.2	1.00	1.4	35	30	30	20	25	15	1.15	1.5	3.0
ZFDC-15-10	800-1000	15 $\pm$ 1.0	$\pm$ 1.0	0.3	0.7	0.3	0.7	0.3	0.7	23	17	23	17	23	17	1.20	5.0	5.0
ZNDC-15-2G	800-2000	15 $\pm$ 0.5	$\pm$ 0.3	0.8	1.3	0.8	1.3	0.8	1.3	23	14	23	14	23	14	1.20	3.0	3.0
ZFDC-15-5	1-2000	15.5 $\pm$ 0.5	$\pm$ 1.0	1.20	1.8	1.2	1.8	1.30	2.3	30	20	25	20	18	11	1.30	0.5	2.0
ZADC-17-14HP	500-1350	16.4 $\pm$ 0.9	$\pm$ 1.3	0.8	1.5	0.8	1.5	0.8	1.5	29	16	29	16	29	16	1.06	10.0	10.0
ZK30-17-5	5-2000	17.5 $\pm$ 0.9	$\pm$ 0.4	0.7	1.7	0.7	1.7	0.7	1.7	16	9	16	9	16	9	1.30	0.5	1.0
ZNDC-18-2G	800-2000	18.2 $\pm$ 0.5	$\pm$ 0.4	0.5	1.1	0.5	1.1	0.5	1.1	25	14	25	14	25	14	1.20	3.0	3.0
ZDC-20-3	0.2-250	19.5 $\pm$ 0.5	$\pm$ 0.5	0.35	0.6	0.2	0.5	0.35	0.6	36	30	33	25	25	20	1.20	1.5	4.0
ZFDC-20-3	0.2-250	19.5 $\pm$ 0.5	$\pm$ 0.25	0.35	0.6	0.2	0.5	0.35	0.6	36	25	33	25	25	20	1.20	1.5	4.0
ZMDC-20-3	0.2-250	19.5 $\pm$ 0.5	$\pm$ 0.5	0.35	0.6	0.35	0.5	0.35	0.6	36	30	33	25	25	20	1.20	1.5	4.0
ZFDC-20-4	1-1000	19.5 $\pm$ 0.5	$\pm$ 0.5	0.40	1.2	0.4	0.8	0.80	1.5	36	28	27	20	23	18	1.10	0.5	2.0
ZFDC-20-5	0.1-2000	19.5 $\pm$ 0.5	$\pm$ 0.5	0.30	1.0	0.7	1.4	1.50	2.3	30	20	27	20	22	10	1.20	0.5	2.0
ZFDC-20-50	20-2000	19.5 $\pm$ 0.5	$\pm$ 0.8	0.80	1.3	0.7	1.3	1.00	1.6	30	20	25	20	22	10	1.25	1.0	1.0
ZDC-20-1	25-400	20 $\pm$ 0.5	$\pm$ 0.5	0.20	0.25	0.3	0.35	0.35	0.5	25	20	35	25	25	20	1.25	3.0	5.0
ZNDC-20-2G	800-2000	20 $\pm$ 0.5	$\pm$ 0.5	0.5	1.1	0.5	1.1	0.5	1.1	25	14	25	14	25	14	1.15	3.0	3.0
ZADC-20-10	800-1000	20 $\pm$ 0.6	$\pm$ 1.2	0.4	0.7	0.4	0.7	0.4	0.7	21	17	21	17	21	17	1.18	5.0	5.0
ZADC-20-50DC	800-1600	20 $\pm$ 1.0	$\pm$ 1.1	0.8	1.0	0.8	1.0	0.8	1.0	20	11	20	11	20	11	1.20	5.0	5.0
ZFDC-20-4L	10-1000	20.2 $\pm$ 0.5	$\pm$ 0.5	0.20	0.5	0.3	0.7	0.70	1.2	40	20	30	16	20	14	1.10	1.0	1.0
ZK30-20-4	5-1000	20.5 $\pm$ 0.6	$\pm$ 0.5	0.30	0.5	0.3	0.6	0.60	0.9	21	19	22	19	19	11	1.11	1.0	1.0
ZNDC-23-2G	800-2000	23.0 $\pm$ 0.5	$\pm$ 0.4	0.5	1.1	0.5	1.1	0.5	1.1	25	14	25	14	25	14	1.20	3.0	3.0
ZMDC-30-1	0.1-250	30 $\pm$ 0.5	$\pm$ 0.5	0.40	0.6	0.5	0.8	0.55	0.85	23	18	20	15	17	10	1.50	1.0	3.0
ZADC-30-10	800-1000	30 $\pm$ 0.6	$\pm$ 1.4	0.4	0.7	0.4	0.7	0.4	0.7	21	16	21	16	21	16	1.15	5.0	5.0

DIRECTIONAL COUPLERS 75 Ω

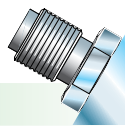
ZDC-2375	50-100	10.5 $\pm$ 0.3	$\pm$ 0.2	—	—	—	—	1.10	1.3	—	—	—	—	35	30	1.30	4.0	4.0
ZDC-10-1-75	1-250	10.5 $\pm$ 0.5	$\pm$ 0.75	1.10	1.5	1.1	1.5	1.10	1.5	30	20	30	20	30	20	2.00	2.0	4.0
ZFDC-10-1-75	1-400	10.5 $\pm$ 0.5	$\pm$ 0.5	1.00	1.7	1.1	1.5	1.10	1.6	46	30	44	28	34	20	1.30	2.0	4.0
Z30-10-4-75	5-1000	10.5 $\pm$ 0.5	$\pm$ 0.3	1.50	2.5	1.5	2.3	1.50	2.2	22	16	21	14	19	—	1.30	0.5	1.0
ZADC-10-4-75	10-1000	10.7 $\pm$ 0.5	$\pm$ 0.5	1.18	1.9	1.2	1.9	1.32	1.9	27	20	22	15	18	13	1.17	1.0	1.0
ZFDC-10-21-75	10-750	11 $\pm$ 0.5	$\pm$ 0.75	1.50	1.8	1.5	1.9	1.70	2.1	36	30	30	20	26	20	1.40	1.0	2.0
Z30-13-5-75	5-1500	13.5 $\pm$ 0.5	$\pm$ 0.7	0.85	1.4	0.9	2.2	1.00	1.7	22	17	20	14	19	—	1.30	0.5	1.0
Z30-16-5-75	5-1500	16.5 $\pm$ 0.5	$\pm$ 0.9	1.10	2.0	1.1	1.1	1.20	1.9	22	16	24	—	24	—	1.30	0.5	1.0
Z30-18-4-75	5-1000	18.5 $\pm$ 0.5	$\pm$ 0.9	0.80	1.5	0.85	1.5	0.95	1.6	28	17	23	16	15	—	1.30	1.0	1.0
ZDC-20-3-75-1	55-90	18.6 $\pm$ 0.5	$\pm$ 0.3	0.40	0.6	0.4	0.6	0.40	0.6	35	30	35	30	35	30	1.20	4.0	4.0
ZFDC-20-3-75	10-250	19.3 $\pm$ 0.5	$\pm$ 0.3	0.25	0.4	0.3	0.5	0.40	0.6	29	25	29	25	28	24	1.20	1.0	2.0
ZDC-20-3-75	1-150	19.5 $\pm$ 0.5	$\pm$ 0.75	0.35	0.8	0.35	0.8	0.35	0.8	25	20	25	20	25	20	2.00	2.0	4.0
ZADC-20-18-75	800-1750	19.8 $\pm$ 0.6	$\pm$ 0.7	0.4	0.9	0.4	0.9	0.4	0.9	22	13	22	13	22	13	1.20	4.0	1.0
ZADC-20-7550DC	800-1450	20 $\pm$ 1.5	—	0.8	1.2	0.8	1.2	0.8	1.2	24	16	24	16	24	16	1.15	5.0	5.0
ZFDC-20-5-75	100-1500	20.5 $\pm$ 0.5	$\pm$ 0.75	0.90	1.3	0.9	1.2	1.10	1.5	30	20	25	18	22	13	1.30	1.0	1.0

L = low range (f_L to $10f_L$)

M = mid range ($10f_L$ to $f_U/2$)

U = upper range ($f_U/2$ to f_U)





MODEL PREFIX	FREQUENCY (MHz) f _L -f _U	COUPLING (dB) Typ. Nom. Flatness		MAINLINE LOSS (dB) Typ. ^L Max. Typ. ^M Max. Typ. ^U Max.						DIRECTIVITY (dB) Typ. ^L Min. Typ. ^M Min. Typ. ^U Min.						VSWR (:1) Typ.	POWER INPUT, W ^L Max ^{MU} Max.			
		BI-DIRECTIONAL COUPLERS 50 Ω																		
		ZABDC10-25HP	1500-2500	10.0±1.0	±0.5	0.55	0.9	0.55	0.9	0.55	0.9	26	18	26	18		26	18	1.10	10
ZABDC20-2400	1500-2400	19.5±1.0	±1.0	0.3	0.5	0.3	0.5	0.3	0.5	25	18	25	18	25	18	1.20	10	10		
ZFBDC20-62HP	10-600	20.0±0.5	±0.9	0.25	0.70	0.25	0.70	0.25	0.70	25	16	25	16	25	16	1.05	25	25		
ZFBDC20-13HP	40-1000	20.0±0.5	±1.2	0.6	1.0	0.6	1.0	0.6	1.0	22	16	22	16	22	16	1.20	10	10		
ZFBDC20-61HP	1-60	20.0±0.6	±0.3	0.1	0.25	0.1	0.25	0.1	0.25	30	20	30	20	30	20	1.07	15	15		
ZABDC20-182HP	750-1800	20.0±1.0	±0.6	0.20	0.35	0.20	0.35	0.20	0.35	25	19	25	19	25	19	1.08	50	50		
ZABDC20-252H	800-2500	20.0±2.0	—	0.20	0.35	0.20	0.35	0.20	0.35	28	20	28	20	28	20	1.05	50	50		
ZFBDC20-970HP	860-970	20.4±0.6	±0.6	0.1	0.4	0.1	0.4	0.1	0.4	28	20	28	20	28	20	1.10	10	10		
ZFDC-20-1H	30-400	20.5±0.5	±0.4	0.15	0.4	0.15	0.4	0.3	0.4	30	25	30	25	30	23	1.20	25	25		
ZABDC20-322H	1700-3200	20.5±1.0	±1.3	0.25	0.35	0.25	0.35	0.25	0.35	21	13	21	13	21	13	1.10	50	50		
ZFBDC20-900HP	800-900	20.7±0.6	±0.6	0.1	0.4	0.1	0.4	0.1	0.4	28	20	28	20	28	20	1.10	10	10		
ZX30-20-20BD	500-2000	21.0±1.0	±2.2	0.2	0.5	0.2	0.5	0.2	0.5	21	14	21	14	21	14	1.20	2.0	2.0		
ZBDC25-2575W	1270-2575	24.9±1.1	±0.8	0.3	0.5	0.3	0.5	0.3	0.5	28	20	28	20	28	20	1.05	20	20		
ZBDC40-1450W	550-1450	39.9±1.5	±1.5	0.15	0.4	0.15	0.4	0.15	0.4	24	18	24	18	24	18	1.12	50	50		
ZX30-20-462HP	2600-4600	19.3±0.8	±0.4	0.35	0.6	0.35	0.6	0.35	0.6	20	12	—	—	25	14	1.20	40	40		

BI-DIRECTIONAL COUPLERS 75 Ω

ZABDC20-25H75	700-2500	20.0 $\pm$ 0.8	$\pm$ 0.8	0.15	0.35	0.15	0.35	0.15	0.35	25	15	25	15	25	15	1.08	25	25
L = low range (f_L to 10 f_L) M = mid range (10 f_L to $f_U/2$) U = upper range ($f_U/2$ to f_U)																		

DC BLOCKS Very Wideband, 50 & 75 Ω
0.1 MHz to 18000 MHz



MODEL PREFIX	FREQUENCY RANGE (GHz)	INSERTION LOSS (dB)		RETURN LOSS (dB)	
		Typ.	Max.	Typ.	Min.
SMA	50 Ω BLK-18	0.01-18			
		0.01-0.1	0.02 0.2	26	20
		0.1-1.0	0.07 0.3	36	20
		1.0-4.0	0.15 0.5	24	20
		4.0-8.0	0.38 1.0	18	15
		8.0-18	1.00 —	12	—
	BLK-89	0.0001-8.0			
		0.0001-0.1	0.010 0.09	40	20
		0.1-1.0	0.10 0.3	36	25
		1.0-4.0	0.15 0.8	24	18
TYPE-N	BLK-6	0.01-6.0			
		0.01-1.0	0.05 0.20	45	30
		1.0-3.0	0.12 0.40	30	18
		3.0-4.0	0.25 0.60	22	14
		4.0-6.0	0.50 1.00	17	—
BNC	BLK-222 75 Ω BLK-222-75	0.01-2.2			
		0.01-0.1	0.02 0.10	44	33
		0.1-0.5	0.05 0.20	30	22
		0.5-1.0	0.08 0.30	25	17
		1.0-2.2	0.15 0.70	23	16

