

**DC PASS**  
**Bi-Directional Coupler**

**ZGBDC20-33H-S+**

*Typical Performance Data*

FREQ. (MHz)	INSERTION LOSS <sup>(1)</sup> (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
	100	0.03	0.02	34.3	34.3	25.9	26.0	32.5	33.8	33.2
150	0.03	0.03	30.9	30.9	26.5	26.8	30.4	30.0	30.0	30.1
200	0.05	0.04	28.5	28.5	26.2	26.0	28.3	28.2	28.1	28.2
250	0.06	0.05	26.8	26.7	25.9	26.4	26.7	26.7	26.6	26.6
300	0.07	0.06	25.4	25.4	25.7	26.4	25.8	25.6	25.7	25.8
350	0.08	0.07	24.3	24.3	25.5	26.4	25.1	24.9	24.8	24.9
360	0.08	0.08	24.1	24.1	25.5	26.5	25.0	24.9	24.7	24.8
370	0.08	0.08	23.9	23.9	25.5	26.6	25.0	24.8	24.6	24.7
380	0.08	0.08	23.7	23.7	25.5	26.6	24.9	24.7	24.6	24.6
390	0.08	0.08	23.5	23.5	25.5	26.6	24.9	24.7	24.5	24.6
400	0.09	0.08	23.4	23.4	25.4	26.7	24.9	24.6	24.4	24.5
450	0.09	0.09	22.6	22.6	25.2	26.8	24.6	24.6	24.2	24.2
500	0.10	0.10	22.0	22.0	25.2	26.9	24.8	24.7	24.2	24.4
550	0.10	0.10	21.6	21.5	25.0	27.2	24.9	24.8	24.4	24.4
600	0.11	0.11	21.2	21.1	25.0	27.4	25.7	25.6	24.9	25.1
650	0.11	0.11	20.9	20.9	25.1	28.0	26.4	26.4	25.6	25.7
700	0.11	0.11	20.7	20.6	25.2	28.2	27.9	27.8	26.6	26.9
800	0.12	0.12	20.5	20.4	25.9	29.2	32.4	32.2	30.0	30.0
850	0.12	0.12	20.4	20.4	26.6	30.0	36.3	36.8	32.9	32.8
900	0.12	0.12	20.4	20.4	27.5	30.8	44.4	44.8	36.8	36.2
950	0.12	0.12	20.5	20.4	28.6	32.0	41.4	41.9	41.1	38.3
1000	0.12	0.12	20.5	20.5	30.4	33.9	35.2	34.8	37.8	36.5
1050	0.12	0.13	20.6	20.6	32.4	36.3	31.1	30.8	33.5	33.2
1100	0.13	0.13	20.7	20.6	34.8	42.2	28.5	28.4	30.8	30.5
1150	0.13	0.13	20.8	20.7	34.7	53.8	26.6	26.5	28.5	28.5
1200	0.14	0.14	20.8	20.8	32.5	41.0	25.3	25.1	27.1	27.1
1250	0.14	0.14	20.9	20.8	29.1	35.2	24.3	24.2	26.0	26.1
1300	0.14	0.14	20.9	20.9	26.8	31.2	23.5	23.4	25.3	25.3
1350	0.15	0.15	20.9	20.9	24.6	28.4	23.2	23.1	24.7	24.9
1400	0.15	0.15	20.9	20.9	23.0	26.6	23.0	23.0	24.3	24.6
1450	0.15	0.16	20.9	20.8	21.7	24.9	23.1	23.0	24.3	24.5
1500	0.15	0.15	20.9	20.8	20.6	24.0	23.3	23.4	24.3	24.5
1550	0.16	0.16	20.8	20.7	19.8	23.0	23.9	23.7	24.6	24.8
1600	0.16	0.16	20.8	20.7	19.3	22.6	24.7	24.7	25.0	25.1
1650	0.16	0.16	20.7	20.6	18.8	22.2	25.7	25.6	25.6	25.7
1700	0.16	0.16	20.7	20.6	18.5	21.9	26.8	27.2	26.3	26.1
1750	0.16	0.16	20.6	20.5	18.4	21.8	28.9	29.5	27.3	26.7
1800	0.15	0.16	20.6	20.5	18.4	21.9	30.9	32.4	28.3	27.2
1850	0.15	0.16	20.6	20.5	18.5	22.1	34.1	38.2	29.6	27.6
1900	0.15	0.17	20.7	20.5	18.8	22.4	36.6	55.0	31.0	28.0
1950	0.16	0.16	20.7	20.6	19.0	23.0	34.6	39.2	32.3	28.2
2000	0.16	0.17	20.8	20.7	19.6	23.6	32.5	32.9	33.6	28.5
2050	0.16	0.16	20.8	20.7	20.2	24.4	29.5	29.9	33.7	28.4
2100	0.16	0.17	20.9	20.8	21.2	25.6	28.1	27.6	33.4	28.7
2150	0.16	0.16	20.9	20.8	22.0	26.5	26.5	26.3	32.3	28.8
2200	0.17	0.17	21.0	20.9	23.0	28.3	25.6	25.2	31.3	29.1
2250	0.17	0.17	21.0	20.9	23.7	29.9	24.7	24.6	30.2	28.9
2300	0.18	0.18	21.0	21.0	24.1	32.5	24.4	24.0	29.3	29.0
2350	0.18	0.17	21.0	21.0	23.7	33.4	23.8	23.8	28.5	28.7
2400	0.18	0.18	21.1	21.0	23.0	33.6	24.0	23.6	27.8	28.6
2450	0.18	0.18	21.0	20.9	22.0	30.5	23.8	23.8	27.1	28.0
2500	0.19	0.19	21.0	20.9	21.0	28.2	24.4	24.0	26.7	27.6
2550	0.19	0.19	21.0	20.9	19.9	25.4	24.6	24.5	26.3	27.0
2600	0.19	0.20	20.9	20.8	19.2	23.7	25.7	25.3	26.1	26.7
2650	0.19	0.20	20.9	20.8	18.5	22.1	26.3	26.2	25.8	26.3
2700	0.19	0.20	20.9	20.7	18.0	20.8	28.2	27.7	25.8	26.0
2750	0.20	0.20	20.8	20.7	17.6	20.0	29.4	29.6	25.8	25.9
2800	0.20	0.21	20.8	20.6	17.2	19.2	31.7	31.2	26.1	25.8
2850	0.20	0.21	20.8	20.6	17.2	18.8	33.9	34.0	26.4	26.0
2900	0.20	0.21	20.8	20.6	17.0	18.2	37.1	34.4	27.1	26.3
2950	0.20	0.21	20.8	20.6	16.9	18.0	40.1	35.3	27.9	26.7
3000	0.19	0.20	20.9	20.7	17.1	17.8	39.1	32.5	28.8	27.2
3050	0.20	0.21	20.9	20.7	17.1	18.1	37.5	31.4	30.5	28.1
3100	0.19	0.19	20.9	20.8	17.4	18.3	34.1	28.9	32.3	28.8
3150	0.21	0.21	21.0	20.8	17.7	18.9	32.6	28.0	35.5	30.2
3200	0.20	0.19	21.0	20.9	18.0	19.6	30.5	26.8	39.5	31.2
3250	0.21	0.21	21.1	21.0	18.6	20.5	29.2	26.3	42.0	32.4
3300	0.20	0.20	21.1	21.0	18.9	21.4	27.7	25.6	37.7	32.6
3350	0.23	0.22	21.1	21.0	19.2	22.2	26.6	24.8	33.6	31.7
3400	0.30	0.27	20.6	22.2	22.3	17.3	28.8	24.9	31.4	33.9
3450	0.23	0.23	21.2	21.1	22.6	27.2	25.5	24.6	29.1	29.4
3475	0.21	0.21	21.2	21.1	22.7	27.2	25.4	24.4	28.2	28.8
3500	0.21	0.21	21.2	21.1	22.6	27.2	25.3	24.3	27.5	28.3

<sup>(1)</sup> Does not include coupling loss



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