COMPUTATION AIDS

COMBINATION OF TWO QUANTITIES IN DECIBELS

When combining gains, add the combining term to the larger; when combining losses, subtract the combining term from the smaller.

COMBINATION ON POWER RATIO (RANDOM) BASIS

Difference Between the Two Quantities	Combining Term	Difference Between the Two Quantities	Combining Term	Difference Between the Two Quantities	Combining Term
0 – .1	3.0	2.2 – 2.4	2.0	5.7 – 6.1	1.0
.2 – .3	2.9	2.5 – 2.7	1.9	6.2 – 6.6	.9
.4 – .5	2.8	2.8 – 3.0	1.8	6.7 – 7.2	.8
.6 – .7	2.7	3.1 – 3.3	1.7	7.3 – 7.9	.7
.8 – .9	2.6	3.4 – 3.6	1.6	8.0 – 8.6	.6
1.0 – 1.2	2.5	3.7 – 4.0	1.5	8.7 – 9.6	.5
1.3 – 1.4	2.4	4.1 – 4.3	1.4	9.7 – 10.7	.4
1.5 – 1.6	2.3	4.4 – 4.7	1.3	10.8 – 12.2	.3
1.7 – 1.9	2.2	4.8 – 5.1	1.2	12.3 – 14.5	.2
2.0 – 2.1	2.1	5.2 – 5.6	1.1	14.6 – 19.3	.1
				19.4 up	0

COMBINATION ON VOLTAGE OR CURRENT RATIO (IN PHASE) BASIS

Difference Between the Two Quantities	Combining Term	Difference Between the Two Quantities	Combining Term	Difference Between the Two Quantities	Combining Term
0 – .1	6.0	4.6 – 4.7	4.0	11.6 – 11.9	2.0
.2 – .3	5.9	4.8 – 5.0	3.9	12.0 – 12.5	1.9
.4 – .5	5.8	5.1 – 5.3	3.8	12.6 – 13.0	1.8
.6 – .7	5.7	5.4 – 5.6	3.7	13.1 – 13.5	1.7
.8 – .9	5.6	5.7 – 5.9	3.6	13.6 – 14.1	1.6
1.0 – 1.1	5.5	6.0 – 6.2	3.5	14.2 – 14.8	1.5
1.2 – 1.3	5.4	6.3 – 6.5	3.4	14.9 – 15.4	1.4
1.4 – 1.6	5.3	6.6 – 6.8	3.3	15.5 – 16.2	1.3
1.7 – 1.8	5.2	6.9 – 7.1	3.2	16.3 – 16.9	1.2
1.9 – 2.0	5.1	7.2 – 7.5	3.1	17.0 – 17.8	1.1
2.1 – 2.2	5.0	7.6 – 7.8	3.0	17.9 – 18.7	1.0
2.3 – 2.5	4.9	7.9 – 8.2	2.9	18.8 – 19.7	.9
2.6 – 2.7	4.8	8.3 – 8.5	2.8	19.8 – 20.9	.8
2.8 – 2.9	4.7	8.6 – 8.9	2.7	21.0 – 22.1	.7
3.0 – 3.2	4.6	9.0 – 9.3	2.6	22.2 – 23.6	.6
3.3 – 3.4	4.5	9.4 – 9.7	2.5	23.7 – 25.4	.5
3.5 – 3.7	4.4	9.8 – 10.1	2.4	25.5 – 27.7	.4
3.8 – 3.9	4.3	10.2 – 10.5	2.3	27.8 – 30.6	.3
4.0 – 4.2	4.2	10.6 – 11.0	2.2	30.7 – 35.1	.2
4.3 – 4.5	4.1	11.1 – 11.5	2.1	35.2 – 44.7	.1
				44.8 up	0