

Reflection loss in db when impedances are not matched by means of repeating coils at the junction.

Negative values are reflection gains.

This table assumes facilities of sufficient length to exhibit a characteristic impedance.

Reflection Losses at 1000 Cycles  
JUNCTION OF OPEN WIRE AND LOADED CABLE

| TYPE OF CIRCUIT                    | CABLE                                       |     |     |     |     |     |     |      |      |      |      |      |      |      | OPEN WIRE - COPPER |      |     |     |     |              |     |     |     |     |     | IRON WIRE |     |     |     |     |     |     |     |     |
|------------------------------------|---|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|--------------------|------|-----|-----|-----|--------------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-----|-----|-----|
|                                    | TYPE SPACING AND LOADING - SIDE AND PHANTOM |     |     |     |     |     |     |      |      |      |      |      |      |      | NL - SIDE          |      |     |     |     | NL - PHANTOM |     |     |     |     | L   | PHYSICAL  |     |     |     |     |     |     |     |     |
|                                    | B50   | B55 | H25 | H44 | H50 | H65 | H85 | H106 | H155 | H172 | H245 | K130 | K200 | M106 | M174               | R135 | 000 | 104 | 114 | 128          | 134 | 165 | 000 | 104 | 114 | 128       | 134 | 165 | S   | P   | 083 | 109 | 134 |     |
|                                    |   |     |     |     |     |     |     |      |      |      |      |      |      |      |                    |      |     |     |     |              |     |     |     |     |     |           |     |     |     |     |     |     |     |     |
| CABLE<br>SIDE AND PHANTOM          | B50   | .2  | .4  | 0   | .2  | 0   | .1  | 0    | .1   | .3   | .6   | 0    | .2   | 0    | .1                 | 0    | 0   | .1  | .1  | .2           | .2  | .2  | .6  | .7  | .7  | .8        | .8  | .8  | .6  | .1  | .3  | .2  | .1  |     |
|                                    | B55   | .2  | 1.2 | .4  | .8  | .4  | .1  | .2   | 0    | 0    | .1   | .2   | 0    | .4   | 0                  | .2   | .5  | .6  | .7  | .7           | .8  | .9  | 1.6 | 1.7 | 1.8 | 1.8       | 1.9 | 2.0 | .1  | 0   | -.2 | -.1 | -.1 |     |
|                                    | H25   | .4  | 1.2 | .3  | .3  | 0   | .2  | .7   | .6   | 1.0  | 1.5  | 1.9  | .5   | 1.4  | .2                 | 1.0  | .6  | .1  | .1  | .1           | 0   | 0   | 0   | 0   | 0   | 0         | .1  | .1  | .1  | 1.9 | 1.0 | 1.5 | 1.2 | 1.0 |
|                                    | H44   | 0   | .4  | .3  | .1  | 0   | .1  | 0    | .2   | .5   | .9   | 0    | .4   | 0    | .2                 | 0    | 0   | 0   | 0   | .1           | .1  | .1  | .4  | .4  | .5  | .6        | .6  | .6  | 1.0 | .2  | .6  | .4  | .3  |     |
|                                    | H50   | .2  | .8  | 0   | .1  | 0   | .4  | .2   | .5   | .8   | 1.4  | .2   | .8   | .1   | .5                 | .2   | -.1 | 0   | 0   | 0            | 0   | 0   | .1  | .2  | .2  | .2        | .2  | .3  | 1.4 | .4  | 1.0 | .8  | .6  |     |
|                                    | H65   | 0   | .4  | .3  | 0   | 0   | .2  | .1   | .3   | .5   | 1.0  | 0    | .5   | 0    | .3                 | .1   | 0   | 0   | 0   | 0            | 0   | 0   | .3  | .4  | .5  | .5        | .5  | .6  | 1.0 | .3  | .6  | .4  | .3  |     |
|                                    | H85   | .1  | .1  | .1  | .1  | .4  | .2  | 0    | 0    | .1   | .3   | 0    | .1   | .1   | 0                  | 0    | .2  | .3  | .3  | .4           | .4  | .5  | 1.0 | 1.1 | 1.2 | 1.2       | 1.2 | 1.3 | .3  | 0   | .1  | 0   | 0   |     |
|                                    | H106  | 0   | .2  | .6  | 0   | .2  | .1  | 0    | .1   | .2   | .5   | 0    | .1   | .1   | .1                 | 0    | .1  | .1  | .2  | .2           | .2  | .3  | .8  | .9  | .9  | 1.0       | 1.0 | 1.1 | .5  | 0   | .1  | .1  | 0   |     |
|                                    | H155  | .1  | 0   | 1.0 | .2  | .3  | .3  | 0    | .1   | 0    | .2   | .1   | 0    | .2   | 0                  | .1   | .2  | .4  | .4  | .5           | .5  | .6  | 1.2 | 1.3 | 1.4 | 1.5       | 1.5 | 1.6 | .2  | 0   | 0   | -.1 | -.1 |     |
|                                    | H172  | .3  | 0   | 1.5 | .3  | .8  | .6  | .1   | .2   | 0    | 0    | .3   | 0    | .5   | 0                  | .2   | .6  | .8  | .8  | .9           | .9  | 1.0 | 1.8 | 1.9 | 2.0 | 2.0       | 2.0 | 2.1 | .1  | 0   | -.1 | -.1 | -.1 |     |
|                                    | H245  | .6  | .1  | 1.9 | .9  | 1.4 | 1.0 | .3   | .5   | .2   | 0    | .6   | .1   | .9   | .2                 | .6   | .9  | 1.2 | 1.3 | 1.3          | 1.4 | 1.5 | 2.4 | 2.5 | 2.6 | 2.6       | 2.7 | 2.8 | 0   | .3  | -.2 | -.1 | -.1 |     |
|                                    | K130  | 0   | .2  | .5  | 0   | .2  | 0   | 0    | .1   | .3   | .6   | .2   | 0    | .1   | 0                  | 0    | 0   | 0   | .1  | .2           | .2  | .2  | .5  | .6  | .7  | .7        | .8  | .9  | .6  | .1  | .3  | .2  | .1  |     |
|                                    | K200  | .2  | 0   | 1.4 | .4  | .8  | .5  | .1   | .1   | 0    | .1   | .2   | .4   | 0    | .2                 | .4   | .4  | .6  | .6  | .7           | .8  | .9  | 1.5 | 1.7 | 1.8 | 1.8       | 1.9 | 2.0 | .1  | 0   | -.2 | -.1 | -.1 |     |
|                                    | M106  | 0   | .4  | .2  | 0   | .1  | 0   | .1   | .3   | .5   | .9   | 0    | .4   | .2   | 0                  | 0    | -.1 | 0   | 0   | .1           | .1  | .1  | .3  | .4  | .5  | .5        | .5  | .6  | 1.9 | .3  | .6  | .4  | .3  |     |
| M174                               | .1  | 0   | 1.0 | .2  | .5  | .5  | 0   | .1   | 0    | .2   | .1   | 0    | .2   | .1   | .1                 | .2   | .4  | .5  | .5  | .5           | .6  | 1.2 | 1.3 | 1.4 | 1.5 | 1.5       | 1.6 | .2  | 0   | 0   | -.1 | -.1 |     |     |
| R135                               | 0   | .2  | .6  | 0   | .2  | .1  | 0   | .1   | .2   | .6   | 0    | .2   | 0    | .1   | .1                 | 0    | .1  | .1  | .2  | .2           | .2  | .6  | .8  | .8  | .8  | .9        | 1.0 | .6  | .1  | .3  | .2  | .1  |     |     |
| OPEN WIRE - COPPER<br>NL - SIDE    | 000   | 0   | .5  | .1  | 0   | -.1 | 0   | .2   | .1   | .2   | .6   | .9   | 0    | .4   | -.1                | .2   | 0   | 0   | 0   | 0            | 0   | 0   | 0   | .3  | .4  | .4        | .4  | .5  | .5  | 1.0 | .2  | .8  | .5  | .3  |
|                                    | 104   | .1  | .6  | .1  | 0   | 0   | 0   | .3   | .1   | .4   | .8   | 1.2  | 0    | .6   | 0                  | .4   | .1  | 0   | 0   | 0            | 0   | 0   | 0   | .2  | .2  | .3        | .3  | .4  | .4  | 1.3 | .4  | .9  | .6  | .5  |
|                                    | 114   | .1  | .7  | .1  | 0   | 0   | 0   | .2   | .2   | .4   | .8   | 1.3  | .1   | .6   | 0                  | .5   | .1  | 0   | 0   | 0            | 0   | 0   | 0   | .2  | .2  | .2        | .3  | .3  | .3  | 1.3 | .3  | .9  | .6  | .5  |
|                                    | 128   | .2  | .7  | 0   | .1  | 0   | 0   | .4   | .2   | .5   | .9   | 1.3  | .2   | .7   | .1                 | .5   | .2  | 0   | 0   | 0            | 0   | 0   | 0   | .1  | .2  | .2        | .3  | .3  | .3  | 1.4 | .4  | 1.0 | .7  | .5  |
|                                    | 134   | .2  | .8  | 0   | .1  | 0   | 0   | .4   | .2   | .5   | .9   | 1.4  | .2   | .8   | .1                 | .5   | .2  | 0   | 0   | 0            | 0   | 0   | 0   | .1  | .2  | .2        | .3  | .3  | .3  | 1.5 | .4  | 1.0 | .7  | .5  |
|                                    | 165   | .2  | .9  | 0   | .1  | 0   | 0   | .5   | .3   | .6   | 1.0  | 1.5  | .2   | .9   | .1                 | .6   | .2  | 0   | 0   | 0            | 0   | 0   | 0   | .1  | .1  | .2        | .2  | .2  | .2  | 1.6 | .6  | 1.1 | .8  | .6  |
| OPEN WIRE - COPPER<br>NL - PHANTOM | 000   | .6  | 1.6 | 0   | .4  | .1  | .3  | 1.0  | .8   | 1.2  | 1.8  | 2.4  | .5   | 1.5  | .3                 | 1.2  | .6  | .3  | .2  | .2           | .1  | .1  | .1  | 0   | 0   | 0         | 0   | 0   | 0   | 2.4 | 1.2 | 2.0 | 1.6 | 1.3 |
|                                    | 104   | .7  | 1.7 | 0   | .4  | .2  | .4  | 1.1  | .9   | 1.3  | 1.9  | 2.5  | .6   | 1.7  | .4                 | 1.3  | .8  | .4  | .2  | .2           | .2  | .2  | .1  | 0   | 0   | 0         | 0   | 0   | 0   | 2.7 | 1.4 | 2.1 | 1.8 | 1.5 |
|                                    | 114   | .7  | 1.8 | 0   | .5  | .2  | .5  | 1.2  | .9   | 1.4  | 2.0  | 2.6  | .7   | 1.8  | .5                 | 1.4  | .8  | .4  | .3  | .2           | .2  | .2  | .2  | 0   | 0   | 0         | 0   | 0   | 0   | 2.6 | 1.4 | 2.2 | 1.8 | 1.5 |
|                                    | 128   | .8  | 1.8 | .1  | .6  | .2  | .5  | 1.2  | 1.0  | 1.5  | 2.0  | 2.6  | .7   | 1.8  | .5                 | 1.5  | .8  | .4  | .3  | .3           | .3  | .3  | .2  | 0   | 0   | 0         | 0   | 0   | 0   | 2.6 | 1.5 | 2.3 | 1.9 | 1.6 |
|                                    | 134   | .8  | 1.9 | .1  | .6  | .2  | .5  | 1.2  | 1.0  | 1.5  | 2.0  | 2.7  | .8   | 1.9  | .5                 | 1.5  | .9  | .5  | .4  | .3           | .3  | .3  | .2  | 0   | 0   | 0         | 0   | 0   | 0   | 2.7 | 1.5 | 2.3 | 1.9 | 1.6 |
|                                    | 165   | .8  | 2.0 | .1  | .6  | .2  | .6  | 1.3  | 1.1  | 1.6  | 2.1  | 2.8  | .9   | 2.0  | .6                 | 1.6  | 1.0 | .5  | .4  | .3           | .3  | .3  | .2  | 0   | 0   | 0         | 0   | 0   | 0   | 2.8 | 1.6 | 2.4 | 2.0 | 1.7 |
| IRON WIRE<br>PHYSICAL              | 8   | .6  | .1  | 1.9 | 1.0 | 1.4 | 1.1 | .3   | .6   | .3   | .1   | 0    | .7   | .1   | 1.9                | .2   | .6  | 1.0 | 1.3 | 1.3          | 1.4 | 1.5 | 1.6 | 2.4 | 2.5 | 2.6       | 2.6 | 2.7 | 2.8 | .3  | .3  | -.2 | -.1 | -.1 |
|                                    | 4   | .1  | 0   | 1.0 | .2  | .4  | .3  | 0    | .1   | 0    | 0    | .3   | .1   | 0    | .2                 | 0    | .1  | .2  | .4  | .3           | .4  | .4  | .6  | 1.2 | 1.4 | 1.4       | 1.5 | 1.5 | 1.6 | .3  | .3  | 0   | 0   | -.1 |
| IRON WIRE<br>PHYSICAL              | 083   | .3  | -.2 | 1.5 | .6  | 1.0 | .6  | .1   | .1   | 0    | -.2  | -.2  | .3   | .2   | .6                 | 0    | .3  | .8  | .9  | .9           | 1.0 | 1.0 | 1.1 | 2.0 | 2.1 | 2.2       | 2.3 | 2.3 | 2.4 | -.2 | 0   | 0   | 0   | -.1 |
|                                    | 109   | .2  | -.1 | 1.2 | .4  | .8  | .4  | 0    | .1   | -.1  | -.1  | -.1  | .2   | -.1  | .4                 | -.1  | .2  | .5  | .6  | .6           | .7  | .7  | .8  | 1.6 | 1.8 | 1.8       | 1.9 | 1.9 | 2.0 | -.1 | 0   | 0   | 0   | 0   |
|                                    | 134   | .1  | -.1 | 1.0 | .3  | .6  | .3  | 0    | 0    | -.1  | -.1  | -.1  | .1   | -.1  | .3                 | -.1  | .1  | .3  | .5  | .5           | .5  | .5  | .6  | 1.3 | 1.5 | 1.5       | 1.6 | 1.6 | 1.7 | -.1 | -.1 | .1  | 0   | 0   |