

App Note 322: DS2153, DS2154 Selectable 120 and 75-Ohm E1 Interface

Different values of resistor can be selected between DS2153 or DS2154 single chip transceiver (SCT) and the transformer when interfacing to the E1 line with secondary overvoltage protection or in a high return loss configuration.

When interfacing to the E1 line with Secondary Over Voltage protection or in a high return loss configuration, resistors are added between the DS2153 outputs and the transformer. Normally the resistors are of different values depending on whether the interface is driving a 75Ω coax or 120Ω twisted wire pair line. Also a change in the termination resistor is required. A single set of resistors can be utilized in both situations by using the circuit shown in Figure 1. The dotted lines indicate jumper positions for selecting 75Ω or 120Ω operation.

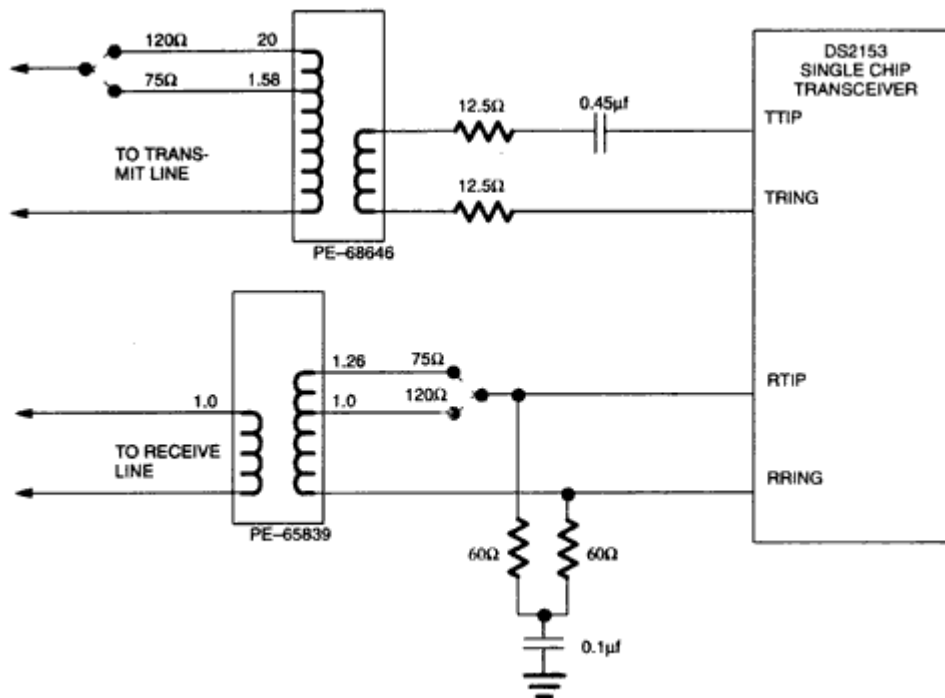


Figure 1. E1 Interface

Table 1. Line Interface Control Register Settings

| Line Type | L2 | L1 | L0 |
|------------------|-----------|-----------|-----------|
| 75Ω | 0 | 1 | 0 |
| 120Ω | 0 | 1 | 0 |

Notes:

1. Transformers shown are available from Pulse.
2. Resistors shown are within 1% of best value.

MORE INFORMATION

DS2154: [QuickView](#) -- [Full \(PDF\) Data Sheet \(1.1M\)](#) -- [Free Sample](#)