

APPLICATION NOTE 322

DS2153, DS2154 Selectable 120 and 75Ω E1 Interface

Abstract: 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.

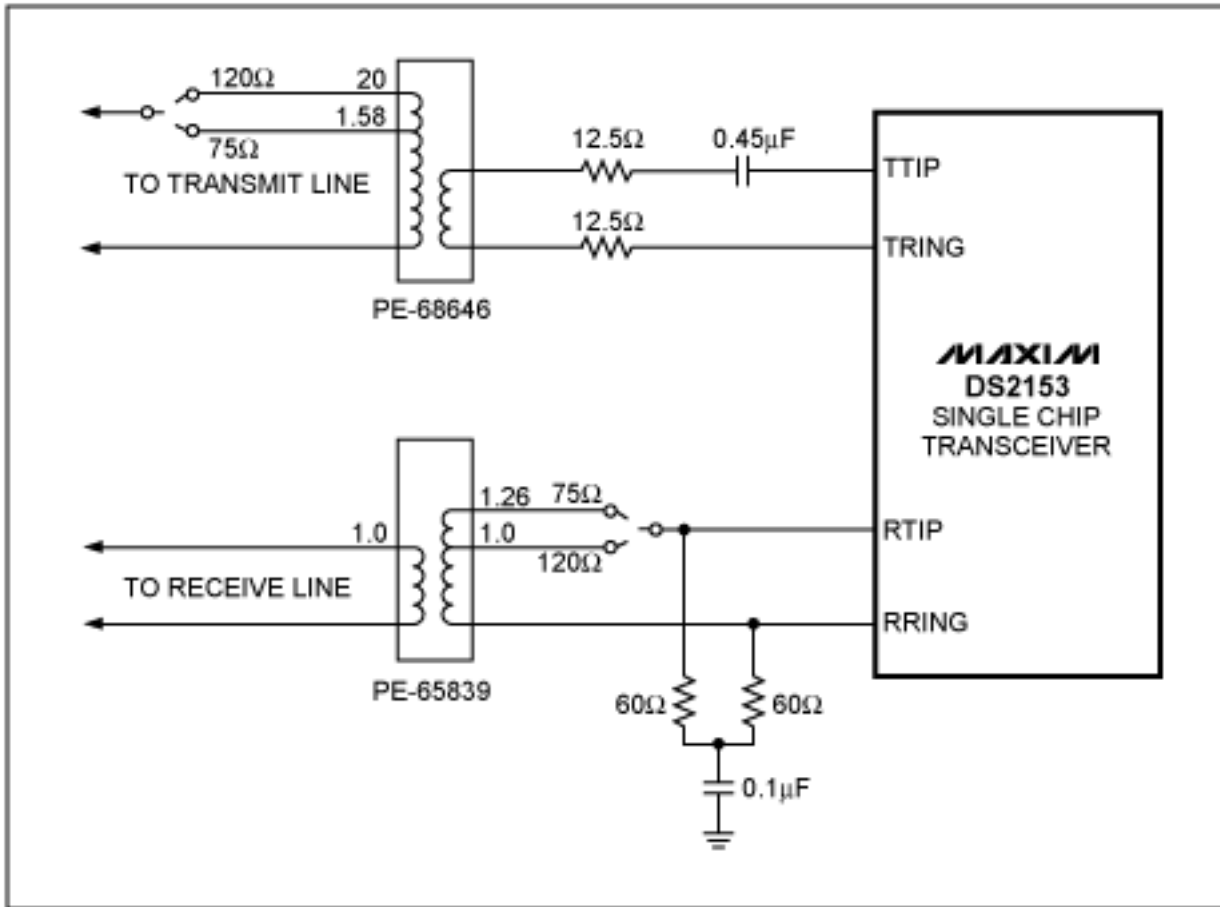


Figure 1. E1 interface.

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.

Application Note 322: <http://www.maxim-ic.com/an322>

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Related Parts

DS2154: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

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