

App Note 346: Converting the DS2152/DS2154 Demo Kits

This application note provides the instruction to convert the Dallas Semiconductor/Maxim DS2152/DS2154 T1/E1 demo kits.

The DS2152DK & DS2154DK are ordered and shipped for either T1 or E1 operation. However, the kits are easily converted to the other mode.

To convert from DS2152DK to DS2154DK: T1 → E1

1. Place DS2154 in location marked U1.
2. Place 2.048 MHz oscillator in location marked X1.
3. Remove and replace Rr.
4. Cut trace and place Rt, see note 3 below.

To convert from DS2154DK to DS2152DK: E1 → T1

1. Place DS2152 in location marked U1.
2. Place 1.544 MHz oscillator in location marked X1.
3. Remove and replace Rr.
4. Remove Rt and solder wire in place.

The table below details the required components.

Component	Description	T1	E1
U1	SCT	DS2152	DS2154
X1	OSCILLATOR ¹	1.544 MHz	2.049 MHz
R25 & R26	Rt	0Ω ^{2,3}	9,2Ω ²
R33 & R34	Rr	50Ω	37.5Ω for 75 Ohm Termination 60Ω for 120 Ohm Termination

Notes:

1. Recommended oscillators: NTH039A-1.544000 & NTH039A-2.04800.

Saronix
151 Laura Lane
Palo Alto, CA 94303
Phone: (415) 856-6900
Fax: (415) 856-4732
<http://www.saronix.com>

2. The DS2152DK and DS2154DK are both shipped with a 1:1.15 transformer (PE-65388) in the transmit path. Some of the configurations in the data sheets specify a 1:1.36 transformer, PE-64937 is a 1:1.36 transformer available from Pulse Engineering.

Pulse Engineering
P.O. Box 12236
San Diego, CA 92112
Phone: (619) 674-8100
Fax: (619) 674-8262
<http://www.pulseeng.com>

3. The DS2152DK is shipped without R25 & R26, the kit is configured with $R_t=0\Omega$ by shorting the path on the printed circuit board. In order to place resistors, $R_t\neq 0$, the traces must be cut. The locations to cut can be found by turning the PCB over and locating the trace that connects the through holes at either end of the R25 & R26 resistors. Carefully cut them with an X-acto knife, and solder the resistors in place on the top side of the PCB.

More Information

DS2152: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

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