

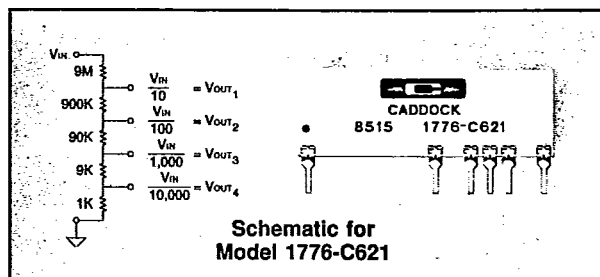
Type 1776 Precision Decade Resistor Voltage Dividers

Input Voltage Dividers for Digital Multimeters and Range-Switching Instruments

The exceptional performance of this extensive family of Type 1776 Precision Decade Resistor Voltage Dividers has been achieved through the special combination of advantages provided by Caddock's Tetrinox® resistance films. This advanced film resistor technology provides the performance characteristics required by the precision input signal circuits of both bench-type and laboratory digital instruments.

In addition to requiring less board space, these compact precision resistor networks deliver higher performance than selected discrete resistor sets and thin-film networks.

There are now 39 standard models in the expanded family of Type 1776 precision resistor networks that include -



- 3, 4 and 5 - decade voltage dividers with ratios from 10:1 to 10,000:1.
- 1,200 volts continuous ratings and overvoltage to 2,000 volts.
- Many combinations of Ratio and Absolute Tolerance, and Ratio and Absolute Temperature Coefficient.

For complete information on quantity price and delivery, call or write our Sales Office.

Model No.	Resistance Values					Fig.	Voltage Rating (7)	Absolute Tolerance %	Ratio Tolerance % (1)	Absolute TC ppm/°C	Ratio TC ppm/°C (2)	Voltage Coefficient of Ratio ppm/volt (3)	Ratio Stability % Change in Ratio		
	R ₁	R ₂	R ₃	R ₄	R ₅								Load Life (4)	Shelf Life (5)	Over-Voltage (6)
1776-C61	9 Meg	900 K	90 K	9 K	900	6	1200	0.1	0.1	30	10	0.1	0.01	0.005	0.01
1776-C611	9 Meg	900 K	90 K	9 K	900	6	1200	0.1	0.05	30	10	0.1	0.01	0.005	0.01
1776-C6117	9 Meg	900 K	90 K	9 K	900	6	1200	0.1	0.02	30	10	0.1	0.01	0.005	0.01
1776-C62	9 Meg	900 K	90 K	9 K	1 K	6	1200	0.1	0.1	30	10	0.1	0.01	0.005	0.01
1776-C621	9 Meg	900 K	90 K	9 K	1 K	6	1200	0.1	0.05	30	10	0.1	0.01	0.005	0.01
1776-C6217	9 Meg	900 K	90 K	9 K	1 K	6	1200	0.1	0.02	30	10	0.1	0.01	0.005	0.01
1776-C732	9 Meg	900 K	90 K	9 K	900	7	1200	0.25	0.25	50	50	0.5	0.04	0.02	0.04
1776-C73	9 Meg	900 K	90 K	9 K	900	7	1200	0.1	0.1	50	50	0.5	0.04	0.02	0.04
1776-C742	9 Meg	900 K	90 K	9 K	1 K	7	1200	0.25	0.25	50	50	0.5	0.04	0.02	0.04
1776-C74	9 Meg	900 K	90 K	9 K	1 K	7	1200	0.1	0.1	50	50	0.5	0.04	0.02	0.04
1776-232	9 Meg	900 K	90 K	9 K	900	3	1200	0.25	0.25	50	50	0.3	0.04	0.02	0.04
1776-23	9 Meg	900 K	90 K	9 K	900	3	1200	0.1	0.1	50	50	0.2	0.02	0.01	0.02
1776-231	9 Meg	900 K	90 K	9 K	900	3	1200	0.1	0.05	50	50	0.2	0.02	0.01	0.02
1776-242	9 Meg	900 K	90 K	9 K	1 K	3	1200	0.25	0.25	50	50	0.3	0.04	0.02	0.04
1776-24	9 Meg	900 K	90 K	9 K	1 K	3	1200	0.25	0.1	50	50	0.2	0.02	0.01	0.02
1776-241	9 Meg	900 K	90 K	9 K	1 K	3	1200	0.25	0.05	50	50	0.2	0.02	0.01	0.02
1776-10	9 Meg	900 K	90 K	10 K	N/A	4	1200	+0, -0.5	0.1	30	10	0.02	0.01	0.005	0.01
1776-105	9 Meg	900 K	90 K	10 K	N/A	4	1200	+0, -0.5	0.1	30	5	0.02	0.01	0.005	0.01
1776-C10	9 Meg	900 K	90 K	10 K	N/A	9	1200	+0, -0.5	0.1	30	10	0.02	0.01	0.005	0.01
1776-C105	9 Meg	900 K	90 K	10 K	N/A	9	1200	+0, -0.5	0.1	30	5	0.02	0.01	0.005	0.01
1776-1	9 Meg	900 K	90 K	10 K	N/A	2	1200	0.25	0.05	30	10	0.02	0.01	0.005	0.01
1776-14	9 Meg	900 K	90 K	10 K	N/A	2	1200	0.25	0.1	30	10	0.02	0.01	0.005	0.01
1776-8	9.9 Meg	90 K	10 K	N/A	N/A	1	1200	0.25	0.1	30	25	0.2	0.02	0.01	0.02
1776-81	9.9 Meg	90 K	10 K	N/A	N/A	1	1200	0.25	0.05	30	25	0.2	0.02	0.01	0.02
1776-9	9.9 Meg	90 K	10 K	N/A	N/A	1	1200	0.25	0.1	30	10	0.02	0.01	0.005	0.01
1776-91	9.9 Meg	90 K	10 K	N/A	N/A	1	1200	0.25	0.05	30	10	0.02	0.01	0.005	0.01
1776-912	9.9 Meg	90 K	10 K	N/A	N/A	1	1200	0.25	0.02	30	5	0.02	0.01	0.005	0.01
1776-C4	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.25	0.25	30	10	0.1	0.01	0.005	0.01
1776-C44	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.1	0.1	30	10	0.1	0.01	0.005	0.01
1776-C441	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.1	0.05	30	10	0.1	0.01	0.005	0.01
1776-C4417	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.1	0.02	30	10	0.1	0.01	0.005	0.01
1776-C3	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.5	0.5	50	50	0.5	0.04	0.02	0.04
1776-C34	10 Meg	1.111M	101.01K	10.01K	1.0001K	8	1200	0.25	0.25	50	50	0.5	0.04	0.02	0.04
1776-C532	900 K	90 K	9 K	900	N/A	5	750	0.25	0.25	25	25	0.4	0.02	0.01	0.02
1776-C53	900 K	90 K	9 K	900	N/A	5	750	0.1	0.1	25	15	0.3	0.02	0.01	0.02
1776-C531	900 K	90 K	9 K	900	N/A	5	750	0.1	0.05	25	15	0.3	0.02	0.01	0.02
1776-C542	900 K	90 K	9 K	1 K	N/A	5	750	0.25	0.25	25	25	0.4	0.02	0.01	0.02
1776-C54	900 K	90 K	9 K	1 K	N/A	5	750	0.1	0.1	25	15	0.3	0.02	0.01	0.02
1776-C541	900 K	90 K	9 K	1 K	N/A	5	750	0.1	0.05	25	15	0.3	0.02	0.01	0.02

Specifications:

(Numbers inside circles reference columns in Model No. table)

- ① **Ratio Tolerance:** Maximum ratio difference between two resistors in the network. (See the specific Figures for the Ratio Definition).
- ② **Ratio Temperature Coefficient:** Ratio track from 0°C to +70°C.
- ③ **Voltage Coefficient of Ratio (ppm/volt):** R₁ in series with any combination of R₂, R₃, R₄ and R₅. 100 volts to rated voltage.
- ④ **Load Life:** Ratio stability of resistance under full load, rated voltage applied to R₁ in series with any combination of R₂, R₃, R₄ and R₅.
- ⑤ **Shelf Stability of Ratio:** Six months at shelf conditions.
- ⑥ **Overvoltage:** Maximum voltage of 1.67 times rated DC voltage. Volts DC or peak AC applied to R₁ and any combination of R₂, R₃, R₄ and R₅ in series with R₁ for 10 seconds.
- ⑦ **Voltage Rating:** DC or RMS AC voltage applied to R₁ in series with any combination of R₂, R₃, R₄ and R₅.

Storage Temperature: -55°C to +85°C.

CADDOCK
RIVERSIDE, CALIFORNIA, USA
KERKRADE, THE NETHERLANDS

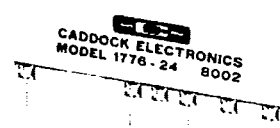
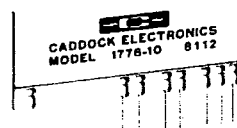
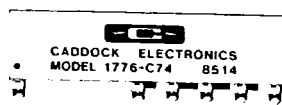
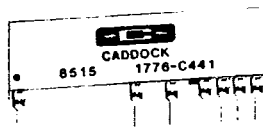
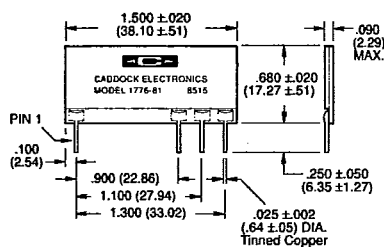


Figure 1



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

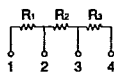
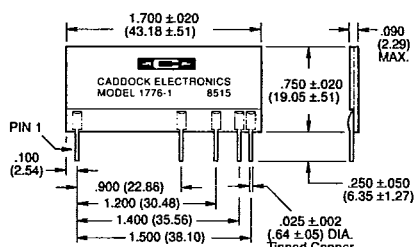


Figure 2



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

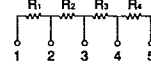
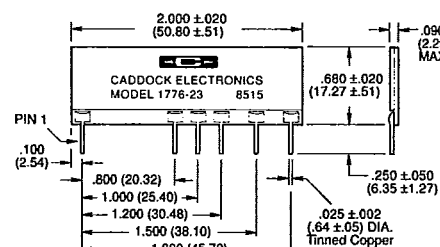


Figure 3



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

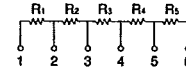
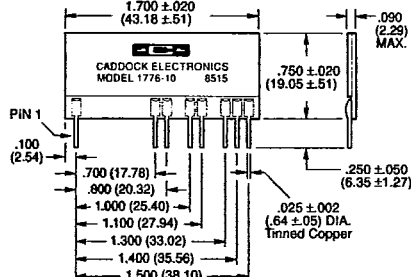


Figure 4



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

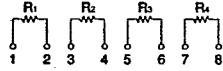
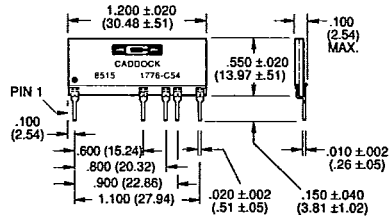


Figure 5



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

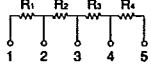
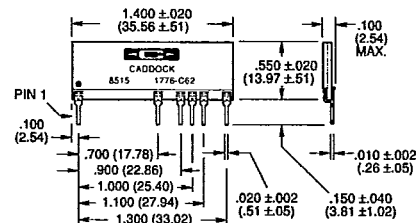


Figure 6



RATIO DEFINITION: Where $R_T = R_1 + R_2 + R_3 + R_4 + R_5$
RATIO 1 $(R_2 + R_3 + R_4 + R_5):R_T$
RATIO 2 $(R_3 + R_4 + R_5):R_T$
RATIO 3 $(R_4 + R_5):R_T$
RATIO 4 $(R_5):R_T$

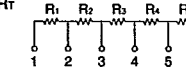
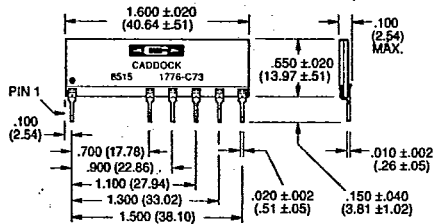


Figure 7



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

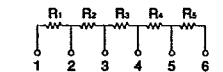
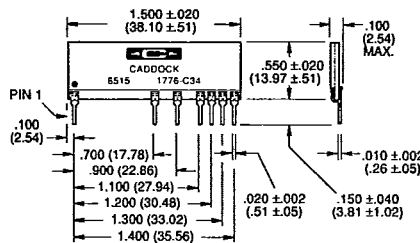


Figure 8



RATIO DEFINITION:
RATIO 1 $R_1:R_2$
RATIO 2 $R_1:R_3$
RATIO 3 $R_1:R_4$
RATIO 4 $R_1:R_5$

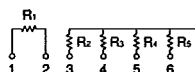
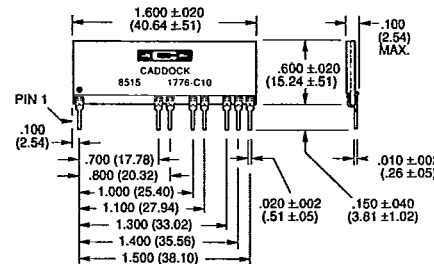


Figure 9



RATIO DEFINITION:
ALL RESISTORS RATIO
ONE ANOTHER

