

## 1:6 VOLTAGE BALUN -

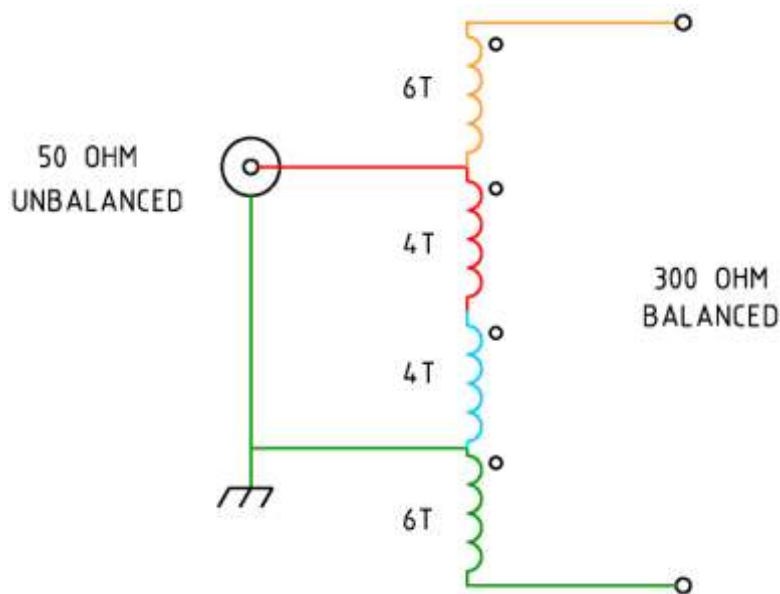
1:6 voltage balun using a FT140-43 Ferrite Toroid Core for 0.5MHz to 30MHz. Completed January 2022.

---

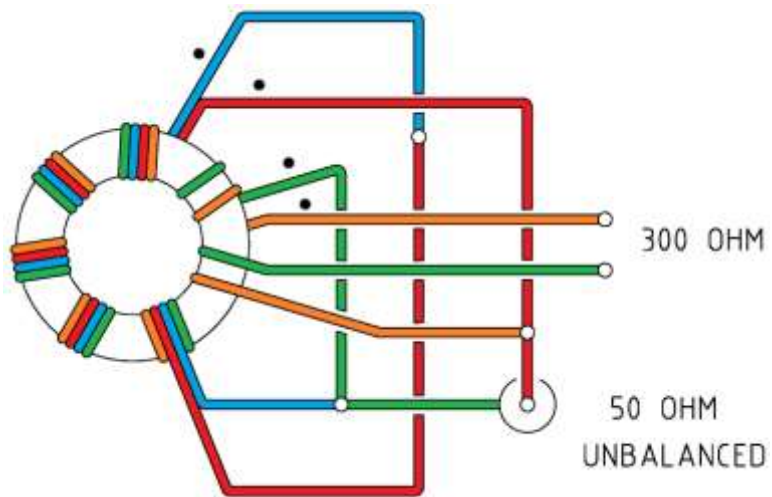
Requiring a balun to feed a balanced antenna from an un-balanced line with a impedance step up from 50ohms to 300ohms, a 1:6 Voltage balun design using a FT140-43 Ferrite Toroid Core was selected.

### Construction

The 1:6 voltage balun has 6 x 2 and 4 X 2 turns 0.5mm<sup>2</sup> hook-up wire wound evenly spaced around the FT140-43 Ferrite Toroid Core. See Figure 2 and Photo 1 for details.



**Figure 1** Schematic of the 1:6 Voltage balun



**Figure 2** Wiring of the 1:6 Voltage balun.

Type	Voltage Balun
Ratio	1:6
Frequency Range	0.5 ~ 30MHz
Core Used	FT140-43 Ferrite Toroid Core
Number of turns	6 x 2 and 4 X 2
SWR	Low 1:1.2 (2.5MHz) High 1:1.7 (30.0MHz)
PEP Power Handling.	Approximately 100W



**Photo 1** 1:6 Voltage balun assembled.