TESTS OF CHARACTERISTICS FOR A DIGITAL - ANALOG - CONVERTER (DAC)

R. Bossart

There is a breadboard of a digital to analog converter to be tested. The following measurements are requested :

1. What are the resistance values of the ladder network and its tolerances for a serial production (manufacturer's data sheet)?
2. What is the temperature coefficient of the ladder network (manufacturer's data sheet)?
3. What is the leakage output current for all bits off over a temperature range of 20 - 75°C?
4. What is the full output current for all bits on over a temperature range of 20 - 75°C?
5. What is the sensitivity of the full output current with all bits on for ± 2°/o variation of any single supply voltage +24 V, +18 V, +5V?
6. What is the linearity of the converter? What linearity can be expected for serial production?
7. What is the accuracy of the converter? What accuracy can be expected for serial production?
8. What is the dynamic behaviour? slew rate? settling time? (photo).