

Resistors

1) color: red, purple, yellow, gold

expected resistance: $27 \times 10 \text{ k}\Omega \pm 5\%$

max: $28.35 \text{ k}\Omega$ min: $26.65 \text{ k}\Omega$

measured: Fluke: $266.5 \text{ k}\Omega$

generic: $266.2 \text{ k}\Omega$

2) color: brown, red, red, gold

expected resistance: $12 \times 100 \Omega \pm 5\%$

max: 1260Ω min: 1140Ω

measured: fluke: $1.189 \text{ k}\Omega$

generic: $1.182 \text{ k}\Omega$

3) color: yellow, purple, green, gold

expected resistance: $47 \times 100 \text{ k}\Omega \pm 5\%$

max: $4935 \text{ k}\Omega$ min: $4465 \text{ k}\Omega$

measured: fluke: $4.69 \text{ M}\Omega$

generic: $4.61 \text{ M}\Omega$

4) color: blue, red, black, gold

expected resistance: $61 \times 1 \Omega \pm 5\%$

max: 65.1Ω min: 58.9Ω

measured: fluke: 83.2Ω

generic: 82.4Ω

Capacitors:

① Expected: $10 \mu\text{F}$

fluke: $11 \mu\text{F}$

capacitor meter: $10.34 \mu\text{F}$

2) Expected: $100 \mu F$
Fluke: $97.3 \mu F$
Capacitance meter: $97.5 \mu F$

3) Expected: $10 nF$
Fluke: $10.2 nF$
Capacitance meter: $9.85 nF$

4) Expected: $1 \mu F$
Fluke: $1.16 \mu F$
Capacitance meter: $1.26 \mu F$

Voltage

$V_1 = 1.5 V$	DMM = 1.57 V	{	$V_2 = 1.5 V$	DMM = 1.62 V
$V_1 = 7.0 V$	DMM = 7.06 V		$V_2 = 7.0 V$	DMM = 7.32 V
$V_1 = 12.0 V$	DMM = 11.92 V		$V_2 = 12.0 V$	DMM = 11.5 V

5V output = 4.998V (DMM value)

Function generator

2 KHz:

1) Amplitude = (3 squares)(1V) = 3V(2) = 6V Peak to Peak

$$\text{frequency} = \frac{1}{500 \mu s} = \frac{1}{5 \times 10^{-6}} = 2000 \text{ Hz}$$

2) Amplitude = 5.84V (Peak to Peak)

$$\text{frequency} = \frac{1}{400 \mu s} = \frac{1}{4 \times 10^{-6}} = 2040 \text{ Hz}$$

3) Amplitude = 5.80V (peak to peak)

$$\text{frequency} = 2.008 \text{ KHz}$$

4) Amplitude = 1.751V (rms)

$$\text{frequency} = 2.005 \text{ KHz}$$

5) Amplitude = 1.968V (rms)

$$\text{frequency} = 2.007 \text{ KHz}$$