

## Chapter 7

## TRANSFORMER, PARTRIDGE, TYPE 2038, Mk. 2

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## LEADING PARTICULARS

<b>Transformer, Type 2038, Mk. 2</b> ... ..	<i>Ref. No. 5UB/6670</i>
<i>Type of winding</i> ... ..	<i>Auto</i>
<i>Rating</i> ... ..	<i>50VA, single-phase 400 c/s</i>
<i>No load voltage</i>	
<i>Primary</i> ... ..	<i>115V a.c. (r.m.s.)</i>
<i>Secondary</i> ... ..	<i>26V a.c. (r.m.s.)</i>
<i>Rated current</i>	
<i>Primary</i> ... ..	<i>0.46 amp.</i>
<i>Secondary</i> ... ..	<i>1.8 amp.</i>
<i>Resistance at 18 deg. C.</i>	
<i>Primary</i> ... ..	<i>2.45 ohm.</i>
<i>Secondary</i> ... ..	<i>0.3 ohm.</i>
<i>External connections</i> ... ..	<i>3-pole Mk. 4 miniature socket (Inter Ser. Ref. No. Z.560800)</i>
<i>Overall dimensions (in.)</i> ... ..	<i>3½ × 2½ × 2½</i>
<i>Weight (lb)</i> ... ..	<i>1¼ (approx.)</i>

**Introduction**

1. The auto-transformer, Type 2038, Mk. 2, is designed to provide a low-voltage, high frequency alternating current supply for aircraft instrumentation purposes.

**DESCRIPTION**

2. A general view of the transformer is

shown in fig. 1. It is auto-wound and consists of one winding on a laminated iron core. The core is constructed by winding cold-rolled, grain orientated, silicon-steel strip on a mandrel, and then bonding the roll firmly together. The core is then machined to form two "C" shaped pieces, the mating faces of which are ground so that they butt together making a joint with no appreciable air-gap.

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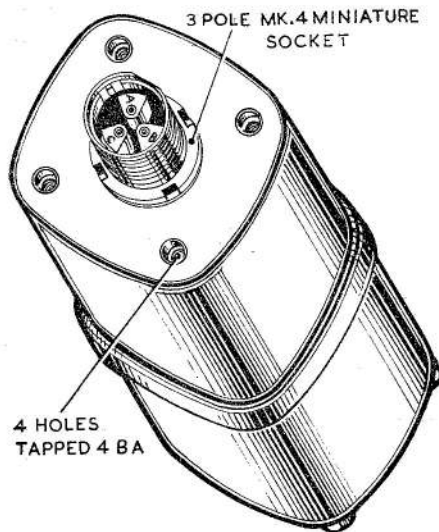


Fig. 1. Transformer, Type 2038 Mk. 2

3. The winding is wound on a spool which is assembled on two mating limbs of the "C" shaped pieces. These are then clamped together by a steel retaining band.
4. After vacuum varnish impregnation the wound core assembly is dip sealed in heavy varnish. It is then enclosed in the case, the centre seam of which and the fixing pillars are soldered to seal the unit.
5. The leads from the winding are brought out to a 3-pole Mk. 4 miniature socket (*Inter. Ser. Ref. No. Z.560800*). A circuit diagram is given in fig. 2.

## INSTALLATION

6. The transformer may be mounted in any position using the four 4 B.A. fixing holes on centres  $1\frac{13}{16}$  in.  $\times$   $1\frac{7}{16}$  in. It must not be placed in any position where the temperature is likely to exceed 85 deg. C.

## SERVICING

7. Very little servicing can be done except to ensure that the transformer is securely fixed and that the socket connections are sound.

## TESTING

8. Ensure that the resistances of the winding are within  $\pm 10$  per cent of the values given in Leading Particulars.
9. Check that when a 115V (r.m.s.) 400 c/s supply is connected across terminals A and C the open circuit output voltage measured across terminals B and C is  $26 \pm 0.5$ V (r.m.s.).
10. The insulation resistance between the transformer winding and earth, measured with a 500-volt insulation resistance tester, should not be less than 5 megohms.

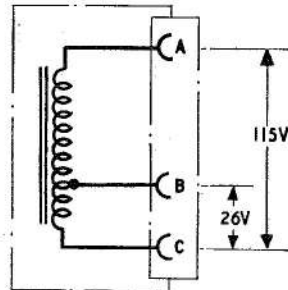


Fig. 2. Circuit diagram

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