



Fig. 6-80 — Circuit of the 813 amplifier. All capacitances below 0.001  $\mu\text{f.}$  are in  $\mu\text{f.}$

- C<sub>1</sub> — Air trimmer.
- C<sub>2</sub> — 0.025-inch plate spacing.
- C<sub>3</sub>, C<sub>12</sub>, C<sub>15</sub> — Mica.
- C<sub>4</sub>, C<sub>5</sub>, C<sub>7</sub>, C<sub>8</sub>, C<sub>9</sub>, C<sub>10</sub>, C<sub>11</sub>, C<sub>16</sub>, C<sub>17</sub>, C<sub>18</sub>, C<sub>19</sub>, C<sub>20</sub>, C<sub>21</sub>, C<sub>22</sub>, C<sub>23</sub>, C<sub>24</sub>, C<sub>25</sub>, C<sub>26</sub> — Ceramic.
- C<sub>6</sub> — Neutralizing condenser (Johnson N-250, 0.25-inch spacing).
- C<sub>13</sub> — 0.070-inch plate spacing.
- C<sub>14</sub> — Four-section variable gang, 374  $\mu\text{f.}$  per section, 0.025-inch plate spacing.
- R<sub>2</sub> — Five 680-ohm 1-watt carbon resistors in parallel, tapped across 3 turns of L<sub>11</sub>.
- L<sub>1</sub> — 32 turns No. 24 enam., close-wound,  $\frac{3}{4}$ -inch diam.
- L<sub>2</sub> — 3 turns No. 22 hook-up wire over cold end of L<sub>1</sub>.
- L<sub>3</sub> — 20 turns No. 20 enam., close-wound,  $\frac{3}{4}$ -inch diam.
- L<sub>4</sub> — 3 turns No. 22 hook-up wire over cold end of L<sub>3</sub>.
- L<sub>5</sub> — 14 turns No. 20 enam., close-wound,  $\frac{3}{4}$ -inch diam.
- L<sub>6</sub> — 2 turns No. 22 hook-up wire over cold end of L<sub>5</sub>.
- L<sub>7</sub> — 10 turns No. 18 enam.,  $\frac{5}{8}$ -inch long,  $\frac{3}{4}$ -inch diam.
- L<sub>8</sub> — 2 turns No. 22 hook-up wire over cold end of L<sub>7</sub>.
- L<sub>9</sub> — 8 turns No. 18 enam.,  $\frac{5}{8}$  inch long,  $\frac{5}{8}$ -inch diam.
- L<sub>10</sub> — 2 turns No. 22 hook-up wire over cold end of L<sub>9</sub>.
- L<sub>11</sub> — Parasitic suppressor —  $5\frac{1}{2}$  turns No. 14,  $\frac{1}{4}$ -inch diam.
- L<sub>12</sub> — 3 turns No. 10,  $\frac{3}{4}$  inch long,  $\frac{3}{4}$ -inch diam.
- L<sub>13</sub> — Variable inductor from BC-375 (25 $\mu\text{h. max.}$ ).
- J<sub>1</sub>, J<sub>2</sub> — Coax connector.
- M<sub>1</sub>, M<sub>3</sub> — D.c. milliammeter, 2-inch.
- M<sub>2</sub> — A.c. voltmeter, 2-inch.
- RFC<sub>1</sub> — 125 ma.
- RFC<sub>2</sub> — National R-175A.
- S<sub>1</sub> — 2-circuit 5-position ceramic rotary switch (Centralab RR wafer).
- S<sub>2</sub> — 3-position progressively-shortening ceramic rotary switch (Centralab P1S wafer).
- T<sub>1</sub> — Filament transformer: 6.3 volts, 1.2 amp.
- T<sub>2</sub> — Filament transformer: 10 volts, 5 amp.

4 The B & W type 3852 rotary coil (15  $\mu\text{h.}$ ) has sufficient inductance to be used as a substitute, although it requires somewhat more space.

The bottom, top and rear are closed with...