

## 8.3 T2000-500 & T2000-600 1-7W Versions

This Section describes how to convert a T2000-500 or T2000-600 radio to operate between 1 and 7W.

**Note:** T2000-500 and T2000-600 1 to 7W radios are currently type approved only in Australia and Germany.

The following topics are covered in this Section:

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## 8.3.1 Components Required

To convert a T2000-500 and T2000-600 to low power, the following components are required:

	Description	IPN	Quantity
<b>Low Power Common Parts</b>	56Ω SRF16 resistor	030-02560-20	2
	T2000-500/600 replacement transistor PCB	220-01287-00	1
	radio type label	-	1
	appropriate type approval label	-	1
<b>T2000-500 Low Power Parts</b>	5p6 NP0 500V GRM42-2 chip capacitor	015-01560-06	2
	22p NP0 500V GRM42-2 chip capacitor	015-02220-06	3
<b>T2000-600 Low Power Parts</b>	4p7 NP0 500V GRM42-2 chip capacitor	015-01470-06	1
	5p6 NP0 500V GRM42-2 chip capacitor	015-01560-06	1
	18p NP0 500V GRM42-2 chip capacitor	015-02180-06	2

## 8.3.2 Fitting

- 1 Refer to Figure 8.3.1.

Remove L315, L316, L317 and \*R319 from the top side of the PA.

Crush and remove the ferrite bead which forms part of L314, so that only the wire link remains.

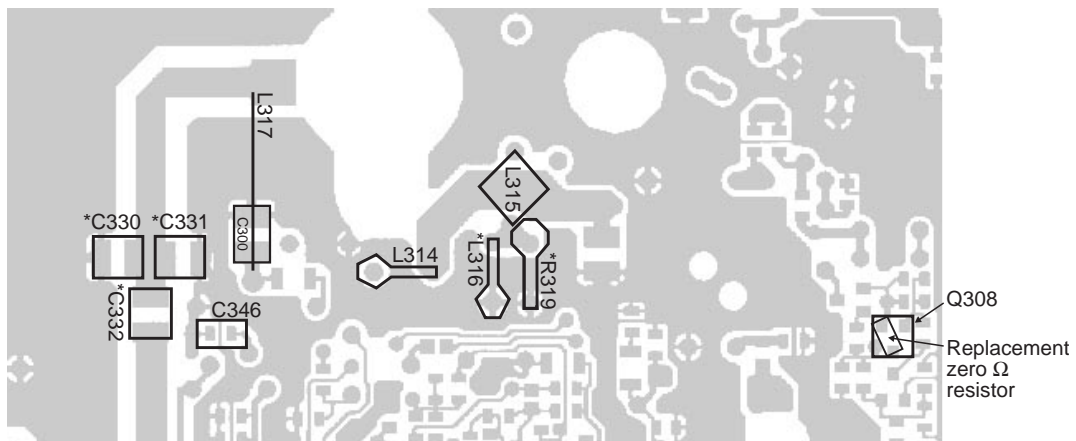


Figure 8.3.1 T2000-500/600 PA - Top Side

- 2 Refer to Figure 8.3.2.

Remove the following components from the bottom side of the PA:  
C323, \*C324, C325, \*C327, \*C329 and Q306.

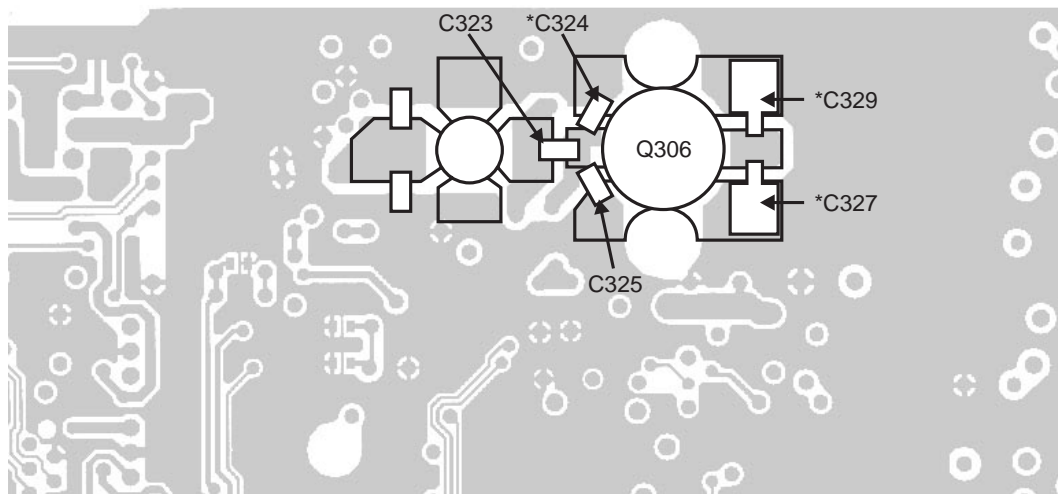


Figure 8.3.2 T2000-500/600 PA - Bottom Side

- 3 Remove the output matching capacitors, \*C330, C331 and \*C332 from the top side of the PA (shown in Figure 8.3.1).

Solder the replacement capacitors in the original positions, as follows:

	T2000-500	T2000-600
*C330	5p6	-
C331	5p6	4p7
*C332	22p	5p6

#### 4 Replacement Transistor Fitting

Refer to Figure 8.3.3.

- a Tin the underside of the replacement transistor PCB.

Place the PCB as shown, and sweat-solder into position, soldering the centre strip first, followed by the other strips.

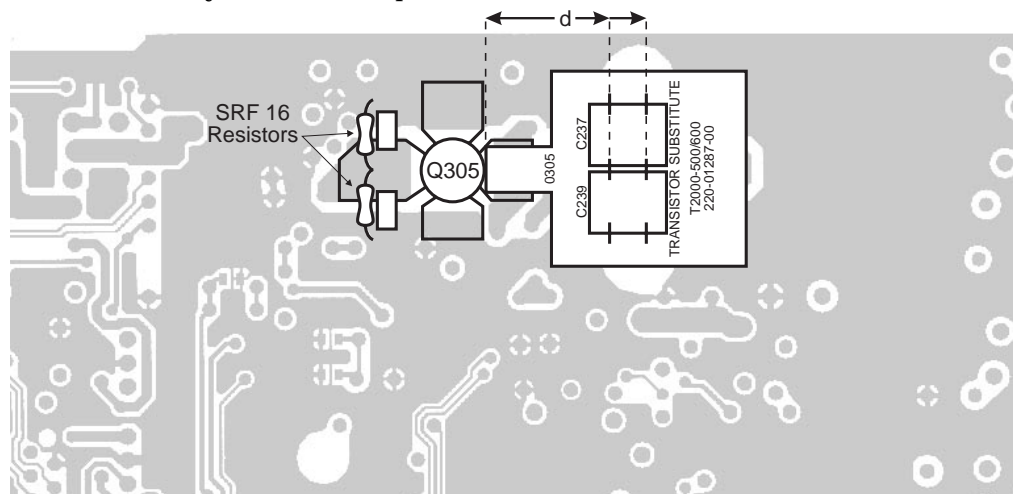


Figure 8.3.3 T2000-500/600 PA - Bottom Side

- b** Solder the chip capacitors onto the replacement transistor PCB, in the positions shown. Refer to the table below for capacitor values and the distance 'd'.

	T2000-500	T2000-600
Capacitor Value	22p	18p
Distance (d)	14.5mm*	11.5mm

\* d is 13mm if Q305 is a BLW81 transistor

**Note:** The distance 'd' shown in Figure 8.3.3 is measured from the edge of the transistor top cap to the centre of the capacitors.

- c** Solder the 2 SRF16 resistors in the positions shown. Keep the leads as short as possible and ensure the resistors do not cause a short circuit.
- 5** Replace the radio type label and type approval certificate number label on the heatsink fins with the new type label and corresponding type approval certificate number label.

### 8.3.3 Set-Up

- 1** Adjust RV324 to set the required output power level.

**Note:** If the output power is set to 1W for RF control purposes, program the radio for high power and adjust RV324 for 1W.

- 2** Seal RV324 with permanent adhesive so that the power cannot be readjusted.

### 8.3.4 Specifications

Frequency Range:

T2000-500	.. 400 to 470MHz
T2000-600	.. 450 to 520MHz

Supply Voltage .. 0.8 to 16V DC

Power Output .. adjustable 1 to 7W

Temperature Range .. -30°C to +60°C

Stability (power output set to >1W) .. transmitter stable into 5:1 VSWR (all phase angles)