

## T859 Parts List (IPN 220-01422-03)

### How To Use This Parts List

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc.) and those without (miscellaneous and mechanical).

Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns: the circuit reference, variant (if applicable), IPN and description. A number in the variant column indicates that this is a variant component which is fitted only to the product type listed. Static sensitive devices are indicated by an (S) at the start of the description column.

The miscellaneous and mechanical section lists the variant and common parts in IPN order. Where possible, a number in the legend column indicates their position in the mechanical assembly drawing.

The Parts List Amendments box below lists component changes that took place after the parts list and diagrams in this section were compiled. These changes (e.g. value changes, added/deleted components, etc.) are listed by circuit reference in alphanumeric order and supersede the information given in the parts list or diagrams. Components without circuit references are listed in IPN order.

### Parts List Amendments

|                            |  |
|----------------------------|--|
| C142                       | Changed from 4n7 (IPN 015-24470-08) to 33nF (IPN 015-25330-08) to improve cyclic keying (711105).  |
| C147                       | Changed from 1nF (IPN 015-24100-08) to 33nF (IPN 015-25330-08) to improve cyclic keying (711104).  |
| C173                       | Deleted - not required for circuit performance (711141).   |
| #C247, #C273               | T859-10-0000: changed from 15pF (IPN 015-02150-03) to 12pF (IPN 015-02120-03) to reduce the maximum output power and reduce excessive power at the top of the frequency band (711138).   |
| #C256, #C257, #C269, #C270 | T859-10-0000: changed from 39pF (IPN 029-02390-02) to 47pF (IPN 029-02470-02) to reduce the maximum output power and reduce excessive power at the top of the frequency band (711138).   |
| #C257, #C270               | T859-30-0000: changed from 22pF (IPN 029-02220-02) to 33pF (IPN 029-02330-02) to reduce the maximum output power and instabilities across the 480-520MHz frequency band (711140).<br>T859-30-0000: changed from 33pF (IPN 029-02330-02) to 27pF (IPN 029-02270-02) to reduce the maximum output power and instabilities across the 480-520MHz frequency band (711158).   |
| D101                       | Changed from MR750/SR2607 (IPN 001-00011-60) to MR2520L (IPN 001-00012-90) to provide overvoltage transient suppression (750087/88/89/90/91/92 and 711129).  |
| Resistors Added            | Two 4E7 mylar film resistors (IPN 032-31470-01 - no circuit references) were added, one from Q217 base to ground (L247) and the other from Q216 base to ground (L238) to reduce the maximum output power and instabilities across the 400-520MHz frequency band (711158).  |
| R144                       | Changed from 1k (IPN 036-14100-10) to 18k (IPN 036-15180-00) to improve cyclic keying (711104).  |
| R158                       | Changed from 22k (IPN 036-15220-00) to 18k (IPN 036-15180-00) to improve cyclic keying (711105).   |
| R168                       | Changed from 2k7 (IPN 036-14270-10) to 4k7 (IPN 036-14470-10) to reduce the maximum output power and reduce excessive power at the top of the frequency band (711138/39/40).<br>Changed from 4k7 (IPN 036-14470-10) to 5k1 (IPN 036-14510-10) to limit the maximum output power and reduce instabilities (711181/82/83).   |
| R170                       | Changed from 2k2 (IPN 036-14220-00) to 5k6 (IPN 036-14560-00) to reduce the maximum output power and reduce excessive power at the top of the frequency band (711138/39/40).<br>T859-10-0000: changed from 5k6 (IPN 036-14560-00) to 4k7 (IPN 036-14470-10) } to limit the maximum output power and reduce instabilities - circuit reference changed to #R170 (711182/83).<br>T859-30-0000: changed from 5k6 (IPN 036-14560-00) to 5k1 (IPN 036-14510-10) }<br>T859-20-0000: value unchanged; circuit reference changed to #R170 |
| 349-00020-36               | The two M3x8 Torx screws which secure the module into the rack frame have been replaced by M3x8 Pozidriv screws (IPN 349-00020-55) (750101/2/3/5/6).   |

**Parts List Amendments - Continued**

This page is provided for entering future amendments to the parts list.

| Ref   | Var | IPN          | Description                    | Ref    | Var | IPN          | Description                    |
|-------|-----|--------------|--------------------------------|--------|-----|--------------|--------------------------------|
| C100  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C247  | 10  | 015-02150-03 | CAP CER 15P 5% 500V HIQ GRH111 |
| C101  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C247  | 20  | 015-02120-03 | CAP CER 12P 5% 500V HIQ GRH111 |
| C102  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C247  | 30  | 015-02120-03 | CAP CER 12P 5% 500V HIQ GRH111 |
| C103  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C249   |     | 015-02150-03 | CAP CER 15P 5% 500V HIQ GRH111 |
| C104  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C250   |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 |
| C105  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C252  | 10  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C107  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C252  | 20  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C108  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C252  | 30  | 029-02470-02 | CAP MICA 5 CASE 47P 5%         |
| C109  |     | 014-07100-02 | CAP TANT CHIP 1U0 3.2 X 1.6MM  | #C253  | 10  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C110  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C253  | 20  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C111  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C253  | 30  | 029-02470-02 | CAP MICA 5 CASE 47P 5%         |
| C112  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | C254   |     | 029-02150-02 | CAP MICA 5 CASE 15P 5%         |
| C113  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C256  | 10  | 029-02390-02 | CAP MICA 5 CASE 39P 5%         |
| C114  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C256  | 20  | 029-02330-02 | CAP MICA 5 CASE 33P 5%         |
| C115  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C256  | 30  | 029-02220-02 | CAP MICA 5 CASE 22P 5%         |
| C116  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | #C257  | 10  | 029-02390-02 | CAP MICA 5 CASE 39P 5%         |
| C117  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C257  | 20  | 029-02330-02 | CAP MICA 5 CASE 33P 5%         |
| C119  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C257  | 30  | 029-02220-02 | CAP MICA 5 CASE 22P 5%         |
| C120  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C258   |     | 015-03100-02 | CAP CER HIQ1210 100P 5%NPO200V |
| C121  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C259   |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  |
| C122  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C260   |     | 014-07470-04 | CAP TANT SMD 4U7 50V 20%       |
| C123  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C261   |     | 015-03100-02 | CAP CER HIQ1210 100P 5%NPO200V |
| C124  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C262   |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 |
| C125  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C263   |     | 029-02150-02 | CAP MICA 5 CASE 15P 5%         |
| C126  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C264  | 10  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C127  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C264  | 20  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C128  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C264  | 30  | 029-02470-02 | CAP MICA 5 CASE 47P 5%         |
| C129  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C265  | 10  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C130  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C265  | 20  | 029-02560-02 | CAP MICA 5 CASE 56P 5%         |
| C131  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C265  | 30  | 029-02470-02 | CAP MICA 5 CASE 47P 5%         |
| C132  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C268   |     | 015-02150-03 | CAP CER 15P 5% 500V HIQ GRH111 |
| C133  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | #C269  | 10  | 029-02390-02 | CAP MICA 5 CASE 39P 5%         |
| #C134 |     | 014-18220-02 | LJCAP TANT SMD 22U 20% 35V     | #C269  | 20  | 029-02330-02 | CAP MICA 5 CASE 33P 5%         |
| C136  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C269  | 30  | 029-02220-02 | CAP MICA 5 CASE 22P 5%         |
| C137  |     | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V  | #C270  | 10  | 029-02390-02 | CAP MICA 5 CASE 39P 5%         |
| C138  |     | 015-25220-08 | CAP CER 0805 22N 10% X7R 50V   | #C270  | 20  | 029-02330-02 | CAP MICA 5 CASE 33P 5%         |
| C139  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C270  | 30  | 029-02220-02 | CAP MICA 5 CASE 22P 5%         |
| C140  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C272   |     | 014-07470-04 | CAP TANT SMD 4U7 50V 20%       |
| C141  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C273  | 10  | 015-02150-03 | CAP CER 15P 5% 500V HIQ GRH111 |
| C142  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | #C273  | 20  | 015-02120-03 | CAP CER 12P 5% 500V HIQ GRH111 |
| C143  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C273  | 30  | 015-02120-03 | CAP CER 12P 5% 500V HIQ GRH111 |
| C144  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C274   |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 |
| C145  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | C275   |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   |
| C146  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C276   |     | 015-23150-01 | CAP CER 0805 150P 5% NPO 50V   |
| C147  |     | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V    | #C277  | 10  | 029-02120-01 | CAP MICA 10 CASE 12P 5%        |
| C148  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C277  | 20  | 029-02100-01 | CAP MICA 10 CASE 10P 10%       |
| C149  |     | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V   | #C277  | 30  | 029-02100-01 | CAP MICA 10 CASE 10P 10%       |
| C150  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C278  | 10  | 029-02120-01 | CAP MICA 10 CASE 12P 5%        |
| C151  |     | 015-27100-10 | CAP CER 0805 1M+80-20% Y5V 16V | #C278  | 20  | 029-02100-01 | CAP MICA 10 CASE 10P 10%       |
| C152  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C278  | 30  | 029-02100-01 | CAP MICA 10 CASE 10P 10%       |
| C153  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C280  | 10  | 029-01560-02 | CAP MICA 5 CASE 5P6 5%         |
| C154  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C280  | 20  | 029-01470-02 | CAP MICA 5 CASE 4P7 5%         |
| C156  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C280  | 30  | 029-01470-02 | CAP MICA 5 CASE 4P7 5%         |
| C157  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | C282   |     | 015-21220-01 | CAP CER 0805 2P2+-1/4P NPO 50V |
| C158  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #C283  | 10  | 015-21470-01 | CAP CER 0805 4P7+-1/4P NPO 50V |
| C159  |     | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V  | #C283  | 20  | 015-21390-01 | CAP CER 0805 3P9+-1/4P NPO 50V |
| C161  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | #C283  | 30  | 015-21390-01 | CAP CER 0805 3P9+-1/4P NPO 50V |
| C162  |     | 014-18220-02 | LJCAP TANT SMD 22U 20% 35V     | C284   |     | 015-23150-01 | CAP CER 0805 150P 5% NPO 50V   |
| C163  |     | 014-18220-02 | LJCAP TANT SMD 22U 20% 35V     | #C285  | 10  | 015-21390-01 | CAP CER 0805 3P9+-1/4P NPO 50V |
| C164  |     | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V    | #C285  | 20  | 015-21330-01 | CAP CER 0805 3P3+-1/4P NPO 50V |
| C166  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | #C285  | 30  | 015-21330-01 | CAP CER 0805 3P3+-1/4P NPO 50V |
| C167  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | C286   |     | 015-21220-01 | CAP CER 0805 2P2+-1/4P NPO 50V |
| C168  |     | 014-08100-00 | CAP TANT CHIP 10M 16VW +-20%   | C287   |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   |
| C169  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | C293   |     | 029-03100-02 | CAP MICA 5 CASE 100P 5%        |
| C172  |     | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V  | D101   |     | 001-00011-60 | S) DIODE MR750 OR SR2607       |
| C173  |     | 014-07100-02 | CAP TANT CHIP 1U0 3.2 X 1.6MM  | D105   |     | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23  |
| C174  |     | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V   | D110   |     | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23  |
| C175  |     | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V  | D112   |     | 008-00014-79 | S)LED 3MM RED WITH WIRE        |
| C176  |     | 014-07470-03 | LJ CAP TANT SMD 4U7 35V 20%    | D114   |     | 008-00014-79 | S)LED 3MM RED WITH WIRE        |
| C177  |     | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V   | D115   |     | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23  |
| C178  |     | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V    | D120   |     | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23  |
| C197  |     | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V   | D190   |     | 008-00014-80 | S)LED 3MM GREEN WITH WIRE      |
| C198  |     | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V   | D205   |     | 001-10066-00 | DIODE SCHOTTKY HSMS2815        |
| C200  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | D206   |     | 001-10066-00 | DIODE SCHOTTKY HSMS2815        |
| C201  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | IC100  |     | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14    |
| C202  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | IC105  |     | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14    |
| C203  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | IC110  |     | 002-10006-62 | S)IC SMD LMC662CM 2X O-AMP     |
| C204  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | IC130  |     | 002-10003-17 | (S) IC LM317L REG SO-8 100MA   |
| C205  |     | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V    | IC140  |     | 002-12951-00 | IC SMD LP2951CM ADJ VLTGE REG  |
| C206  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | IC200  |     | 002-10003-58 | S) IC SMD LM358 DUAL O-AMP     |
| C207  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #IC210 | 10  | 004-00687-62 | MODULE M68762L 400-450MHZ 30W  |
| C208  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | #IC210 | 20  | 004-00687-61 | MODULE M68762H 440-490MHZ 30W  |
| C209  |     | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V   | #IC210 | 30  | 004-00687-63 | MODULE M68762SH 470-520MHZ 30W |
| C210  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   | L120   |     | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2    |
| C211  |     | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V    | L161   |     | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2    |
| C214  |     | 015-23680-08 | CAP CER 0805 680P 10% X7R 50V  | L162   |     | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2    |
| C215  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | L200   |     | 056-10330-02 | (L) IND SMD 330NH              |
| C218  |     | 015-03100-06 | CAP CER 1210 100P NPO500VGRM42 | L201   |     | 056-10330-02 | (L) IND SMD 330NH              |
| C219  |     | 014-07470-04 | CAP TANT SMD 4U7 50V 20%       | L202   |     | 056-10330-02 | (L) IND SMD 330NH              |
| C220  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | L203   |     | 056-10330-02 | (L) IND SMD 330NH              |
| C221  |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 | L208   |     | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2    |
| C222  |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 | L209   |     | 052-08340-40 | COIL A/W 4T/4.0MM SMD 0.8MM    |
| C223  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | L210   |     | 052-08340-40 | COIL A/W 4T/4.0MM SMD 0.8MM    |
| C224  |     | 014-07470-04 | CAP TANT SMD 4U7 50V 20%       | L211   |     | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2    |
| C225  |     | 015-06100-08 | CAP CER 1206 100N 10% X7R 50V  | L212   |     | 052-08340-40 | COIL A/W 4T/4.0MM SMD 0.8MM    |
| C226  |     | 015-03100-03 | CAP CER 100P 5% 500VHIQ GRH111 |        |     |              |                                |
| C227  |     | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V   |        |     |              |                                |
| C228  |     | 015-03100-02 | CAP CER HIQ1210 100P 5%NPO200V |        |     |              |                                |

| Ref     | Var | IPN          | Description                    | Ref    | Var | IPN          | Description                    |
|---------|-----|--------------|--------------------------------|--------|-----|--------------|--------------------------------|
| %L213   |     | 056-10330-02 | (L) IND SMD 330NH              | R137   |     | 036-15150-00 | RES M/F 0805 15K 5%            |
| L235    |     | 051-00005-60 | IND HAIRPIN 10MM TALL T859     | R138   |     | 036-15150-00 | RES M/F 0805 15K 5%            |
| L237    |     | 052-08340-50 | COIL A/W 5T/4.0MM SMD 0.8MM    | R139   |     | 036-14390-10 | RES M/F 0805 3K9 1%            |
| L238    |     | 065-10009-20 | BEAD FER SMD BDS 3/3/8.9-4S2   | R140   |     | 036-15150-00 | RES M/F 0805 15K 5%            |
| L239    |     | 052-08340-50 | COIL A/W 5T/4.0MM SMD 0.8MM    | R141   |     | 036-14390-10 | RES M/F 0805 3K9 1%            |
| L240    |     | 051-00649-10 | HYBRID COUPLER 0.4-1G 100W 3DB | R142   |     | 036-14820-10 | RES M/F 0805 8K2 1%            |
| L241    |     | 051-00649-10 | HYBRID COUPLER 0.4-1G 100W 3DB | R143   |     | 036-14680-10 | RES M/F 0805 6K8 1%            |
| L242    |     | 052-08340-50 | COIL A/W 5T/4.0MM SMD 0.8MM    | R144   |     | 036-14100-10 | RES M/F 0805 1K 1%             |
| L243    |     | 051-00005-60 | IND HAIRPIN 10MM TALL T859     | %R145  |     | 036-10000-00 | RES M/F 0805 ZERO OHM          |
| L246    |     | 052-08340-50 | COIL A/W 5T/4.0MM SMD 0.8MM    | R146   |     | 036-13470-00 | RES M/F 0805 470E 5%           |
| L247    |     | 065-10009-20 | BEAD FER SMD BDS 3/3/8.9-4S2   | R147   |     | 036-13220-10 | RES 0805 220E 1%               |
| L253    |     | 056-10330-02 | (L) IND SMD 330NH              | R148   |     | 036-10000-00 | RES M/F 0805 ZERO OHM          |
| #L254   | 10  | 052-08340-20 | COIL A/W 2T/4.0MM SMD 0.8MM    | R149   |     | 036-14560-00 | RES M/F 0805 5K6 5%            |
| #L254   | 20  | 052-08335-20 | COIL A/W 2T/3.5MM SMD 0.8MM    | R150   |     | 036-14470-10 | RES M/F 0805 4K7 1%            |
| #L254   | 30  | 052-08335-20 | COIL A/W 2T/3.5MM SMD 0.8MM    | R151   |     | 036-13220-10 | RES 0805 220E 1%               |
| #L255   | 10  | 052-08345-20 | COIL A/W 2T/4.5MM SMD 0.8MM    | R152   |     | 036-13100-10 | RES M/F 0805 100E 1%           |
| #L255   | 20  | 052-08340-20 | COIL A/W 2T/4.0MM SMD 0.8MM    | R153   |     | 036-14220-00 | RES M/F 0805 2K2 5%            |
| #L255   | 30  | 052-08340-20 | COIL A/W 2T/4.0MM SMD 0.8MM    | R154   |     | 036-14220-00 | RES M/F 0805 2K2 5%            |
| #L256   | 10  | 052-08340-20 | COIL A/W 2T/4.0MM SMD 0.8MM    | R155   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| #L256   | 20  | 052-08335-20 | COIL A/W 2T/3.5MM SMD 0.8MM    | R156   |     | 036-14180-00 | RES M/F 0805 1K8 5%            |
| #L256   | 30  | 052-08335-20 | COIL A/W 2T/3.5MM SMD 0.8MM    | R157   |     | 036-15470-10 | RES M/F 0805 47K 1%            |
| L257    |     | 056-10330-02 | (L) IND SMD 330NH              | R158   |     | 036-15220-00 | RES M/F 0805 22K 5%            |
| #L258   | 10  | 052-08325-10 | COIL A/W 1T/2.5MM SMD 0.8MM    | R159   |     | 036-13470-00 | RES M/F 0805 470E 5%           |
| #L258   | 20  | 052-08320-10 | COIL A/W 1T/2.0MM SMD 0.8MM    | R160   |     | 036-03180-10 | RES 180R 1W SMD 2512           |
| #L258   | 30  | 052-08320-10 | COIL A/W 1T/2.0MM SMD 0.8MM    | R161   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| L259    |     | 052-08320-10 | COIL A/W 1T/2.0MM SMD 0.8MM    | R162   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| L260    |     | 052-08335-10 | COIL A/W 1T/3.5MM SMD 0.8MM    | R163   |     | 036-13100-10 | RES M/F 0805 100E 1%           |
| LINK200 |     | 051-00640-02 | LNK 65.5 COP STPL C/W SLCN SLV | R164   |     | 036-03180-10 | RES 180R 1W SMD 2512           |
| P200    |     | 356-00010-26 | PIN TRACK HARWIN FOR 1.6MM PCB | R165   |     | 036-03100-02 | RES 100E 1206 200V 250MW RC01  |
| P201    |     | 356-00010-26 | PIN TRACK HARWIN FOR 1.6MM PCB | R166   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| P250    |     | 356-00010-26 | PIN TRACK HARWIN FOR 1.6MM PCB | R167   |     | 036-13470-00 | RES M/F 0805 470E 5%           |
| P260    |     | 356-00010-26 | PIN TRACK HARWIN FOR 1.6MM PCB | R168   |     | 036-14270-10 | RES M/F 0805 2K7 1%            |
| P270    |     | 356-00010-26 | PIN TRACK HARWIN FOR 1.6MM PCB | R169   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| PL101   |     | 070-01001-00 | D-RANGE 15 WAY COMPL T800      | R170   |     | 036-14220-00 | RES M/F 0805 2K2 5%            |
| PL110   |     | 240-00021-03 | LIM) HEADER 2X7 WAY SMD        | R171   |     | 036-13150-10 | RES M/F 0805 150E 1%           |
| Q100    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R172   |     | 036-16180-00 | RES M/F 0805 180K 5%           |
| Q101    |     | 000-10017-00 | LS) XSTR SMD BF170LT1 SOT23    | R173   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q102    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R175   |     | 036-15220-00 | RES M/F 0805 22K 5%            |
| Q103    |     | 000-10017-00 | LS) XSTR SMD BF170LT1 SOT23    | R176   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q110    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R177   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q111    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R178   |     | 036-14100-10 | RES M/F 0805 1K 1%             |
| Q112    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R179   |     | 036-14100-10 | RES M/F 0805 1K 1%             |
| Q113    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R180   |     | 036-14100-10 | RES M/F 0805 1K 1%             |
| Q114    |     | 000-10008-69 | S) XSTR SMD BC869 PNP 1W SOT89 | R181   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q120    |     | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS | R182   |     | 036-16220-00 | RES M/F 0805 20K 5%            |
| Q121    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R183   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q122    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R184   |     | 036-14470-10 | RES M/F 0805 4K7 1%            |
| Q123    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R185   |     | 036-16100-10 | RES M/F 0805 100K 1%           |
| Q124    |     | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 | R186   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| Q125    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R187   |     | 036-16150-00 | RES M/F 0805 150K 5%           |
| Q126    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R188   |     | 036-16100-10 | RES M/F 0805 100K 1%           |
| Q127    |     | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS | R189   |     | 036-14100-10 | RES M/F 0805 1K 1%             |
| Q128    |     | 000-00030-95 | S) XSTR 2N6107 PNP TO220 AF    | R190   |     | 036-13220-10 | RES 0805 220E 1%               |
| Q129    |     | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS | R191   |     | 036-12100-10 | RES M/F 0805 10E 1%            |
| Q135    |     | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS | R192   |     | 036-13680-00 | RES M/F 0805 680E 5%           |
| Q200    |     | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS | R193   |     | 036-16100-10 | RES M/F 0805 100K 1%           |
| Q216    |     | 000-00031-02 | S)XSTR 2SC3102 UHF 60W 6LFL    | R194   |     | 036-14150-10 | RES M/F 0805 1K5 1%            |
| Q217    |     | 000-00031-02 | S)XSTR 2SC3102 UHF 60W 6LFL    | R195   |     | 036-12220-00 | RES M/F 0805 22E 5%            |
| R100    |     | 036-14820-10 | RES M/F 0805 8K2 1%            | R197   |     | 036-12220-00 | RES M/F 0805 22E 5%            |
| R101    |     | 036-13470-00 | RES M/F 0805 470E 5%           | R198   |     | 036-12220-00 | RES M/F 0805 22E 5%            |
| R102    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R200   |     | 045-05100-02 | RES NTC 10K 2% Metal tagged    |
| R103    |     | 036-15100-10 | RES M/F 0805 10K 1%            | R201   |     | 036-13100-10 | RES M/F 0805 100E 1%           |
| R104    |     | 036-15100-10 | RES M/F 0805 10K 1%            | R202   |     | 036-13560-10 | RES M/F 0805 560E 1%           |
| R105    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R203   |     | 036-14470-10 | RES M/F 0805 4K7 1%            |
| R106    |     | 036-14680-10 | RES M/F 0805 6K8 1%            | R204   |     | 036-14470-10 | RES M/F 0805 4K7 1%            |
| R107    |     | 036-14470-10 | RES M/F 0805 4K7 1%            | R205   |     | 036-13390-10 | RES M/F 0805 390E 1%           |
| R109    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R206   |     | 036-13390-10 | RES M/F 0805 390E 1%           |
| R111    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R207   |     | 036-14680-10 | RES M/F 0805 6K8 1%            |
| R112    |     | 036-15100-10 | RES M/F 0805 10K 1%            | R208   |     | 036-15100-10 | RES M/F 0805 10K 1%            |
| R113    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R209   |     | 036-14470-10 | RES M/F 0805 4K7 1%            |
| R114    |     | 036-14470-10 | RES M/F 0805 4K7 1%            | R210   |     | 045-04470-00 | RES NTC SMD 4K7 5% 20MW        |
| R115    |     | 036-17100-10 | RES M/F 0805 1M 1%             | R223   |     | 036-11330-00 | RES M/F 0805 3E3 5%            |
| R116    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R224   |     | 036-11330-00 | RES M/F 0805 3E3 5%            |
| R117    |     | 036-14220-00 | RES M/F 0805 2K2 5%            | R225   |     | 036-11330-00 | RES M/F 0805 3E3 5%            |
| R118    |     | 036-16100-10 | RES M/F 0805 100K 1%           | R226   |     | 036-03118-10 | RES 18R 1W SMD 2512            |
| R119    |     | 036-15100-10 | RES M/F 0805 10K 1%            | R227   |     | 036-03270-10 | RES 270 OHM 1 WATT 2512 CHIP   |
| R120    |     | 036-13680-00 | RES M/F 0805 680E 5%           | R230   |     | 036-03270-10 | RES 270 OHM 1 WATT 2512 CHIP   |
| R121    |     | 036-17100-10 | RES M/F 0805 1M 1%             | R231   |     | 039-50500-00 | RES TERM 50E 50W RFP50-50TCG   |
| R122    |     | 036-14220-00 | RES M/F 0805 2K2 5%            | R235   |     | 036-13100-10 | RES M/F 0805 100E 1%           |
| R123    |     | 036-14100-10 | RES M/F 0805 1K 1%             | R236   |     | 036-13100-10 | RES M/F 0805 100E 1%           |
| R124    |     | 036-13680-00 | RES M/F 0805 680E 5%           | R237   |     | 036-03100-02 | RES 100E 1206 200V 250MW RC01  |
| R125    |     | 036-16100-10 | RES M/F 0805 100K 1%           | R238   |     | 036-03100-02 | RES 100E 1206 200V 250MW RC01  |
| R126    |     | 036-16220-00 | RES M/F 0805 220K 5%           | R240   |     | 039-50500-00 | RES TERM 50E 50W RFP50-50TCG   |
| R127    |     | 045-04470-00 | RES NTC SMD 4K7 5% 20MW        | R245   |     | 036-03130-10 | RES 30E 1W SMD 2512            |
| R128    |     | 036-16220-00 | RES M/F 0805 220K 5%           | R246   |     | 036-03130-10 | RES 30E 1W SMD 2512            |
| R129    |     | 036-15100-10 | RES M/F 0805 10K 1%            | R247   |     | 036-11330-00 | RES M/F 0805 3E3 5%            |
| R130    |     | 036-16220-00 | RES M/F 0805 220K 5%           | RV101  |     | 042-04500-05 | RES PRESET SMD 5K CER 4MM SQ   |
| R131    |     | 036-15330-10 | RES M/F 0805 33K 1%            | RV103  |     | 042-05500-05 | RES PRESET SMD 50K CER 4MM SQ  |
| R132    |     | 036-14100-10 | RES M/F 0805 1K 1%             | RV105  |     | 042-04500-05 | RES PRESET SMD 5K CER 4MM SQ   |
| R133    |     | 036-15270-10 | RES M/F 0805 27K 1%            | RV107  |     | 042-05500-05 | RES PRESET SMD 50K CER 4MM SQ  |
| R134    |     | 036-14330-10 | RES M/F 0805 3K3 1%            | %RV109 |     | 044-04200-06 | RES PRE MULT 2K 15T PNL MITG   |
| R135    |     | 036-16470-00 | RES M/F 0805 470K 5%           | RV113  |     | 042-06500-05 | RES PRESET SMD 500K CER 4MM SQ |
| R136    |     | 036-16470-00 | RES M/F 0805 470K 5%           | RV115  |     | 042-05200-05 | RES PRESET SMD 20K CER 4MM SQ  |
|         |     |              |                                | SK101  |     | 240-10000-05 | CONN SMD SKT 8W 2R M-MATCH     |
|         |     |              |                                | SK103  |     | 240-10000-05 | CONN SMD SKT 8W 2R M-MATCH     |
|         |     |              |                                | SK201  |     | 240-02100-44 | SKT COAX MINI JACK PCB MT ANG. |



## T859 Mechanical &amp; Miscellaneous Parts (220-01422-03)

| IPN          | Legend | Description  | IPN          | Legend | Description                    |
|--------------|--------|--|--------------|--------|--------------------------------|
| 012-04100-05 | 1      | CAP F/THRU 1N SUPPR FLTR S-MTG   | 353-00010-24 | 32     | WSHR M4x8MM FLAT               |
| 044-04200-07 | 2      | RES POT COVER H-83P  | 356-00010-01 | 33     | TAG SOLDER 3MM SHORT M6132/3.2 |
| 045-05100-02 | 3      | RES NTC 10K 2% METAL TAGGED R200   | 356-00010-03 | 34     | TAG SOLDER 3MM LONG M614/3.2   |
| 070-01001-00 | 4      | D-RANGE 15 WAY COMPL T800  | 356-00010-05 | 35     | TAG SOLDER 4MM LONG M6144/4.2  |
| 201-00030-02 |        | WIRE T/C WIRE 7/0.2 PVC RED<br>Power feed for fan.                       | 357-00010-45 | 36     | CLAMP CABLE 4.8MM P CLIP       |
| 201-00050-25 |        | AUTO 154 RED 41/0.3 PVC<br>DC+ from D-range PCB.                         | 360-00010-41 | 37     | BUSH SHORTY BLK                |
| 201-00050-26 |        | AUTO 154 BLACK 41/0.3 PVC<br>DC- from D-range PCB.                       | 362-00010-07 | 38     | GASKET SIL INSULATING TO-220   |
| 219-02591-01 | 5      | LOOM RIBBON 8 WAY FOR T839PA   | 362-00010-13 | 39     | BUSH INSULATING 1.1MM TOP HAT  |
| 219-02612-00 |        | RG316 CABLE ASSY T869PA<br>BNC to SK201 cable assembly with connectors.  | 362-00010-33 | 40     | GROMMET LED MTG 3MM            |
| 219-02639-00 |        | CABLE ASSEMBLY RG223/U N TO BNC<br>Exciter/PA connecting cable assembly. | 399-00010-51 |        | BAG PLASTIC 75X100MM           |
| 219-02709-00 | 6      | T858/T859 N-TYPE CONNECTOR SUB   | 400-00020-30 |        | HEATSHRINK 3MM                 |
| 220-01422-03 | 7      | PCB T859PA SERIES II   | 410-00010-43 |        | PKG T296 AMPAC REF 73-46       |
| 220-01442-03 | 41     | PCB T858/T859 SII DRNL COUPLER   |              |        |                                |
| 240-02100-17 | 8      | SKT COAX BNC PNL JAC CRP RG316   |              |        |                                |
| 240-04020-62 |        | SKT 2 W RECEP SHORTING LINK<br>PL110                                     |              |        |                                |
| 240-06010-15 | 9      | BLOCK LATCHING 15W D RANGE   |              |        |                                |
| 258-00010-08 | 10     | FAN 12V 119 x 119 x 25 (PAPST)   |              |        |                                |
| 302-05204-00 | 11     | BRKT A3M2314 F/THRU MTG T859   |              |        |                                |
| 303-23146-00 | 12     | COVER SIDE T869PA  |              |        |                                |
| 308-01007-01 | 13     | HANDLE BASE STATION SERIES II  |              |        |                                |
| 308-13131-02 | 14     | HEATSINK T859 PA DRILLED DCST  |              |        |                                |
| 316-06651-00 | 15     | PNL PA NO INP DRV SER II DBL   |              |        |                                |
| 319-01190-01 | 16     | SHIELD WALL HARM. FILTER 869PA   |              |        |                                |
| 319-01201-00 | 17     | SHIELD LID HARM. FILTER 869PA  |              |        |                                |
| 319-01202-00 | 18     | SHIELD T869PA CONTROL CIRCUIT  |              |        |                                |
| 319-30061-00 | 19     | SPACER PLATE T889 WIRELINE   |              |        |                                |
| 319-30064-00 | 20     | SPACER HSINK RF MODULE 869PA   |              |        |                                |
| 319-30068-00 | 21     | SPACER, T859 PCB HYBRID  |              |        |                                |
| 345-00040-16 | 22     | SCRW M3X20MM P/POZ ST BZ   |              |        |                                |
| 349-00010-59 | 23     | SCRW 6-32 X 3/8 P/PH T/T ZP  |              |        |                                |
| 349-00020-07 | 24     | SCRW 4-40 X 5/16 P/POZ T/T BLK   |              |        |                                |
| 349-00020-09 | 25     | SCRW T/T 4-40X3/8 IN P/POZ BLK   |              |        |                                |
| 349-00020-36 | 26     | SCREW TT M3X8m PANTORX BLK   |              |        |                                |
| 349-00020-43 | 27     | SCRW T/T M4X12MM P/POZ BZ  |              |        |                                |
| 349-00020-49 | 28     | SCRW T/T M4X35MM P/POZ BZ  |              |        |                                |
| 349-00020-55 | 29     | SCRW M3X8 P/P T/T BLCKZNC CHRMM  |              |        |                                |
| 352-00010-29 | 30     | NUT M4 NYLOC HEX   |              |        |                                |
| 353-00010-10 | 31     | WSHR M3 FLAT 7MMX0.6MM ST BZ   |              |        |                                |

**replace A4 pages D5.3.23/D5.3.24 with A3 pages D5.3.23/D5.3.24**

**replace A4 pages D5.3.23/D5.3.24 with A3 pages D5.3.23/D5.3.24**



## T859 Grid Reference Index (IPN 220-01422-03)

**How To Use This Grid Reference Index**

The first digit in the PCB layout reference is a "1" or "2", indicating the top or bottom side layout respectively, and the last two characters give the location of the component on that diagram.

The first digit in the circuit diagram reference is the sheet number, and the last two characters give the location of the component on that sheet.

| Device | PCB  | Circuit | Device | PCB  | Circuit | Device | PCB  | Circuit | Device  | PCB  | Circuit |
|--------|------|---------|--------|------|---------|--------|------|---------|---------|------|---------|
| C100   | 1:F6 | 1-B7    | C164   | 1:T3 | 1-C1    | #C273  | 1:H3 | 2-L1    | L209    | 1:R5 | 2-D4    |
| C101   | 1:E6 | 1-B6    | C166   | 1:B1 | 1-G0    | C274   | 1:P3 | 2-E3    | L210    | 1:R4 | 2-D4    |
| C102   | 1:B2 | 1-C7    | C167   | 1:B1 | 1-I0    | C275   | 1:F7 | 2-C9    | L211    | 1:Q6 | 2-C5    |
| C103   | 1:B1 | 1-C6    | C168   | 1:C1 | 1-I0    | C276   | 1:F7 | 2-C8    | L212    | 1:R6 | 2-C4    |
| C104   | 1:E6 | 1-D7    | C169   | 1:J1 | 1-J5    | #C277  | 1:C9 | 2-Q3    | %L213   | 1:S9 | 2-B3    |
| C105   | 1:E5 | 1-D6    | C172   | 1:F2 | 1-J0    | #C278  | 1:B8 | 2-Q3    | L235    | 1:K7 | 2-K4    |
| C107   | 1:B4 | 1-E8    | C173   | 1:E2 | 1-K0    | #C280  | 1:A7 | 2-R3    | L237    | 1:M8 | 2-H4    |
| C108   | 1:C3 | 1-F5    | C174   | 1:D2 | 1-L0    | C282   | 1:D7 | 2-Q2    | L238    | 1:M9 | 2-H4    |
| C109   | 1:E4 | 1-G6    | C175   | 1:D2 | 1-M0    | #C283  | 1:D7 | 2-Q2    | L239    | 1:K6 | 2-K3    |
| C110   | 1:E4 | 1-H6    | C176   | 1:F4 | 1-M0    | C284   | 1:E9 | 2-D6    | L240    | 1:H5 | 2-M3    |
| C111   | 1:F4 | 1-I6    | C177   | 1:E3 | 1-N0    | #C285  | 1:D8 | 2-P3    | L241    | 1:N5 | 2-F3    |
| C112   | 1:B2 | 1-I6    | C178   | 1:F3 | 1-N0    | C286   | 1:D7 | 2-P2    | L242    | 1:K5 | 2-K3    |
| C113   | 1:F5 | 1-J8    | C197   | 1:E5 | 1-P0    | C287   | 1:F9 | 2-E6    | L243    | 1:K4 | 2-K3    |
| C114   | 1:B3 | 1-J6    | C198   | 1:C5 | 1-Q0    | C293   | 1:G7 | 2-M3    | L246    | 1:M2 | 2-H1    |
| C115   | 1:F5 | 1-K8    | C200   | 1:Q2 | 2-H7    |        |      |         | L247    | 1:M2 | 2-H1    |
| C116   | 1:A3 | 1-K8    | C201   | 1:Q1 | 2-H7    | D101   | 1:M5 | 1-B0    | L253    | 1:F7 | 2-C9    |
| C117   | 1:B3 | 1-L8    | C202   | 1:F2 | 2-K7    | D105   | 1:C4 | 1-F8    | #L254   | 1:D9 | 2-P3    |
| C119   | 1:C4 | 1-O7    | C203   | 1:E2 | 2-K7    | D105   | 1:C4 | 1-F8    | #L255   | 1:C8 | 2-Q3    |
| C120   | 1:D6 | 1-O7    | C204   | 1:B2 | 2-L7    | D110   | 1:F5 | 1-G8    | #L256   | 1:A8 | 2-R3    |
| C121   | 1:D5 | 1-O8    | C205   | 1:E3 | 2-M7    | D110   | 1:F5 | 1-G8    | L257    | 1:E9 | 2-D7    |
| C122   | 1:D5 | 1-O8    | C206   | 1:F3 | 2-M7    | D112   | 1:V9 | 1-I4    | #L258   | 1:D7 | 2-P2    |
| C123   | 1:B5 | 1-P9    | C207   | 1:F3 | 2-N7    | D114   | 1:V8 | 1-I4    | L259    | 1:D7 | 2-Q2    |
| C124   | 1:B5 | 1-P9    | C208   | 1:B6 | 2-P7    | D115   | 1:E5 | 1-F5    | L260    | 1:C7 | 2-Q2    |
| C125   | 1:C5 | 1-Q7    | C209   | 1:C6 | 2-Q7    | D115   | 1:E5 | 1-F5    |         |      |         |
| C126   | 1:B5 | 1-Q8    | C210   | 1:D6 | 2-Q7    | D120   | 1:C3 | 1-F5    | LINK200 | 1:N5 | 2-M0    |
| C127   | 1:B6 | 1-Q8    | C211   | 1:C6 | 2-Q7    | D120   | 1:C3 | 1-G4    |         |      |         |
| C128   | 1:C6 | 1-Q7    | C214   | 1:D3 | 1-Q0    | D190   | 1:V9 | 1-J4    | P105    | 1:U5 | 1-B1    |
| C129   | 1:B5 | 1-R8    | C215   | 1:E3 | 1-R0    | D205   | 1:G7 | 2-C8    | P110    | 1:U3 | 1-B0    |
| C130   | 1:B5 | 1-R8    | C218   | 1:Q5 | 2-C5    | D206   | 1:E9 | 2-D7    | P130    | 1:A6 | 1-U8    |
| C131   | 1:A5 | 1-S8    | C219   | 1:R4 | 2-B5    |        |      |         | P200    | 1:F7 | 2-N3    |
| C132   | 1:B5 | 1-S9    | C220   | 1:R5 | 2-C4    | IC100  | 1:E5 | 1-D7    | P201    | 1:E9 | 2-P3    |
| C133   | 1:A5 | 1-T8    | C221   | 1:R4 | 2-C3    | IC100  | 1:E5 | 1-I8    | P210    | 1:M7 | 2-G4    |
| %C134  | 1:A6 | 1-T8    | C222   | 1:R4 | 2-E3    | IC100  | 1:E5 | 1-D7    | P212    | 1:M3 | 2-G1    |
| C136   | 1:B2 | 1-M4    | C223   | 1:Q4 | 2-E4    | IC100  | 1:E5 | 1-O0    | P214    | 1:M7 | 2-J4    |
| C137   | 1:D3 | 1-M3    | C224   | 1:Q4 | 2-E5    | IC100  | 1:E5 | 1-H6    | P216    | 1:M3 | 2-J1    |
| C138   | 1:D3 | 1-M3    | C225   | 1:Q6 | 2-C4    | IC105  | 1:D5 | 1-O7    | P218    | 1:K7 | 2-J5    |
| C139   | 1:B4 | 1-N6    | C226   | 1:R6 | 2-C3    | IC105  | 1:D5 | 1-S0    | P220    | 1:K3 | 2-J2    |
| C140   | 1:F1 | 1-N2    | C227   | 1:S8 | 2-A3    | IC105  | 1:D5 | 1-P0    | P222    | 1:K7 | 2-K5    |
| C141   | 1:C3 | 1-O4    | C228   | 1:R8 | 2-B3    | IC105  | 1:D5 | 1-I2    | P224    | 1:K3 | 2-K2    |
| C142   | 1:D3 | 1-O4    | #C247  | 1:H7 | 2-L4    | IC105  | 1:D5 | 1-P8    | P226    | 1:K7 | 2-L5    |
| C143   | 1:E1 | 1-O2    | C249   | 1:N7 | 2-G4    | IC110  | 1:E3 | 1-T0    | P228    | 1:K3 | 2-L2    |
| C144   | 1:F1 | 1-O2    | C250   | 1:H7 | 2-L4    | IC110  | 1:E3 | 1-N0    | P250    | 1:E7 | 2-N0    |
| C145   | 1:D1 | 1-O3    | #C252  | 1:K7 | 2-K4    | IC110  | 1:E3 | 1-M3    | P260    | 1:G9 | 2-P0    |
| C146   | 1:D2 | 1-O4    | #C253  | 1:K7 | 2-K4    | IC130  | 1:B1 | 1-H0    | P270    | 1:D7 | 2-Q2    |
| C147   | 1:B4 | 1-P6    | C254   | 1:J7 | 2-L4    | IC140  | 1:E2 | 1-K0    |         |      |         |
| C148   | 1:E2 | 1-P3    | #C256  | 1:M7 | 2-H4    | IC200  | 1:E3 | 1-U0    | PL101   | 2:S4 | 1-B0    |
| C149   | 1:E1 | 1-P2    | #C257  | 1:M7 | 2-J4    | IC200  | 1:E3 | 1-Q0    | PL110   | 1:C2 |         |
| C150   | 1:D2 | 1-P4    | C258   | 1:K6 | 2-L3    | IC200  | 1:E3 | 2-M8    |         |      |         |
| C151   | 1:B4 | 1-P5    | C259   | 1:L5 | 2-K3    | #IC210 | 1:S5 | 2-C3    | Q100    | 1:F4 | 1-I6    |
| C152   | 1:E2 | 1-Q2    | C260   | 1:L6 | 2-J3    |        |      |         | Q101    | 1:B3 | 1-J6    |
| C153   | 1:F2 | 1-Q4    | C261   | 1:K4 | 2-L3    | %L100  | 1:A5 | 1-T8    | Q102    | 1:F5 | 1-J8    |
| C154   | 1:F2 | 1-Q2    | C262   | 1:H3 | 2-L2    | L120   | 1:F2 | 1-Q2    | Q103    | 1:A3 | 1-K8    |
| C156   | 1:D4 | 1-G1    | C263   | 1:J3 | 2-L1    | L161   | 1:U4 | 1-B1    | Q110    | 1:B5 | 1-Q9    |
| C157   | 1:D4 | 1-H1    | #C264  | 1:K3 | 2-K1    | L162   | 1:T3 | 1-C1    | Q111    | 1:B6 | 1-Q8    |
| C158   | 1:D4 | 1-I1    | #C265  | 1:K3 | 2-K1    | L200   | 1:Q1 | 2-H8    | Q112    | 1:C6 | 1-Q7    |
| C159   | 1:D3 | 1-K1    | C268   | 1:N3 | 2-G1    | L201   | 1:F2 | 2-K8    | Q113    | 1:B5 | 1-R8    |
| C161   | 1:T3 | 1-B1    | #C269  | 1:M3 | 2-H1    | L202   | 1:B6 | 2-P7    | Q114    | 1:A5 | 1-S8    |
| C162   | 1:U4 | 1-B1    | #C270  | 1:M3 | 2-J1    | L203   | 1:D6 | 2-Q7    | Q120    | 1:B4 | 1-N6    |
| C163   | 1:U3 | 1-C1    | C272   | 1:L6 | 2-J3    | L208   | 1:Q5 | 2-D5    | Q121    | 1:C4 | 1-N4    |

| <u>Device</u> | <u>PCB</u> | <u>Circuit</u> | <u>Device</u> | <u>PCB</u> | <u>Circuit</u> | <u>Device</u> | <u>PCB</u> | <u>Circuit</u> | <u>Device</u> | <u>PCB</u> | <u>Circuit</u> |
|---------------|------------|----------------|---------------|------------|----------------|---------------|------------|----------------|---------------|------------|----------------|
| Q122          | 1:F1       | 1-O2           | R163          | 1:E2       | 1-P3           |               |            |                |               |            |                |
| Q123          | 1:B4       | 1-O6           | R164          | 1:E1       | 1-P2           |               |            |                |               |            |                |
| Q124          | 1:F1       | 1-O3           | R165          | 1:E1       | 1-P2           |               |            |                |               |            |                |
| Q125          | 1:D3       | 1-O4           | R166          | 1:B4       | 1-P6           |               |            |                |               |            |                |
| Q126          | 1:D2       | 1-P4           | R167          | 1:B4       | 1-P5           |               |            |                |               |            |                |
| Q127          | 1:B4       | 1-P5           | R168          | 1:E1       | 1-P2           |               |            |                |               |            |                |
| Q128          | 1:D2       | 1-P3           | R169          | 1:D2       | 1-P4           |               |            |                |               |            |                |
| Q129          | 1:B3       | 1-Q6           | R170          | 1:E2       | 1-P2           |               |            |                |               |            |                |
| Q135          | 1:C4       | 1-K2           | R171          | 1:F1       | 1-P2           |               |            |                |               |            |                |
| Q200          | 1:F3       | 2-P7           | R172          | 1:B4       | 1-P6           |               |            |                |               |            |                |
| Q216          | 1:L7       | 2-J4           | R173          | 1:D2       | 1-Q4           |               |            |                |               |            |                |
| Q217          | 1:L3       | 2-J1           | %R174         | 1:F2       | 1-Q6           |               |            |                |               |            |                |
|               |            |                | R175          | 1:B3       | 1-Q6           |               |            |                |               |            |                |
| R100          | 1:F5       | 1-C7           | R176          | 1:B3       | 1-Q6           |               |            |                |               |            |                |
| R101          | 1:E5       | 1-C6           | R177          | 1:D4       | 1-H2           |               |            |                |               |            |                |
| R102          | 1:D1       | 1-C7           | R178          | 1:D4       | 1-H2           |               |            |                |               |            |                |
| R103          | 1:F6       | 1-D7           | R179          | 1:D4       | 1-H1           |               |            |                |               |            |                |
| R104          | 1:E5       | 1-D6           | R180          | 1:D4       | 1-I1           |               |            |                |               |            |                |
| R105          | 1:B4       | 1-E8           | R181          | 1:D4       | 1-I2           |               |            |                |               |            |                |
| R106          | 1:E4       | 1-F7           | R182          | 1:D5       | 1-J2           |               |            |                |               |            |                |
| R107          | 1:E4       | 1-F6           | R183          | 1:C5       | 1-J2           |               |            |                |               |            |                |
| %R108         | 1:E6       | 1-F6           | R184          | 1:C4       | 1-J1           |               |            |                |               |            |                |
| R109          | 1:F5       | 1-F8           | R185          | 1:C3       | 1-K2           |               |            |                |               |            |                |
| %R110         | 1:F5       | 1-F8           | R186          | 1:C3       | 1-K2           |               |            |                |               |            |                |
| R111          | 1:C3       | 1-F5           | R187          | 1:C3       | 1-K2           |               |            |                |               |            |                |
| R112          | 1:E4       | 1-G6           | R188          | 1:D3       | 1-L1           |               |            |                |               |            |                |
| R113          | 1:B3       | 1-G5           | R189          | 1:B1       | 1-H0           |               |            |                |               |            |                |
| R114          | 1:E4       | 1-G6           | R190          | 1:B1       | 1-H0           |               |            |                |               |            |                |
| R115          | 1:E4       | 1-H6           | R191          | 1:C1       | 1-I0           |               |            |                |               |            |                |
| R116          | 1:E4       | 1-H5           | R192          | 1:V9       | 1-J5           |               |            |                |               |            |                |
| R117          | 1:E4       | 1-H6           | R193          | 1:D2       | 1-L0           |               |            |                |               |            |                |
| R118          | 1:F4       | 1-H8           | R194          | 1:E2       | 1-L0           |               |            |                |               |            |                |
| R119          | 1:E5       | 1-H8           | R195          | 1:E3       | 1-N0           |               |            |                |               |            |                |
| R120          | 1:V7       | 1-I5           | R197          | 1:E5       | 1-O0           |               |            |                |               |            |                |
| R121          | 1:F5       | 1-I8           | R198          | 1:C5       | 1-P0           |               |            |                |               |            |                |
| R122          | 1:F4       | 1-I8           | R200          | 1:T2       | 2-H7           |               |            |                |               |            |                |
| R123          | 1:F5       | 1-I8           | R201          | 1:D3       | 2-L8           |               |            |                |               |            |                |
| R124          | 1:V8       | 1-I5           | R202          | 1:D3       | 2-L6           |               |            |                |               |            |                |
| R125          | 1:C5       | 1-N7           | R203          | 1:D3       | 2-L8           |               |            |                |               |            |                |
| R126          | 1:E6       | 1-N7           | R204          | 1:D3       | 2-L8           |               |            |                |               |            |                |
| R127          | 1:C5       | 1-N7           | R205          | 1:F3       | 2-L7           |               |            |                |               |            |                |
| R128          | 1:D6       | 1-N7           | R206          | 1:F3       | 2-L7           |               |            |                |               |            |                |
| R129          | 1:B5       | 1-O9           | R207          | 1:F3       | 2-M7           |               |            |                |               |            |                |
| R130          | 1:D5       | 1-O8           | R208          | 1:F3       | 2-N7           |               |            |                |               |            |                |
| R131          | 1:D5       | 1-O8           | R209          | 1:F3       | 2-N7           |               |            |                |               |            |                |
| R132          | 1:D5       | 1-O8           | R210          | 1:B6       | 2-P7           |               |            |                |               |            |                |
| R133          | 1:C4       | 1-O7           | R223          | 1:R5       | 2-C4           |               |            |                |               |            |                |
| R134          | 1:B5       | 1-O9           | R224          | 1:Q4       | 2-E4           |               |            |                |               |            |                |
| R135          | 1:C5       | 1-P7           | R225          | 1:Q6       | 2-C4           |               |            |                |               |            |                |
| R136          | 1:D5       | 1-P8           | R226          | 1:R7       | 2-B3           |               |            |                |               |            |                |
| R137          | 1:C5       | 1-P7           | R227          | 1:R8       | 2-B2           |               |            |                |               |            |                |
| R138          | 1:D5       | 1-P8           | R230          | 1:R7       | 2-B2           |               |            |                |               |            |                |
| R139          | 1:C6       | 1-P7           | R231          | 1:N9       | 2-F3           |               |            |                |               |            |                |
| R140          | 1:B5       | 1-Q8           | R235          | 1:E7       | 2-E8           |               |            |                |               |            |                |
| R141          | 1:B6       | 1-Q8           | R236          | 1:G9       | 2-C7           |               |            |                |               |            |                |
| R142          | 1:B5       | 1-Q8           | R237          | 1:D6       | 2-R2           |               |            |                |               |            |                |
| R143          | 1:B5       | 1-R9           | R238          | 1:D6       | 2-R2           |               |            |                |               |            |                |
| R144          | 1:A5       | 1-R9           | R240          | 1:G1       | 2-M3           |               |            |                |               |            |                |
| %R145         | 1:A5       | 1-T8           | R245          | 1:K6       | 2-L3           |               |            |                |               |            |                |
| R146          | 1:V7       | 1-K4           | R246          | 1:K4       | 2-L3           |               |            |                |               |            |                |
| R147          | 1:V7       | 1-K4           | R247          | 1:L6       | 2-K3           |               |            |                |               |            |                |
| R148          | 1:V7       | 1-K4           |               |            |                |               |            |                |               |            |                |
| R149          | 1:E4       | 1-M4           | RV101         | 1:C4       | 1-H8           |               |            |                |               |            |                |
| R150          | 1:D3       | 1-M2           | RV103         | 1:C4       | 1-F8           |               |            |                |               |            |                |
| R151          | 1:E4       | 1-M4           | RV105         | 1:C3       | 1-G6           |               |            |                |               |            |                |
| R152          | 1:D3       | 1-N4           | RV107         | 1:C2       | 1-F5           |               |            |                |               |            |                |
| R153          | 1:E4       | 1-N3           | %RV109        | 1:V6       | 1-K5           |               |            |                |               |            |                |
| R154          | 1:E4       | 1-N2           | %RV111        | 1:V7       | 1-K4           |               |            |                |               |            |                |
| R155          | 1:B4       | 1-O6           | RV113         | 1:C3       | 1-K2           |               |            |                |               |            |                |
| R156          | 1:C4       | 1-O4           | RV115         | 1:C2       | 1-M0           |               |            |                |               |            |                |
| R157          | 1:D3       | 1-O4           |               |            |                |               |            |                |               |            |                |
| R158          | 1:D4       | 1-O4           | SK101         | 1:T4       | 1-C0           |               |            |                |               |            |                |
| R159          | 1:B4       | 1-O6           | SK103         | 1:A4       | 1-C0           |               |            |                |               |            |                |
| R160          | 1:E1       | 1-O2           | SK201         | 1:R9       | 2-A3           |               |            |                |               |            |                |
| R161          | 1:C4       | 1-O6           |               |            |                |               |            |                |               |            |                |
| R162          | 1:D2       | 1-O4           |               |            |                |               |            |                |               |            |                |