
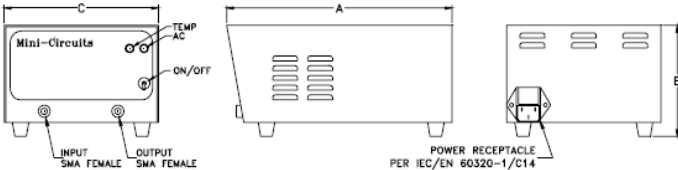

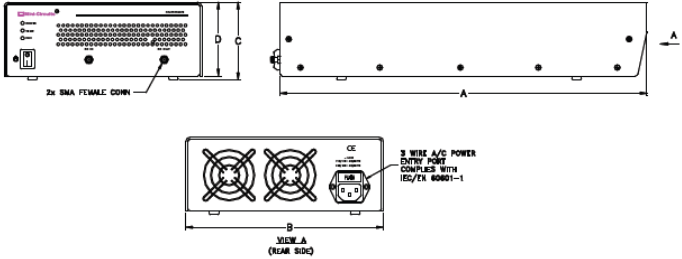


## TVA-63-183A+ PCN Report

**AN-60-080**

As a result of the introduction of RoHS compliant version and assembly option at an alternate qualified Mini-Circuits facility, the replacement part has been judged by the Mini-Circuits Engineering team as a suitable replacement for the existing TVA-63-183.

### CASE STYLE

| ORIGINAL PART: TVA-63-183  | REPLACEMENT PART: TVA-63-183A+ |       |       |       |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
|--|--------------------------------|-------|-------|-------|----|-----|-----|-----|----|-------|-------|-------|-------|----|------|---|---|---|---|---|-----|-------|------|------|------|------|--------|--------|-------|-------|------|
| <p>CASE STYLE: AP1601</p>  <p><b>Outline Drawing</b></p>  <p><b>Outline Dimensions (inch/mm)</b></p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>wt</th> </tr> </thead> <tbody> <tr> <td>9.8</td> <td>4.8</td> <td>6.7</td> <td>--</td> <td>grams</td> </tr> <tr> <td>248.9</td> <td>121.9</td> <td>170.2</td> <td>--</td> <td>1200</td> </tr> </tbody> </table> | A                              | B     | C     | D     | wt | 9.8 | 4.8 | 6.7 | -- | grams | 248.9 | 121.9 | 170.2 | -- | 1200 | <p>CASE STYLE: PJ2059</p>  <p><b>Outline Drawing</b></p>  <p><b>Outline Dimensions (inch/mm)</b></p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>WT.</th> </tr> </thead> <tbody> <tr> <td>15.35</td> <td>8.27</td> <td>3.25</td> <td>3.09</td> <td>GRAM</td> </tr> <tr> <td>389.89</td> <td>210.06</td> <td>82.55</td> <td>78.49</td> <td>2490</td> </tr> </tbody> </table> | A | B | C | D | WT. | 15.35 | 8.27 | 3.25 | 3.09 | GRAM | 389.89 | 210.06 | 82.55 | 78.49 | 2490 |
| A  | B                              | C     | D     | wt    |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
| 9.8  | 4.8                            | 6.7   | --    | grams |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
| 248.9  | 121.9                          | 170.2 | --    | 1200  |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
| A  | B                              | C     | D     | WT.   |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
| 15.35  | 8.27                           | 3.25  | 3.09  | GRAM  |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |
| 389.89   | 210.06                         | 82.55 | 78.49 | 2490  |    |     |     |     |    |       |       |       |       |    |      |   |   |   |   |   |     |       |      |      |      |      |        |        |       |       |      |

- a. Suitability within a particular system must be determined by and is solely the responsibility of the customer based on, among other things, electrical performance criteria, stimulus conditions, application, compatibility with other components and environmental conditions and stresses.

**CONCLUSION:**

- 1) FIT and FORM change for RoHS version
- 2) FUNCTIONAL changes as follows:

| Parameter     | Original Part, TVA-63-183 | Replacement Part, TVA-63-183A+ |
|---------------|---------------------------|--------------------------------|
| Gain          | 20dB min, 23.6dB typ      | 20dB min, 24dB typ             |
| Gain Flatness | +/-1dB typ                | +/-1.5dB typ                   |
| P1dB          | 16dBm min, 18dBm typ      | 15dBm min, 17dBm typ           |
| Noise Figure  | 6.9dB typ                 | 6.4dB typ                      |

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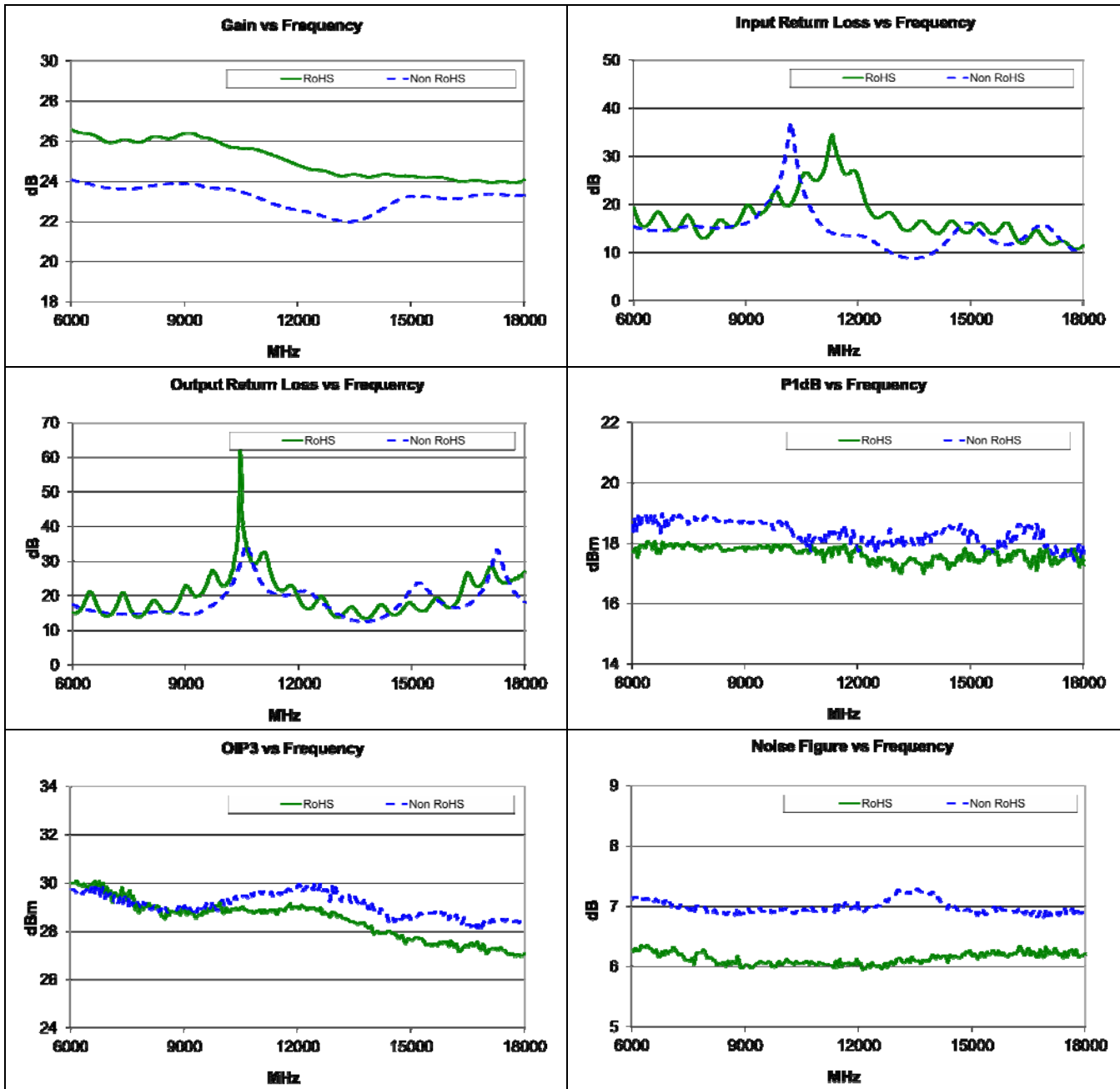
### 3) TYPICAL PERFORMANCE COMPARISON<sub>a</sub>: T<sub>AMB</sub>=25°C

| Parameter          | Freq (MHz) | Non RoHS (TVA-63-183) |         | RoHS (TVA-63-183A+) |         |
|--------------------|------------|-----------------------|---------|---------------------|---------|
|                    |            | Data of 1 unit        |         | Data of 2 units     |         |
|                    |            | Min                   | Max     | Min                 | Max     |
| Gain (dB)          | 6000-18000 | 21.98                 | 24.06   | 23.51               | 26.57   |
| Gain Flatness (dB) | 6000-18000 | -----                 | +/-1.04 | -----               | +/-1.49 |
| Input VSWR (:1)    | 6000-18000 | -----                 | 2.15    | -----               | 2.05    |
| Output VSWR (:1)   | 6000-18000 | -----                 | 1.6     | -----               | 1.54    |
| P1dB (dBm)         | 6000-18000 | 17.48                 | -----   | 17.06               | -----   |
| OIP3 (dBm)         | 6000-18000 | 28.26                 | -----   | 26.97               | -----   |
| Noise Figure (dB)  | 6000-18000 | -----                 | 7.28    | -----               | 6.4     |
| AC Supply (V)      | -----      | -----                 | 110/220 | -----               | 110/220 |

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## COMPARISON PERFORMANCE CURVES<sup>a</sup>:

T<sub>AMB</sub>=25°C



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