
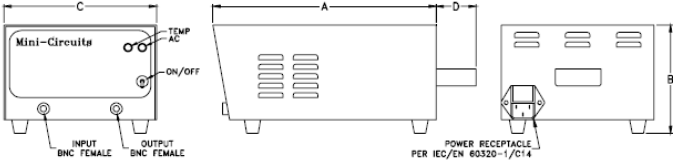

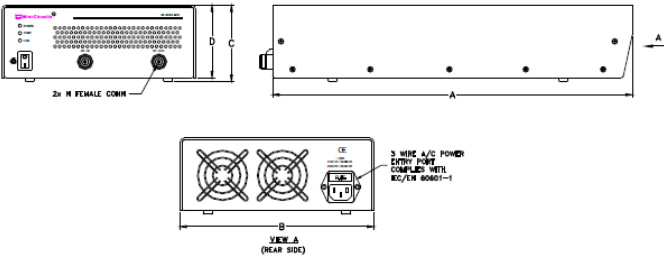


TVA-R5-13A+ PCN Report

AN-60-084

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-R5-13_a.

CASE STYLE

ORIGINAL PART: TVA-R5-13	REPLACEMENT PART: TVA-R5-13A+																														
<p>CASE STYLE: AP1600</p>  <p>Outline Drawing</p>  <p>Outline Dimensions (inch / mm)</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>1.75</td> <td>grams</td> </tr> <tr> <td>248.9</td> <td>121.9</td> <td>170.2</td> <td>44.5</td> <td>3400</td> </tr> </tbody> </table>	A	B	C	D	wt	9.8	4.8	6.7	1.75	grams	248.9	121.9	170.2	44.5	3400	<p>CASE STYLE: PJ2059-2</p>  <p>Outline Drawing</p>  <p>Outline Dimensions (inch / mm)</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>3870</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	3870
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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-R5-13	Replacement Part, TVA-R5-13A+
Gain	35dB min, 41dB typ	34dB min, 38dB typ
Gain Flatness	+/-1.0dB typ, +/-2.2dB max	+/-1.4dB typ, +/-2.2dB max
P1dB	32dBm min, 35dBm typ	31dBm min, 34dBm typ
OIP3	40dBm typ	42dBm typ
Noise Figure	8dB typ	10dBm typ

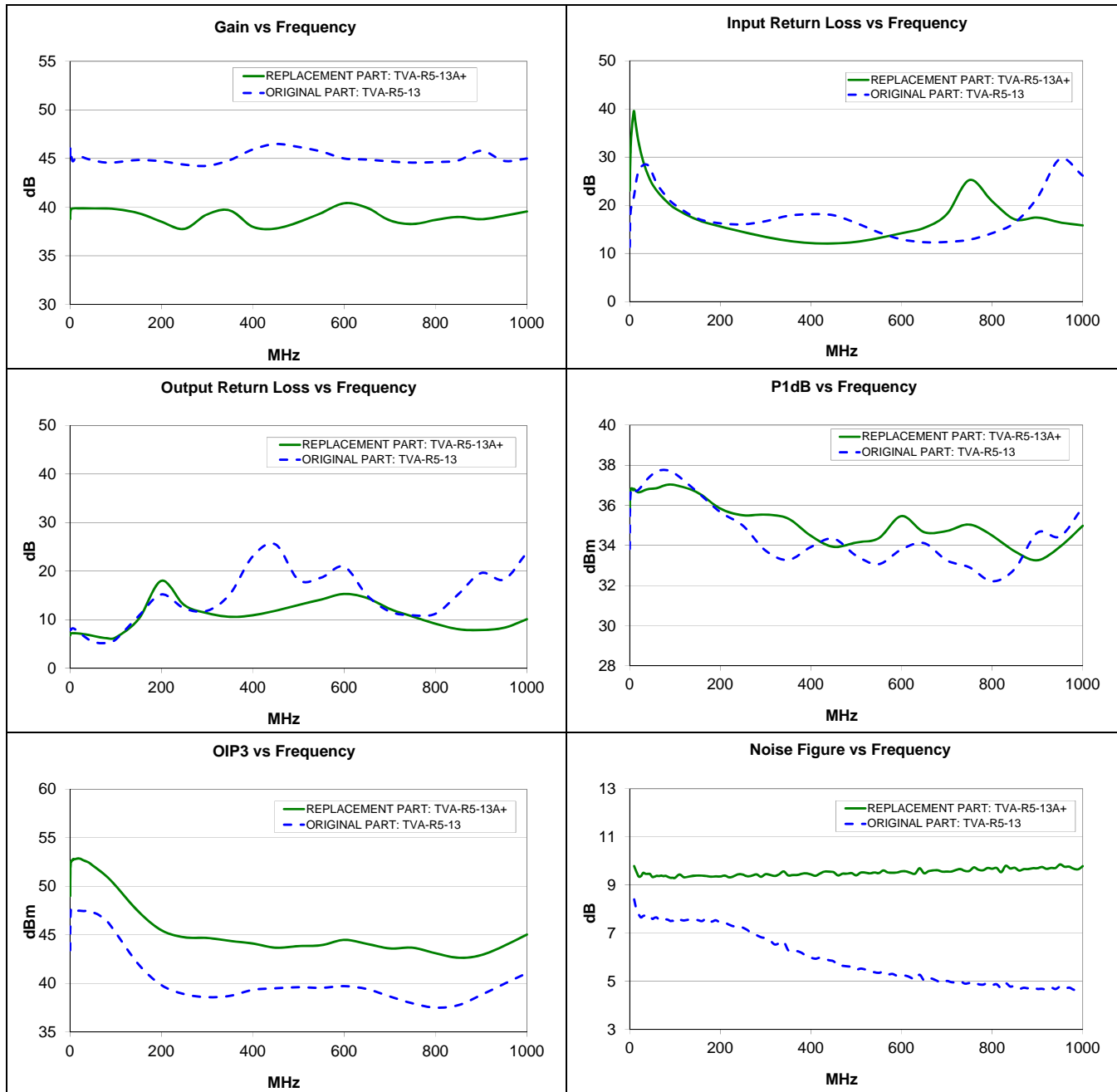
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3) TYPICAL PERFORMANCE COMPARISON_a: T_{AMB}=25°C

Parameter	Freq (MHz)	Original Part (TVA-R5-13)		Replacement Part (TVA-R5-13A+)	
		Data of 1 unit		Data of 2 units	
		Min	Max	Min	Max
Gain (dB)	0.5-1000	44.25	46.48	37.76	40.52
Gain Flatness (dB)	0.5-1000	-----	+/-1.12	-----	+/-1.36
Input VSWR (:1)	0.5-1000	-----	1.74	-----	1.67
Output VSWR (:1)	0.5-1000	-----	3.40	-----	2.94
P1dB (dBm)	0.5-1000	32.21	-----	33.26	-----
OIP3 (dBm)	0.5-1000	37.51	-----	42.54	-----
Noise Figure (dB)	0.5-1000	-----	8.40	-----	10.15

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COMPARISON PERFORMANCE CURVES^a: $T_{AMB}=25^{\circ}\text{C}$



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