REPLACEMENT PART REFERENCE GUIDE, YAT-7+

AN-70-041

ORIGINAL PART:	YAT-7+
REPLACEMENT PART:	YAT-7A+

Replacement Part has been judged by Mini-Circuits Engineering as a suitable replacement to Original Part.

MECHANICAL DIMENSIONS

Case Style: MC1630
Replacement part uses same case style as original part.

CONCLUSION:

1) **FORM-FIT-FUNCTIONAL ANALYSIS**[a]:

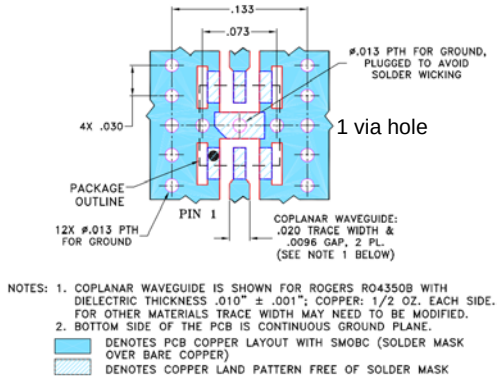
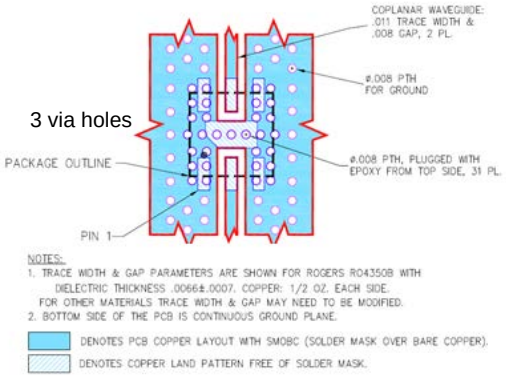
The Replacement Part is Form, Fit compatible.

Following is a summary of changes/improvements in the Specification:

Parameter	Frequency (GHz)	Original Part	Replacement Part
Attenuation Min (dB) Attenuation Max (dB)	DC-5	6.5 7.5	6.7 7.4
Attenuation Min (dB) Attenuation Max (dB)	5-15	6.6 8.1	6.7 7.5
Attenuation Min (dB) Attenuation Max (dB)	15-18	6.8 8.4	6.7 7.6
Input Power	DC-18	2W** at 25°C **Derate linearly to 1W at 85°C	1.3W** at 25°C **Derate linearly to 1W at 85°C

Evaluation Board redesigned to use 2.4 mm End-Launch connectors from Southwest to obtain repeatable electrical performance
Following is a summary of changes in Evaluation Board/Connectors/PL-Drawing:

Parameter	Original Part	Replacement Part
Evaluation Board	TB-621-7+	TB-YAT-7A+
Connectors	SMA End Launch	2.4mm End Launch

PL-Drawing	PL-349	PL-586
		

For typical performance and Graphs: See paragraphs 2 and 3

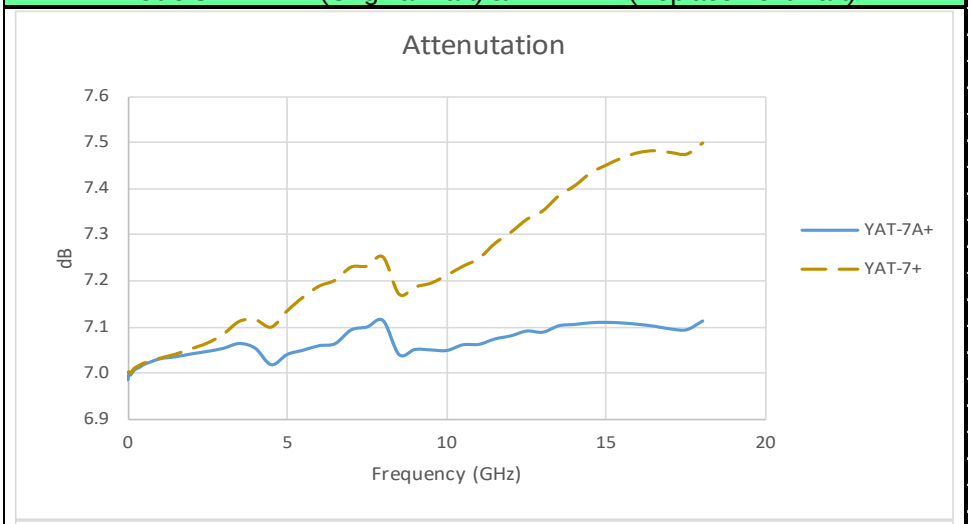
2) TYPICAL PERFORMANCE COMPARISON AT ROOM TEMPERATURE:

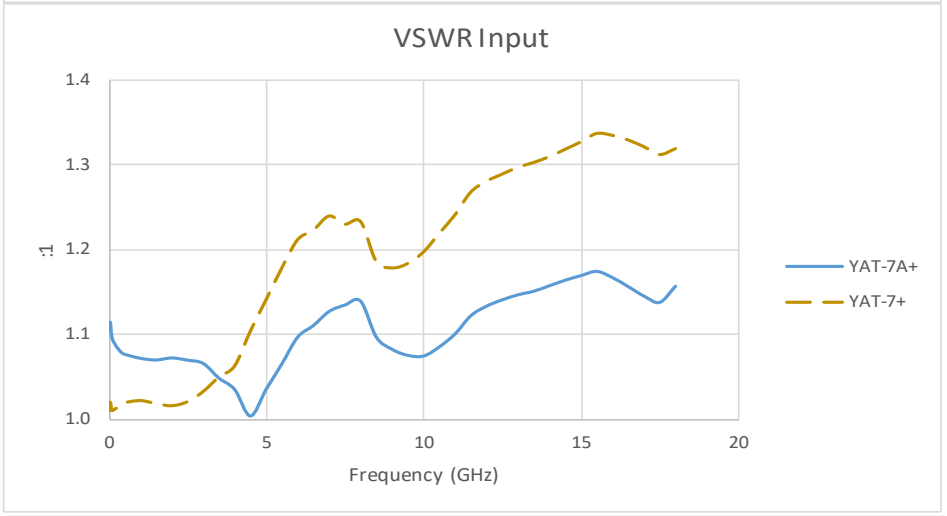
MODEL: YAT-7+, YAT-7A+ (RF Parameters)

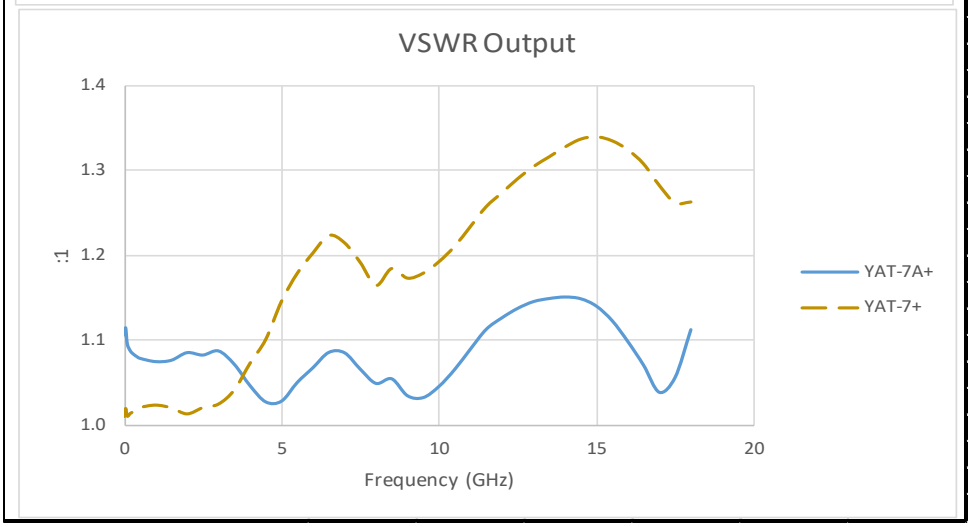
Parameter	Frequency (MHz)		Original Part @ 1 Unit YAT-7+ on TB-621-7+			Replacement Part @ 5 Units YAT-7A+ on TB-YAT-7A+		
	Low	High	Min	Ave	Max.	Min	Ave	Max.
Attenuation (dB)	10	5000	6.97	7.02	7.13	6.94	7.00	7.08
	5000	15000	7.12	7.26	7.45	7.01	7.06	7.13
	15000	18000	7.44	7.47	7.50	7.07	7.10	7.15
Return Loss (dB) (Worse of In/Out)	10	5000	23.33	37.98	45.71	25.15	30.08	44.63
	5000	15000	16.75	19.57	23.33	20.26	25.77	36.54
	15000	18000	16.75	17.06	17.38	19.92	22.18	24.42
VSWR (:1) (Worse of In/Out)	10	5000	1.01	1.03	1.15	1.01	1.06	1.12
	5000	15000	1.15	1.23	1.34	1.03	1.11	1.21
	15000	18000	1.31	1.33	1.34	1.13	1.17	1.22

3) TYPICAL PERFORMANCE GRAPHS AT ROOM TEMPERATURE:

Models: YAT-7+ (Original Part) & YAT-7A+ (Replacement Part)







IMPORTANT NOTICE

This document is provided as an accommodation to Mini-Circuits customers in connection with Mini-Circuits parts only. In that regard, this document is for informational and guideline purposes only. Mini-Circuits assumes no responsibility for errors or omissions in this document or for any information contained herein.

Mini-Circuits may change this document or the Mini-Circuits parts referenced herein (collectively, the "Materials") from time to time, without notice. Mini-Circuits makes no commitment to update or correct any of the Materials, and Mini-Circuits shall have no responsibility whatsoever on account of any updates or corrections to the Materials or Mini-Circuits' failure to do so.

Mini-Circuits customers are solely responsible for the products, systems, and applications in which Mini-Circuits parts are incorporated or used. In that regard, customers are responsible for consulting with their own engineers and other appropriate professionals who are familiar with the specific products and systems into which Mini-Circuits' parts are to be incorporated or used so that the proper selection, installation/integration, use and safeguards are made. Accordingly, Mini-Circuits assumes no liability therefore.

In addition, your use of this document and the information contained herein is subject to Mini-Circuits' standard terms of use, which are available at Mini-Circuits' website at www.minicircuits.com/homepage/terms_of_use.html.

Mini-Circuits and the Mini-Circuits logo are registered trademarks of Scientific Components Corporation d/b/a Mini-Circuits. All other third-party trademarks are the property of their respective owners. A reference to any third-party trademark does not constitute or imply any endorsement, affiliation, sponsorship, or recommendation: (i) by Mini-Circuits of such third-party's products, services, processes, or other information; or (ii) by any such third-party of Mini-Circuits or its products, services, processes, or other information.