

1



#### Figure 1. Photo of the ATRCT101



Figure 2. Numerical Distribution of the ATRCT101

### FEATURES

Wide adjustable resistance range:  $1\Omega$  to  $1000k\Omega$ 

Wide adjustable capacitance range: 10pF to 10µF

High resistance resolution:  $1\Omega$ 

High capacitance resolution: 10pF

High accuracy: ±1%

Very comfortable to use and easy to read the total value

Long life time rocker switches

Compact size: 73.20×27.20×16.01(mm)

Durable resin enclosure

100 % lead (Pb)-free and RoHS compliant

#### APPLICATIONS

Tuning analog circuits and doing experiments. It's highly recommended for high frequency compensation network tuning, greater than 1MHz and up to 10MHz.

### DESCRIPTION

This ATRCT101 is an accurate rocker switch resistor and capacitor box. The features listed above make it a very useful tool for tuning analog circuits where changing capacitance and resistance is needed. In electronic circuit experiments, ATRCT101 can be used to provide accurate resistance and capacitance values, reducing the time to replace resistors or capacitors, thus greatly improving the efficiency of tuning circuits. Its small size not only saves lab space, but also can be easily transported to another site. The anti-interference ability of this ATRCT101 is also better than other resistor and capacitor boxes in the market.



# **SPECIFICATIONS**

Table 1. Characteristic (T<sub>Ambient</sub>=25°C)

Parameter	Conditions	Value	Unit/Note				
Overall Dimensions	73.58×26.85×18.01		mm				
Operating Temperature Range	-40 ~ 55		°C				
Resistance							
Adjustment Range for Each Dial		$1\Omega \sim 500\Omega$ $1k\Omega \sim 500k\Omega$					
Tolerance	-40°C to 85°C	±1%					
Resolution		1	Ω				
Residual Resistance		$0.65 \pm 0.01$	Ω				
Capacitance							
Adjustment Range for Each Dial		10pF to 5nF 10nF to 5μF					
Tolerance	15°C to 35°C	±5%					
Resolution		10	pF				
Residual Capacitance		≈6	pF				

Note:

1. Test requirements: the operating parameters of conducting bridge are 1Hz, 1V, and 100 $\Omega$ .

2. The temperature requirement at test is 25°C.



Figure 3. No Output Status



Figure 4. Full Output Status

Email: staff@analogti.com/sales@analogti.com

1161 Ringwood Ct, #110, San Jose, CA 95131, U. S. A. Tel.: (408) 748-9100, Fax: (408) 770-9187

©Copyrights 2000-2021, Analog Technologies, Inc. All Rights Reserved. Updated on 6/9/2021



## STATISTIC

1. Capacitance statistics: Capacitor output port. From the highest non-zero value to the lowest level, add all the values in turn to the total value.



Figure 5. Example

2. Resistance statistics: Resistance output port. From the highest non-zero value to the lowest level, add all the values in turn to the total value.



Figure 6. Calculation Demonstration



Figure 7. Side View of the ATRCT101



Figure 8. Stereoscopic View of the ATRCT101



Figure 9. Front View of the ATRCT101

3



4

# **MECHANICAL DIMENSIONS**

The dimensions of the ATRCT101 is shown in Figure 11.



Figure 11. Dimensions of the ATRCT101

### **ORDERING INFORMATION**

Quantity (pcs)	1-9	10-49	50-199	200-499	≥500
ATRCT101	\$64.9	\$61.9	\$58.9	\$55.9	\$52.9



5

# NOTICE

- 1. ATI warrants performance of its products for one year to the specifications applicable at the time of sale, except for those being damaged by excessive abuse. Products found not meeting the specifications within one year from the date of sale can be exchanged free of charge.
- 2. ATI reserves the right to make changes to its products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete.
- 3. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgment, including those pertaining to warranty, patent infringement, and limitation of liability. Testing and other quality control techniques are utilized to the extent ATI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.
- 4. Customers are responsible for their applications using ATI components. In order to minimize risks associated with the customers' applications, adequate design and operating safeguards must be provided by the customers to minimize inherent or procedural hazards. ATI assumes no liability for applications assistance or customer product design.
- 5. ATI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of ATI covering or relating to any combination, machine, or process in which such products or services might be or are used. ATI's publication of information regarding any third party's products or services does not constitute ATI's approval, warranty or endorsement thereof.
- 6. IP (Intellectual Property) Ownership: ATI retains the ownership of full rights for special technologies and/or techniques embedded in its products, the designs for mechanics, optics, plus all modifications, improvements, and inventions made by ATI for its products and/or projects.