



The Chroma 13100 Electrolytic Capacitor Analyzer is a general measurement instrument designed for analyzing the features of electrolytic capacitors. It has multiple functions that can be programmed based on the capacitor features by altering the settings to test metal oxidization thin-film withstand voltage, capacitor leakage current, capacitance, dissipation factor, impedance and equivalent serial resistance, etc.

Used with the special designed sequential switch test box A131001, it can complete the test for multiple capacitors or aluminum foil rapidly, accurately and simultaneously in a short time without changing any test wire.

The report printing function is capable of printing the test results correctly and completely; and the built-in data calculation function can compute the test data of the product instantly for CPK analysis. To avoid the inefficient calculation process done manually, a test software application is also available for you to create a quality report easily. It meets the EIAJ RC-2364A regulations for electrolytic capacitor test and is a test instrument of choice.

Chroma A131001 is a sequential switch test box of ten channels specially designed for Chroma 13100. Each test socket on the test box is implemented with Kelvin measurement, which is suitable for the precise measurement requirement for low impedance and low leakage current. With the SCAN function in 13100 it is able to control the C, D, Q, Z, ESR and LC tests for electrolytic capacitor to be done consecutively without switching the capacitor manually. This increases the test efficiency significantly as it costs only 1/10 of the original test time.

## ORDERING INFORMATION

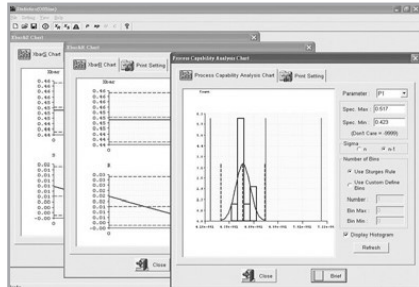
- 13100** : Electrolytic Capacitor Analyzer
- A131001** : 10 Channels Switching Test Fixture
- A131002** : 4T BNC to BNC Lead

## KEY FEATURES

- C meter provides Z/C/D/Q/ESR parameters for test
- Available 7 test frequencies from 100~100kHz for selection
- 0.1% basic measurement accuracy
- The thin-film withstand voltage results can be displayed in graph by converting them to an actual rising curve
- CPK calculation function for 1000 capacitor test results that is convenient for analyzing the production capability
- 320 x 240 dot-matrix LCD display
- 200 sets of internal memories and 4M SRAM interface card for saving and recalling the parameter settings
- Designed for 100mΩ range with accuracy measurement up to 0.1mΩ
- Non-Relay switch is built in. It is safe and reliable as the discharge circuit is close to the fixed power
- Perform electric polarity test before charge to avoid the danger of explosion
- Softpanel for leakage current data statistics analysis
- Equipped with RS-232, printer and scanner controller interfaces
- Meet the test regulation of EIAJ RC-2364A
- A131001 scan box has four terminals designed for measuring accurate high frequency and low impedance (200 Vmax)



**A131001** : 10 Channels Switching Test Fixture (200 Vmax)



**13100 Softpanel**

SPECIFICATIONS	
<b>Model</b>	<b>13100</b>
Main Function	C Meter/Leakage Current Tester/Foil WV Tester/Scanner Controller
<b>C Meter</b>	
Test Parameter	Cs-D, Cs-Q, Cs-ESR, Cp-D, Cp-Q,  Z -ESR,  Z - $\theta$
<b>Test Signals</b>	
Level	1.0V/0.25V, $\pm 10\%$
Frequency	100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 50kHz, 100kHz; $\pm 0.01\%$
Source Ro	25 $\Omega$ , 100 $\Omega$ , 25 $\Omega$ /C.C, 100 $\Omega$ /25 $\Omega$ four mode selectable
<b>Measurement Display Range/ Basic Accuracy *1</b>	
C	0.001pF ~ 1.9999F / $\pm 0.1\%$
Z, ESR	0.01m $\Omega$ ~ 99.99M $\Omega$ / $\pm 0.1\%$
D, Q	0.0001 ~ 9999 / $\pm 0.0005$
$\theta$	-90.00° ~ +90.00° / $\pm 0.03^\circ$
<b>Measurement Speed *2</b>	
Fast/Medium/Slow	Freq. = 100Hz 120Hz : 55ms / 120ms/ 750ms; Freq 1kHz : 35ms / 60ms / 370ms
<b>Function</b>	
Correction	Open / Short zeroing
Averaging	1~99 times
Test Signal Monitor	Vm, Im
<b>Leakage Current Tester</b>	
Test Parameter	LC, IR
<b>Test Signals</b>	
Voltage	1.0 V ~ 100 V, step 0.1 V; 101V~650 V, step 1V; (0.5% + 0.2V)
Charge Current Limit	V $\leq$ 100V: 0.5mA~500mA; V>100V: 0.5mA~150mA; step 0.5mA; (3% + 0.05mA)
<b>Measurement Display Range/ Basic Accuracy *3</b>	
LC (Leakage Current)	0.001 $\mu$ A ~ 99.9mA/ $\pm (0.3\% + 0.005\mu$ A)
Measurement Speed	45ms
<b>Function</b>	
Correction	Null zeroing
Averaging	1 ~ 99 times
Test Voltage Monitor	Vm: 0.0 V ~ 660.0V; (0.2%+0.1V)
Charge/ Dwell Timer	0 ~ 999 sec.
<b>Foil WV Tester</b>	
Test Parameter	Tr (Rise Time), Vt (Foil Withstand Voltage), Plot [ $\log T$ , Vm]
<b>Test Signals</b>	
Voltage Limit	650 V typical
Constant Charge Current	0.5mA~100mA, step 0.5mA; (3% +0.05mA)
<b>Test Display Range</b>	
Tr (Rise Time)	0.05 ~ 120.00 sec.
Charge Voltage	0.1V ~ 660.0V
Plot [ $\log T$ , Vm]	220 plots; Vm: 1.5~ 10 x Vf
Test Time	30 ~ 600 sec.
<b>Scanner Controller</b>	
Controllable Fixture	Chroma A131001
Test Parameter	C parameter pair x 2, LC parameter x 1
Sample Number	1~1000 pcs.
<b>Function</b>	
Correction	Fixture Open/ Short/ Null zeroing
Comparison Limit	Upper, Lower
Statistics	Maximum, Minimum, Average (X bar), Cpk
Interface	RS-232, Printer, Scanner Control Interface
Display	320 x 240 dot-matrix LCD display
<b>Memory (Store/Recall)</b>	
Internal	200 instrument setups
4M SRAM card (Option)	200 instrument setups (for copy and backup)
Trigger	Internal, Manual, BUS, Scanner
<b>General</b>	
Operation Environment	Temperature 0°C~40°C, Humidity < 90 % RH
Power Consumption	400 VA max.
Power Requirement	90 ~ 132Vac or 180 ~ 264Vac, 47 ~ 63Hz
Dimension (H x W x D)	177 x 430 x 301.4 mm / 6.97 x 16.93 x 11.87 inch
Weight	14 kg / 30.84 lbs

**Note\*1** : 23 $\pm$ 5°C after Open and Short correction, slow measurement speed, refer to Operation Manual for detail measurement accuracy descriptions

**Note\*2** : 23 $\pm$ 5°C after Null correction, average exceeds 10 times, refer to Operation Manual for detail measurement accuracy descriptions

**Note\*3** : C/D meter in range >1 $\Omega$ , refer to Operation Manual for detail

