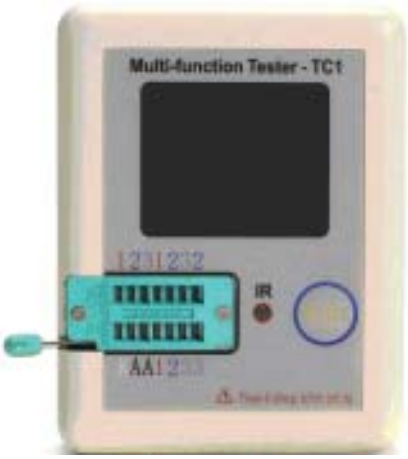
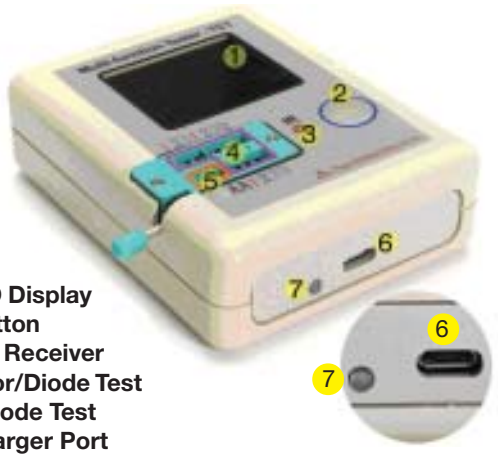
35795-TE

TC1 Component Tester



Handheld tester with a ZIF test socket used to identify & test capacitors, inductors, resistors, NPN/PNP, N and P-channel MOSFETs, IGBT & JFET transistors. Signal & rectifier, Zener Diodes, Triacs and battery cells.
It can also be used to detect infrared wave forms.
After detection, align the infrared remote control with the "IR" light, then press the button in the remote control, if the detector successfully decode it, it will display the data code and infrared wave form.
Display: 1.8inch TFT Screen
Diode Range: < 4.5V
Transistor Detect Range: 0.01-4.5V
Zener Diode Detect Range: 0.01-30V
Triac Range: IGT < 6mA
Capacitance Range: 25pF-100mF
Resistor Range: 0.01-50MO
Inductance Range: 0.01mH-20H
Battery Range: 0.1-4.5V
Power: Internal Rechargeable Lithium Battery
Includes: 6" USB Charging Cable & Three 7" Micro Clip Leads
H: 3-1/2" **W:** 2-3/4" **T:** 1-1/8" **WT:** .3



Attention: Do not charge with a voltage higher than 6V, otherwise you risk damaging the tester, and can cause the battery to Explode!

① TFT LCD Display
② Start Button
③ Infrared Receiver
④ Transistor/Diode Test
⑤ Zener Diode Test
⑥ USB Charger Port
⑦ Charge Indicator LED (Red Charging/Green Charged

Instructions

A Operation of "Start" Button

A1: Short Press: Turns On Tester/Begins Testing of the component
When turning on tester, it will test the internal battery first

A2: Long Press: More than 2 seconds Turns Off Tester
WILL Terminate All In Progress Testing

MARLIN P. JONES & ASSOC., INC.
P.O. Box 530400 Lake Park, Fl 33403
800-652-6733 FAX 561-844-8764
WWW.MPJA.COM

35795-TE

TC1 Component Tester

Test Performed

BJT		hFE(DC Current Gain), Ube(Base-Emitter Voltage), Ic(Collector Current), Iceo(Collector Cut-off Current (IB=0)), Ices(Collector short Current), Uf(Forward Voltage of protecting diode) ⑤
Diode	Forward Voltage <4.50V	Forward Voltage, Diode Capacitance, Ir(Reverse Current) ②
Double Diodes		Forward Voltage
Zener Diode	0.01-4.50V (Transistor test area)	Forward Voltage, Reverse Voltage
	0.01-30V (Zener Diode test area)	Reverse Voltage
MOSFET	JFET	Cg(Gate Capacitance), Id(Drain Current) at Vgs(Gate to Source Threshold Voltag), Uf(Forward Voltage of protecting diode) ④
	IGBT	Id(Drain Current) at Vgs(Gate to Source Threshold Voltag), Uf(Forward Voltage of protecting diode) ④
	MOSFET	Vt(Gate to Source Threshold Voltag), Cg(Gate Capacitance), Rds(Drain to Source On Resistance), Uf(Forward Voltage of protecting diode) ④
Thyristor	Igt(Gate trigger current)<6mA	Gate trigger voltage
Triac		
Capacitor	25pF-100mF	Capacitance, ESR(Equivalent Series Resistance), Vloss ①
Resistor	0.01-50MΩ	Resistance
Inductor	0.01mH-20H	Inductance, DC Resistance ⑤
Battery	0.1-4.5V	Voltage, Battery Polarity

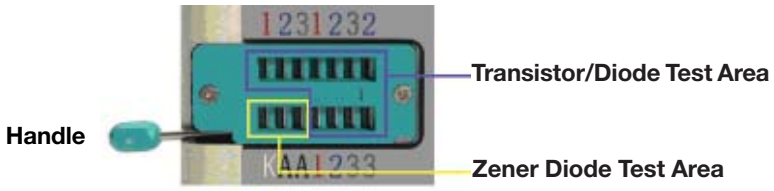
MARLIN P. JONES & ASSOC., INC.

P.O. Box 530400 Lake Park, Fl 33403

800-652-6733 FAX 561-844-8764

WWW.MPJA.COM

35795-TE



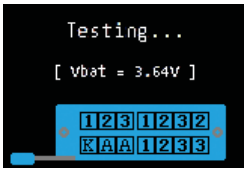
Test Socket Layout

Component Placement

The Test Socket is divided into two major zones: Transistor/Diode Numbered 123etc. and Zener Labled KAA
All "1"s are connected; Same with "2"s & "3"s

General Information

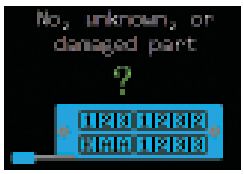
If the tester is off, a short press on the Start Button turns it on.
Tester will test the internal battery first, then the component in the socket
NOTE: Tester will Turn OFF after ~30seconds if no further tests are done



Power On Battery Test

When the Tester is OFF the component to be tested is put into the appropriate test area of the Test Socket, and the handle locked down.
For multiple tests, remove previous part after the completion of the test,
To test, Press the Start Button. The Tester will automatically performs the test and displays the results.

Missing or non-functional part will show



Testing

All Readings are Representive

Cell Testing

NOTICE: It is not recommended to use this tester to measure batteries!

When measuring a cell or battery, make sure that the voltage is **less than 4.5V**, or the tester will be damaged.

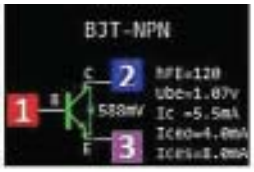
Test Polarity Doen't Matter

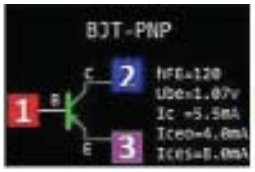
35795-TE

Testing (Continued)
All Readings are Representive

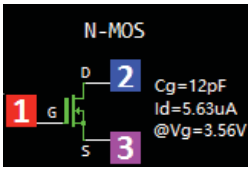
Diode Test
Connect as Shown

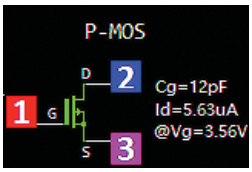
Bipolar Transistor Test

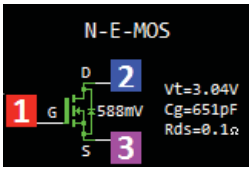


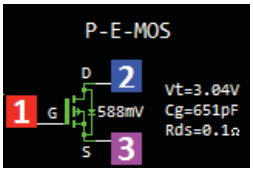


MOS Transistor Test

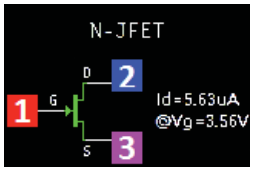


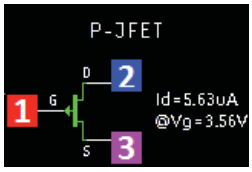




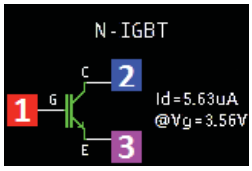


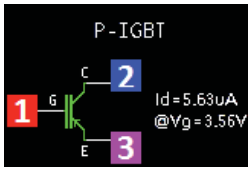
JFET Transistor Test



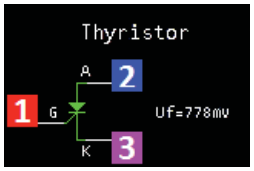


IGBT Transistor Test

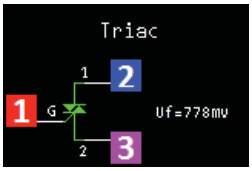




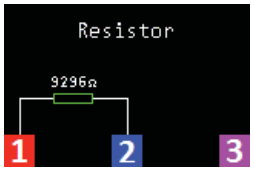
Thyristor Test



Triac Test

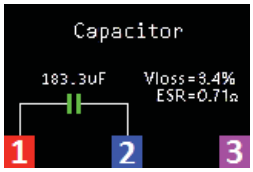


Resistor Test



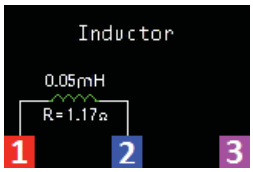
Capacitor Test

Caution: Always make sure that the capacitor is DISCHARGED before connecting to the tester! The tester may be damaged if you do not do not take this precaution!



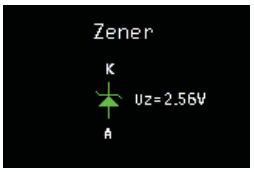
35795-TE

Inductor Test

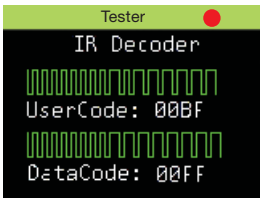


Zener Diode Test

Caution: Test Voltage is > 30VDC
No components allowed in Transistor Test Area
Insert the zener diode in the KAA Zener Test Area.
NOT the transistor test area



IR Remote Test



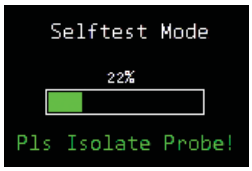
Red/Blue Indicator "DOT"

Tester decodes only the Hitachi IR format.
The IR receiver is located on the front of the Tester Labled "IR" by Start Button
The Dot in the top right corner of Display indicates whether it has received IR data from the remote control.
Red indicates the IR data received, Blue indicates successful decoding.
Aim the Remote at the "IR" receiver, Press the Start Button on Tester,
Press & Hold Button on IR Remote Control
If decoding is successful; Tester will display the User Code, the Data Code and the waveform signal.
If the decoding failed, the tester will not indicate the User or the Data Code.

Self Calibration

Caution: No components allowed in Area

Short Circuit the pins 1-2-3 Together
Short press on the Start Button, the tester will self calibrate.
During the calibration process, the Tester will ask you to isolate (Remove short circuit jumpers)



Charging the Battery

Charge LED **USB Charge Port**

The tester has a Micro USB connector, please use a 5V external charger.
Red LED indicates charging, green LED indicates charging completed

Attention: Do not charge with a voltage higher than 6V, otherwise you risk damaging the tester, and can cause the battery to Explode!

MARLIN P. JONES & ASSOC., INC.
P.O. Box 530400 Lake Park, Fl 33403
800-652-6733 FAX 561-844-8764
WWW.MPJA.COM