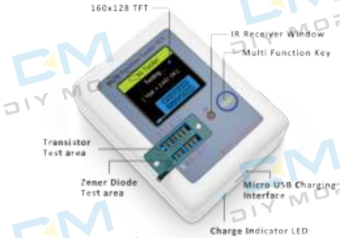
LCR-TC1

Multi-function Tester

Multi-function Tester-TC1
M-Tester
Testing....
[Vbat = 3.64V OK]
1 2 3 1 2 3 2
K A A 1 2 3 3
123 1232
KAA 1233
IR
Start

Features



Performance parameters

Component Type	Range	Parameter Description
BJT	-	HFE(DC Current Gain),Ube(Base-Emitter Voltage),Ic(Coll Current), Iceo(Collector Cut-off Current(IB=0)), Ices(Collector sh Current), Uf(Forward Voltage of protecting diode)
Diode	Forward voltage <4.50V	Forward voltage drop, junction capacitance, reverse leakage cu Ir
Double diode		Forward voltage
Zener diode	0.01-4.50V (Transistor Test Area)	Forward voltage drop, reverse breakdown voltage
	0.01-20V (Zener diode test area)	Reverse breakdown voltage
MOSFET	JFET	Cg(Gate Capacitance), Id(Drain Current)at Vgs(Gate to Source Threshold Voltag),UfForw Voltage of prote diode)
	IGBT	Drain current Id under Vgs, protection diode forward voltage dro
	MOSFET	Turn-on voltage Vt, gate capacitance Cg, drain resistance protection diode forward voltage drop Uf
Thyristor	Gate trigger current <6mA	Gate turn- on voltage
Triac		
Capacitor	25pF-100mF	Capacitance Value, Equivalent Series Resistance ESR, Vloss
Resistor	0.01-50MΩ	Resistance
Inductor	0.01mH-20H	Inductance, DC Resistance
Battery	0.1-4.5V	Voltage value, battery polarity

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Rds,

Transistor tester

Automatic detection of NPN and PNP bipolar transistors.N-channel and P-channel MOSFETs,JFETs diodes(including double Diodes)
N.and P-IGBTS, resistors, Inductors, capacitors, thyristors,triac and battery (0 .1-4.50V)
Automatie detection of zener diode (0.01-20v)
Self test with automatic calibration

IR decoder

Support Hitachi IR coding
- IR waveform display

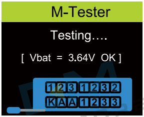
Other

Measurement results using TFT graphic display(160x128)
Auto Power Off(Timeout Settable)
Built-in rechargeable Li-ion Battery
Li-ion Battery voltage detection - 160x128 TFT display

Warning: Built-in Li-ion Battery, it is strictly prohibited the tester immersed in water, or near a heat source!
Warning: For your personal safety, please strictly comply with the use of Li-ion Battery specifications and precautions!

Power on

In the power off state, short press the multifunction key, the tester is turned on and automatically measured.



M-Tester

Testing….

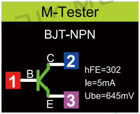
[Vbat = 3.64V OK]

Power on & measurement interface

Detect transistor

In the power off state or the test is completed, put the test
test area of test seat, and press the locking handle, short p
the tester automatically measure, graphical display of mea
testing is complete.

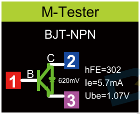
Warning: Always be sure to DISCHARGE capa
them to the tester! The tester may be damaged
switched it on!
Warning: We do not recommend using the test
battery! The battery voltage must be less than 4
may be damaged!



M-Tester

BJT-NPN

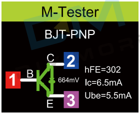
hFE=302
Ie=5mA
Ube=645mV



M-Tester

BJT-NPN

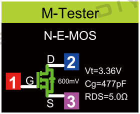
hFE=302
Ie=5.7mA
Ube=1.07V



M-Tester

BJT-PNP

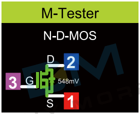
hFE=302
Ic=6.5mA
Ube=5.5mA



M-Tester

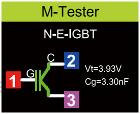
N-E-MOS

Vt=3.36V
Cg=477pF
RDS=5.0Ω



M-Tester

N-D-MOS



M-Tester

N-E-IGBT

Vt=3.93V
Cg=3.30nF

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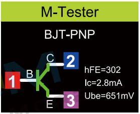
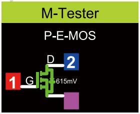
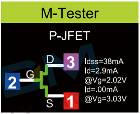
element into the transistor
press the multifunction key,
surement results when

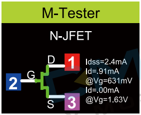
citors before connecting
before you have

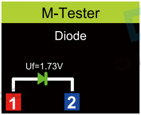
er to measure the
.5V, otherwise the tester

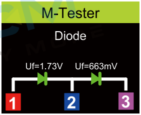

M-Tester
BJT-PNP
hFE=302
Ic=2.8mA
Ube=651mV

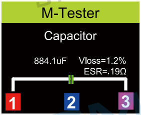

M-Tester
P-E-MOS
615mV

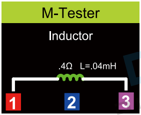

M-Tester
P-JFET
Idss=38mA
Id=2.9mA
@Vg=2.02V
Id=.00mA
@Vg=3.03V

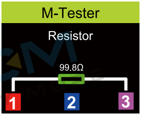

M-Tester
N-JFET
Idss=2.4mA
Id=.91mA
@Vg=631mV
Id=.00mA
@Vg=1.63V

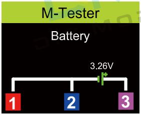

M-Tester
Diode
Uf=1.73V

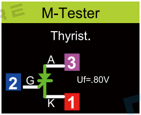

M-Tester
Diode
Uf=1.73V Uf=663mV

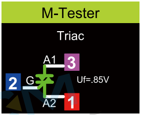

M-Tester
Capacitor
884.1uF Vloss=1.2%
ESR=.19Ω


M-Tester
Inductor
.4Ω L=.04mH


M-Tester
Resistor
99.8Ω

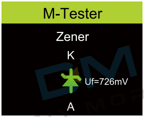

M-Tester
Battery
3.26V


M-Tester
Thyrist.
Uf=.80V


M-Tester
Triac
Uf=.85V

Detect Zener Diode

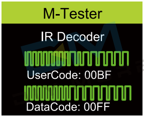
When the device is turned off or the test is completed, put the Zener diode into the Zener diode test area, press the locking handle, and briefly press the multi-function button.


M-Tester
Zener
Uf=726mV

Note: Do not put components in the Transistor test area, otherwise the Zener diode cannot be tested!

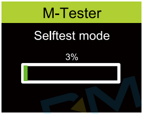
IR decoder

After the component test is com
"IR" test hole of the tester, pres
the user code and data code aft
corresponding infrared wavefor
If the decoding fails or the deco
be displayed. At this time, if you
infrared decoding interface. If y
the last successful decoding inf


M-Tester
IR Decoder
UserCode: 00BF
DataCode: 00FF

Automatic cali

Short-circuit three test sockets,
and the tester will automatically
During the calibration process, t
except to disconnect the short w


M-Tester
Selftest mode
3%

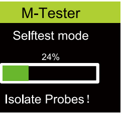
Calibrating

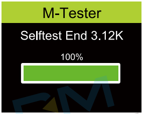
pleted, point the infrared remote control at the
s the remote control button, the tester will display
ter successful decoding, and display the
m.
ding fails, the user code and data code cannot
are in the tester interface, you cannot enter the
ou are in the infrared decoding interface,
ormation will still be displayed.

Note: This decoder only supports infrared encoding in Hitachi format. Other formats of infrared encoding are not supported

bration

short press the multi-function button,
calibrate.
there is no need to perform other operations
wire according to the prompts.


M-Tester
Selftest mode
24%
Isolate Probes!


M-Tester
Selftest End 3.12K
100%

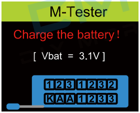
Isolate Probes! → **Selftest End**

Shutdown

Automatic shutdown after timeout
When the component test is completed or the infrared decoding is completed, and the automatic shutdown time is reached, the tester will automatically shut down (overtime 30 seconds) Standby power consumption is 0 UA after shutdown.

Battery voltage measurement

Before each component measurement, the built-in lithium battery voltage will be detected and displayed. When the battery voltage is less than 3.1V, it will be forced to shut down. Please charge it at this time.


M-Tester
Charge the battery!
[Vbat = 3.1V]

Battery charging circuit

The charging interface is a standard Micro USB interface, please use an external 5V power supply or USB power supply for charging.

Note: When the charging indicator is red, it means charging, and green means charging is complete.

DIY MORE

FAQ

The charging interface is a standard Micro USB interface, please use an external 5V power supply or USB power supply for charging.

Question	Cause	Solution
can not power on	Lithium battery is low	Please charge until the light turns green
Inaccurate measurements		Please re-calibrate

Known errors and unsolved problems

1. The current amplication factor of germanium transistors can be measured too high because of the high residual current. In this case the basis emitter voltage will be very low.

2. Capacity value in reverse direction for Power Schottky Diodes such as MBR3045PT can not be measured, if only one diode is connected. The reason is a too big residual current of this diode. Sometimes the measurement is possible by cooling down the device (with cooling spray for example).

3. The diode function of a triac gate can not be examined.

4. The Source and Drain pins can not be detected correctly with JFET's. The reason is the symmetrical structure of this semiconductors. You can notice this problem with the elect, that the display shows the same layout with the same parameters, if the Source and Drain pinsare swapped.

5. The output current of the tester is 6MA/voltage <5V. High-power IGBTs, thyristors, and Darlington tubes that require higher current/higher voltage drive may not be measured. Air core coils and power inductors cannot directly measure inductance. It is recommended to try series connection. Appropriate color ring inductance test, capacitors below 20PF, it is recommended to test a 20PF capacitor

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1:log into your account on Amazon. click "your account",and then click "your Orders".
2. Click on the product you purchased,and select the "Create your own review"button in the middle of the page.

Thank you and have nice day! Sincerely,diymore Customer Service Team

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