EMECO Transistor Voltage withstand Tester Use Manual

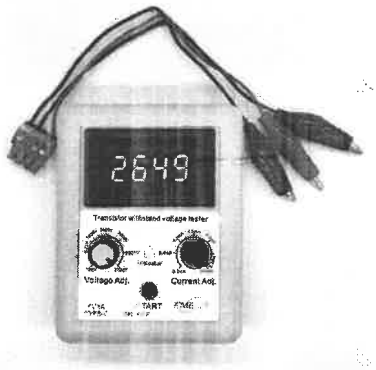
The transistor voltage withstand tester use 3.7V lithium battery step up to 2700VDC with closed-loop control circuit, output constant current and constant voltage. With a high voltage DC voltmeter, electronic component's reverse breakdown voltage or forward voltage can show on the LED screen during testing. Then customers can judge if the electronic component's reverse breakdown voltage comply with its Spec.data. The semiconductor's reverse breakdown voltage is one of the important indexes that evaluate electronic component's quality.

Besides, it is hard for multimeter to test if some IGBT/MOS tube/Triode are good with half breakdown voltage. Well, our transistor voltage withstand tester can do it easily. It can also light on LED high voltage board to find out fail LED bead easily. Just cut off the plug of the multimeter probe and lock it into the 4P terminal, you can get an LED light panel detector.

1.Tester parameters

- Battery capacity：3.7V 600mAH
- Charge port：TYPE-C
- Input：5V 1A
- Charging current：Max.550mA
- Output voltage：120-2700VDC (tolerance±10%)
- Output current：0.2-3.8mA (tolerance±10%)
- Battery low voltage protection: 3.2V
- Battery charging time:1.4H
- Applicable components：MOSFET/IGBT/ Transistor/Diode/ Electrolytic Capacitors /LED/MOV/ SCR / Rectifier bridge/TRAIC
- Testing target: Electronic component's reverse breakdown voltage value

2.Tester dashboard



8888 LED Digital Tube: defined output voltage or electronics' reverse breakdown voltage

3mm indicator light: output indicator light.

Charging indicator: red led light on during charging, red led light off once charging over.

Left adjust button: clockwise adjust output voltage from 120 to 2700V.

Right adjust button: clockwise adjust output current from 0.2 to 3.8mA.

High power start button: Press down get high voltage output, no press no voltage output.

Power switch: switch on or switch off power supply.

TYPE-C port: lithium battery charging port. Use Android smartphone charging head and data cable to charge the tester.

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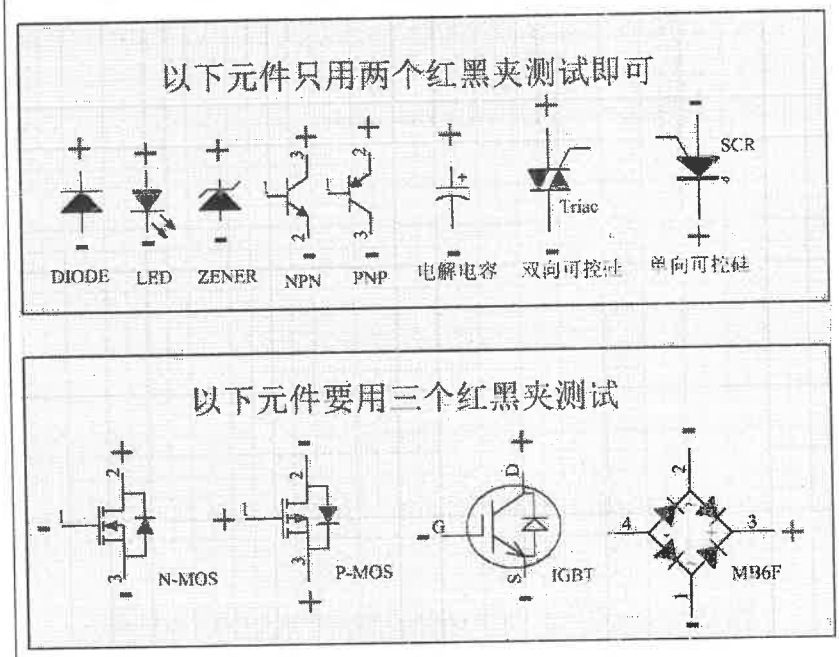
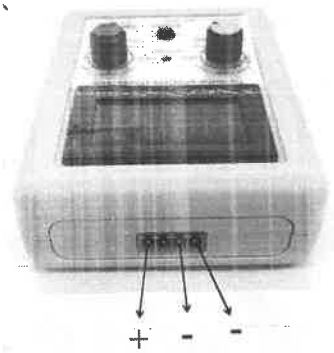
3.Usage guide

- **Power on**：Switch on and 8888 led tube show 0000 means tester is power on.
- **Set proper output voltage:** press red high voltage start button, no clip to any electronic component, 8888 LED tube shows current output voltage value. For exampie, testing 1N4007 diode，Spec.1000V reverse breakdown voltage，then output voltage must set to 1.5 times of 1000V, one hand press the high voltage start button, the other hand clockwise adjust the voltage button to above 1500V.
- **Set proper output current:** for MOSFET/IGBT/ Triode /Diode，set output current at 0.2mA（the Min. output current will be ok)；Testing LED backlight, Electrolytic capacitor，set output current at 3.8mA(the Max. output current will be ok)
- **Testing and read the voltage value**：use red and black clip catch two poles of 1N4007, after ensure polarity is right, press red high voltage start button, if the voltage value shows on LED screen is lower than set value, it means the 1N4007 is breakdown. If the voltage value shows on LED screen is same as set value, it means set output voltage is not high enough, need set bigger output voltage value.
- **After use**: pls. adjust the voltage and current button to the Min. position and turn off the power.
- If you are not familiar with the electronic component's parameters, you can set the voltage to the max. and the current to the min. Just press down the red high voltage start button to read the voltage value on the meter.

4. General component testing





5.Caution：

5.1 Don't use it to test high voltage big electrolytic capacitors like 450V /220uF etc. it is ok to test iow voltage capacitors like 2200uF/35V.

5.2 If there is 0000 voltage when press down the red high voltage start button, it is likely the lithium battery voltage is lower than 3.2V and can't power on the tester, need charge in time.

5.3 When testing LED and E-CAP, the output current can be adjusted to the Max. value, To be accurate, it is necessary to subtract approximately 0.5V. Use the multimeter to measure the voltage value and use a suitable current to make the multimeter voltage consistent with the DC voltmeter. You can use this current to test the voltage regulator diode next time.