



Simple Mosfet tester

This simple tester checks both N-channel and P-channel Mosfets. It checks for shorts between gate, drain and source and also distinguishes between N and P-channel Mosfets.

IC1 is configured as an astable multivibrator to run at about 2Hz, as determined by the components at pins 2, 6 & 7. IC2, another 555 timer, is used simply as an inverter. Hence the two pin 3 outputs of IC1 & IC2 are in anti-phase.

These two pin 3 outputs are fed out via 330 Ω resistors and LEDs 1 &

2, paralleled with diodes D1 & D2. From there, the anti-phase signals are connected to the Mosfet under test via a 3-pole 4-position rotary switch. The three switch wipers are connected to terminals labelled "gate", "drain" and "source".

The switch settings correspond to the following tests: **Test 1** checks for a short between the gate and source. If a short exists, alternating current paths are provided via LED1 and LED2 (ie, the LEDs alternately turn on and off). **Test 2** checks for a short between the gate and drain. If there is no short, no LEDs will light.

Test 3 provides a positive bias to

the gate, while the drain and source are connected to the LEDs. If the Mosfet is N-channel, both LED1 and LED2 will blink. If the Mosfet is P-channel, only LED2 will blink.

Test 4 provides a negative bias to the gate, while the drain and source are connected to the LEDs. If the Mosfet is P-channel, both LED1 and LED2 will blink. If the Mosfet is N-channel, only LED1 will blink.

If the Mosfet's drain and source are shorted, both LED1 & LED2 will flash in tests 3 and 4, for both N-channel and P-channel Mosfets.