

# TOS5101

Hipot Tester

**Basic model series with excellent cost performance.**



## TOS5101(AC/DC)



**High-end model of TOS series having AC, DC10kV output  
Conforming to demands of various component standards  
testing and margin test**

TOS5101 is designed exclusively for withstand voltage testing of electronic equipment and components conforming to various safety standards. The use of a high luminance, large fluorescent display tube for the display enables data including measured values, status and judgment results to be extremely legible. The PASS/FAIL function employs a window comparator method that enables TOS5101 to make fail judgment of current leakage over the upper reference value and below the lower reference value which can be set on the front panel. Thus, highly reliable testing can be performed including that for test lead disconnection and defective contact. In addition, in order to prevent erroneous operation and accidents, the TOS5101 is also equipped with a Key Lock function and Interlock function, a high-voltage output terminal having a narrowed insertion port, a large DANGER lamp, and an automatic discharge function (during DC operation) that removes charge from the test piece. These features give the TOS5101 a high degree of safety and reliability.

- Complies with various safety standards
- AC/DC output (0 to 10 kV)
- Large color display
- Digital voltmeter and ammeter
- Digital timer
- Window comparator type employed for PASS / FAIL judgement.
- Equipped with remote control function
- Various signal outputs
- Automatic discharge function (during DC operation)
- Provided with zero turn-on switch
- Compact size

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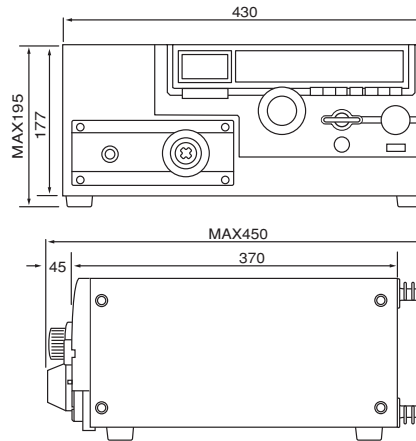
## Hipot Tester

|   |   |
|---|---|
| <b>Output block</b>                           |   |
| Applied Voltage                               | 0 to 5/ 0 to 10 kV AC and DC  |
| <b>AC</b>                                     |   |
| Maximum Rated*1                               | 500VA / 10 kV, 50 mA  |
| Waveform                                      | Commercial line waveform  |
| Voltage Regulation                            | Max. 15% (for max. rated load to no load)   |
| Switching                                     | Use of a zero turn-on switch  |
| <b>DC</b>                                     |   |
| Applied Voltage                               | 50W / 10 kV, 5 mA   |
| Ripple  | 100 Vp-p typ. at 10 kV, no load<br>200 Vp-p typ. at max. rated output   |
| Maximum Rated*1                               | Max. 3% (for max. rated load to no load)  |
| <b>Output Voltmeters</b>                      |   |
| <b>Analog</b>                                 |   |
| Scale   | 10 kV full scale , AC/DC  |
| Class   | JIS Class 2.5   |
| Accuracy                                      | ±5% of full scale   |
| AC Indication                                 | Mean value response / rms value scale   |
| <b>Digital</b>                                |   |
| Full Scale                                    | 5 kV/ 10 kV full scale  |
| Accuracy                                      | ±1.5% of full scale   |
| AC Response                                   | Mean value response / rms value display   |
| <b>Ammeter</b>                                |   |
| <b>Digital</b>                                |   |
| Accuracy                                      | ±(5% + 20μA) of upper cutoff current  |
| AC Response                                   | Mean value response / rms value display   |
| <b>Pass/fail Judgement Function</b>           |   |
| Type of Judgement                             | Window comparator type<br>● FAIL judgement<br>*When current detected above upper cutoff current<br>*When current detected below lower cutoff current (FAIL signal generated when FAIL judgement made)<br>● PASS judgement<br>*When set time has elapsed and no abnormality is detected  |
| Upper cutoff current setting range            | AC: 0.1 to 55 mA DC: 0.1 to 5.5 mA  |
| Lower cutoff current setting range            | AC: 0.1 to 55 mA DC: 0.1 to 5.5 mA  |
| Judgement Accuracy                            | ±(5% of upper cutoff current + 20μA)  |
| Current Detection                             | Integration of current absolute value followed by comparison with reference value.  |
| Calibration                                   | With rms value of sine wave using a pure resistance load.   |
| No-load output voltage required for detection | Approx. 970 V when set to 50 mA AC<br>Approx. 160 V when set to 5 mA DC   |
| Test Time Setting Range                       | 0.5 to 999 sec (±10 ms) (timer-off function provided)   |
| Accuracy                                      | ±20 ms  |
| Line Voltage                                  | 100V±10%, 50/60 Hz (Nominal voltages of 110V, 120V, 220V, 230V and 240V available as factory options.)  |
| <b>Power Requirements</b>                     |   |
| for line voltage of 100 V                     | Max. 50 VA under no-load conditions<br>/ Approx. 600 VA at rated load   |
| for line voltage of 100 V to 200 V            | Max. 50 VA under no-load conditions<br>/ Approx. 600 VA at rated load   |
| for line voltage of 220 V to 240 V            | Max. 50 VA under no-load conditions<br>/ Approx. 610 VA at rated load   |
| Electromagnetic compatibility (EMC)           | Conforms to the requirements of the following directive and standard.*2<br>EMC Directive 89/336/EEC<br>EN61326<br>EN61000-3-2<br>EN61000-3-3<br>Under following conditions<br>1. Used HV test leadwires which is supplied.<br>2. No discharge in testing.<br>3. Used the shielded cable which length is less than three meters when the SIGNAL I/O is used. |

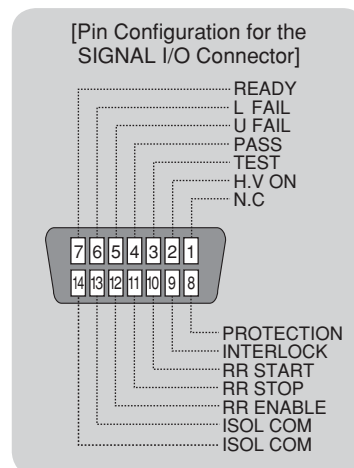
|                                    |   |
|------------------------------------|---|
| Safety                             | Conforms to the requirements of the following directive and standard. *2,4<br>Low Voltage Directive 73/23/EEC<br>EN61010-1<br>Class I<br>Pollution degree 2   |
| Insulation resistance              | 30 M Ω or more (500 V DC)   |
| Hipot                              | 1390 VAC, 2 seconds [between the AC LINE and chassis]<br>1200 VAC, 1 second [UL-approved products only]   |
| Environment                        | Specification range : 5 °C to 35°C / 20 %rh to 80 %rh<br>Operable range : 0 °C to 40°C / 20 %rh to 80 %rh<br>Storage range : -20 °C to 70 °C / 80 %rh or less |
| Dimensions (MAX)                   | 430W × 177(195)H × 370(450)Dmm  |
| <b>Weight</b>                      |   |
| for line voltage of 100 V          | Approx. 21 kg   |
| for line voltage of 100 V to 120 V | Approx. 23 kg   |
| for line voltage of 220 V to 240 V | Approx. 24 kg   |
| <b>Accessories</b>                 |   |
| High-voltage test lead             | TL01-TOS (max.allowablevoltage: 5 kV /1.5m)<br>TL03-TOS (max.allowablevoltage: 10 kV /1.5m)   |
| Others                             | 14-pin amphenol plug (assembled)  |

- \*1: Continuous output time may be limited depending on current high limit reference value and ambient temperature.  
\*2: Only on models that have CE marking on the panel. Not applicable to custom order models.  
\*3: Not applicable to custom order models.  
\*4: This instrument is a Class I equipment. Be sure to ground the protective conductor terminal of the instrument. The safety of the instrument is not guaranteed unless the instrument is grounded properly.

### External dimensional diagrams



Unit: mm





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