TOS5101

Hipot Tester

Basic model series with excellent cost performance

TOS5101(ACW/DCW)

CE

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.

*In general, when the capacitance of DUT has a voltage dependence (such as a “High-dielectric constant ceramic capacitor”), please take a caution that the waveform distortion may occurs.

- 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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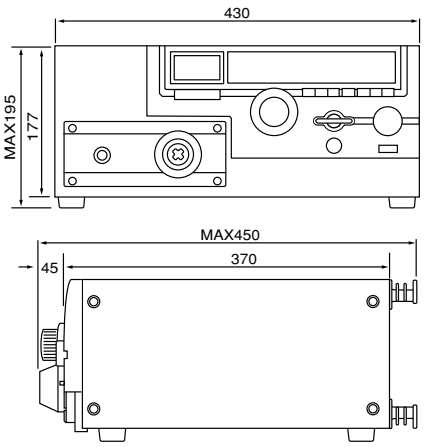
Output block		
Applied Voltage		0 to 5/ 0 to 10 kV AC and DC
AC		
Maximum Rated*1		500VA / 10 kV, 50 mA
Waveform		Commercial line waveform
Voltage Regulation		Max. 15% (for max. rated load to no load)
Switching		Use of a zero turn-on switch
DC		
Applied Voltage		50W / 10 kV, 5 mA
Ripple		100 Vp-p typ. at 10 kV, no load 200 Vp-p typ. at max. rated output
Maximum Rated*1		Max. 3% (for max. rated load to no load)
Output Voltmeters		
Analog	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
Digital	Full Scale	5 kV/ 10 kV full scale
	Accuracy	±1.5% of full scale
	AC Response	Mean value response / rms value display
Ammeter		
Digital	Accuracy	±(5% + 20μA) of upper cutoff current
	AC Response	Mean value response / rms value display
Pass/fail Judgement Function		
Type of Judgement		Window comparator type ●FAIL judgement *When current detected above upper cutoff current *When current detected below lower cutoff current (FAIL signal generated when FAIL judgement made) ● PASS judgement *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
		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.)
Power Requirements		
for line voltage of 100 V		Max. 50 VA under no-load conditions
		/ Approx. 600 VA at rated load
for line voltage of 100 V to 200 V		Max. 50 VA under no-load conditions
		/ Approx. 600 VA at rated load
for line voltage of 220 V to 240 V		Max. 50 VA under no-load conditions
		/ Approx. 610 VA at rated load
Electromagnetic compatibility (EMC) *3		Conforms to the requirements of the following directive and standard.*2 EMC Directive 89/336/EEC EN61326 EN61000-3-2 EN61000-3-3 Under following conditions 1. Used HV test leadwires which is supplied. 2. No discharge in testing. 3. Used the shielded cable which length is less than three meters when the SIGNAL I/O is used.
Safty *3		Conforms to the requirements of the following directive and standard. *2,4 Low Voltage Directive 73/23/EEC EN61010-1 Class I Pollution degree 2
Insulation resistance		30 M Ω or more (500 V DC)
Hipot		1390 VAC, 2 seconds [between the AC LINE and chassis]
		1200 VAC, 1 second [UL-approved products only]
Environment		Specification range : 5 °C to 35°C / 20 %rh to 80 %rh
		Operable range : 0 °C to 40°C / 20 %rh to 80 %rh
		Storage range : -20 °C to 70 °C / 80 %rh or less
Dimensions (MAX)		430W × 177(195)H × 370(450)Dmm
Weight		
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
Accessories		
High-voltage test lead		TL01-TOS (max.allowablevoltage: 5 kV /1.5m) 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

[Pin Configuration for the SIGNAL I/O Connector]