

# TOS5050A / TOS5051A

Hipot Tester

**Supports best-selling model's performance while featuring RS-232C as standard interface**



**TOS5050A(ACW)**  
**TOS5051A(ACW/DCW)**



## Capable of record and storage of the test data

The TOS5000A series offers testers specifically designed to conduct hipot testing on electronic devices and components in accordance with the relevant safety standards. Two models are available - TOS5051A with 5 kV AC/DC output and TOS5050A with 5 kV AC output. While inheriting the basic performance of our best-selling TOS5000 series testers, TOS5000A has an additional feature - RS-232C interface - that comes standard with the tester. Because the tester can be connected directly to a PC and a serial printer, test data can be recorded and saved with ease, leading to further enhancement in quality control.

- Complies with various safety standards
- AC/DC output (TOS5051A)
- 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 (TOS5051A: during DC operation)
- Provided with zero turn-on switch
- Equipped with RS-232C as standard
- Data acquisition software (SD004-TOS5000A/Option)

# TOS5050A / TOS5051A

## Hipot Tester

Item		TOS5050A	TOS5051A
Output block			
Applied Voltage		0 to 2.5/ 0 to 5 kV AC	0 to 2.5/ 0 to 5 kV AC and DC
AC			
Output Rating (with nominal line voltage)		500VA / 5 kV, 100 mA	
Waveform		Commercial line waveform	
Voltage Regulation (with nominal line voltage)		Max. 15% (for max. rated load to no load)	
Switching		Use of a zero turn-on switch	
DC			
Maximum Output Rating (with nominal line voltage)		—————	50W / 5 kV, 10 mA
Ripple		—————	100 Vp-p typ. at 5 kV, no load 100 Vp-p typ. at max. rated output
Voltage Regulation (with nominal line voltage)		—————	3% or better (against change from maximum rated load to no load)
Output Voltmeters			
Analog	Scale	5 kV full scale (no mirrors), AC	5 kV full scale (no mirrors), AC/DC
	Class	JIS Class 2.5	
	Accuracy	±5% of full scale	
	AC Indication	Mean value response / rms value scale	
Digital	Full Scale	2.5 kV/ 5kV 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		<ul style="list-style-type: none"> <li>• Window comparator type</li> <li>• If the current detected is larger than the preset upper cutoff current, the tester gives a FAIL judgement.</li> <li>• If the current detected is less than the preset lower cutoff current, the tester gives a FAIL judgement.</li> <li>• As the tester gives a FAIL judgement, it cuts off the output and delivers a FAIL signal.</li> <li>• If the test period elapses without any unacceptable conditions, the tester gives a PASS judgement</li> </ul>	
Upper cutoff current setting range		AC: 0.1 to 110 mA	AC: 0.1 to 110 mA DC: 0.1 to 11 mA
Lower cutoff current setting range		AC: 0.1 to 110 mA	AC: 0.1 to 110 mA DC: 0.1 to 11 mA
Judgement Accuracy		±(5% of upper cutoff current + 20μA)	
Current Detection		The absolute value of current is integrated and compared with the preset cutoff current value.	
Calibration		Calibrated for rms value of sine wave, with pure-resistive load	
No-load output voltage required for detection		Approx. 460 V when set to 100 mA AC	
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.)	
RS-232C			
Connector		D-SUB 9-pin connector on the rear panel (conforms to EIA-232-D)Outputs test data and test results	
Protocol		9600 bps, 8 bits Data Length, None-Parity, Stop bit 1 bit	
Function		Query test result, status and measured value, and start and stop test (Incapable of setting test condition)	
Power Requirements			
for line voltage of 100 V		Max. 25 VA under no-load conditions/ Approx. 600 VA at rated load	Max. 50 VA under no-load conditions/ Approx. 610 VA at rated load
for line voltage of 100 V to 200 V		Max. 25 VA under no-load conditions/ Approx. 600 VA at rated load	Max. 50 VA under no-load conditions / Approx. 630 VA at rated load
for line voltage of 220 V to 240 V		Max. 25 VA under no-load conditions/ Approx. 640 VA at rated load	Max. 50 VA under no-load conditions/ Approx. 640 VA at rated load
Electromagnetic compatibility (EMC) *1		Conforms to the requirements of the following directive and standard. EMC Directive 2004/108/EC, 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 *1,2		Low Voltage Directive 2006/95/EC, EN61010-1, Class I, Pollution degree 2	
Environment		Ambient temperature and humidity : 5 °C to 35°C / 20 %rh to 80 %rh Operable temperature and humidity : 0 °C to 40°C / 20 %rh to 80 %rh Storage temperature and humidity : -20 °C to 70 °C / 80 %rh or less	
Dimensions (MAX)		320(330)W X 132(150)H X 300(365)Dmm	
Weight			
for line voltage of 100 V		Approx. 15 kg	Approx. 16 kg
for line voltage of 100 V to 120 V		Approx. 17 kg	Approx. 18 kg
for line voltage of 220 V to 240 V		Approx. 18 kg	Approx. 19 kg
Accessories			
High-voltage test lead		TL01-TOS (max.allowablevoltage: 5 kV /1.5m)	
Others		14-pin amphenol plug (assembled)	

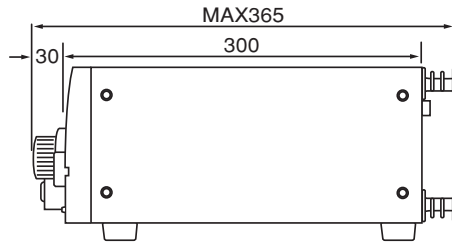
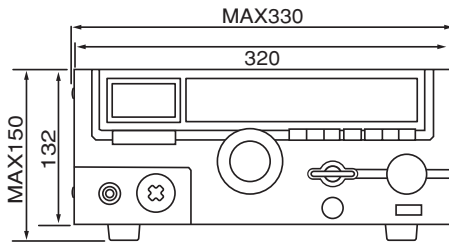
\*1: Only on models that have CE marking on the panel. Not applicable to custom order models.

\*2: Not applicable to custom order models.

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Hipot Tester

## External dimensional diagrams



Unit: mm



## SD004-TOS5000A

(Data Acquisition for TOS5051A/5050A)

**Providing an easy way to collect, manage, and save test results**

**Highly reliable quality control can be achieved!**

SD004-TOS5000A is a software that lets you collect and manage test results generated by our TOS5000A Series hipot testers. Also, SD004-TOS5000A allows you to save, search, and print data with ease. What's more, you can execute or stop the test through a simple operation using a PC.

### Features

- Test mode: Execution/stop function and automatic serial number incrementing function
- Search mode: Data item rearrangement and ascending/descending order function, search function ("sounds-like" search supported), print function (layout change supported), and text and HTML file output function.

### Operating Environment

Pentium III or later, Windows XP/Windows 2000/Windows Me, CD-ROM drive, mouse, display supporting 800 x 600 resolution, 128 MB or more of memory (recommended), 50 MB or more of free space in hard disk drive (for installation) plus sufficient disk capacity to store necessary files, and RS-232C (data rate of 9600 bps; use an RS-232C cross cable for connection.)