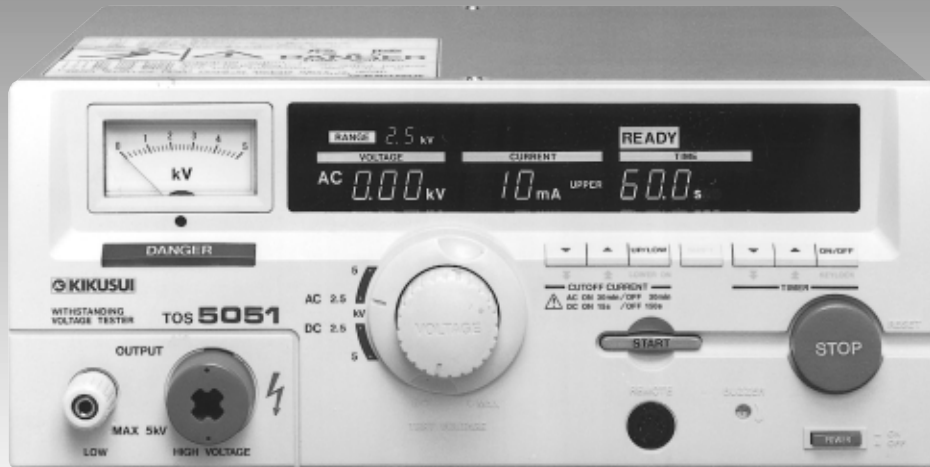


# TOS5051

## WITHSTANDING VOLTAGE TESTER



AC/DC  
5 kV

Transformer capacity: 500 VA

### Outline

The Model TOS5051 is a withstanding voltage tester having a transformer capacity of 500 VA and test voltage of 0 to 5 kV that allows both application of AC and DC.

The Pass/fail judgement function employs a window comparator type that enables highly reliable testing including that for test lead disconnection and defective contact.

Moreover, as a result of employing a remote control function for start and stop operations and being equipped with output signals for various judgement results, the TOS5051 is able to contribute to greater automation and efficiency of testing.

Various safety devices, including an automatic discharge function (during DC operation), are provided in full consideration of operator safety. In addition, the use of a large, color display makes the TOS5051 extremely legible, providing strong support for more accurate and safer operation.

### Features

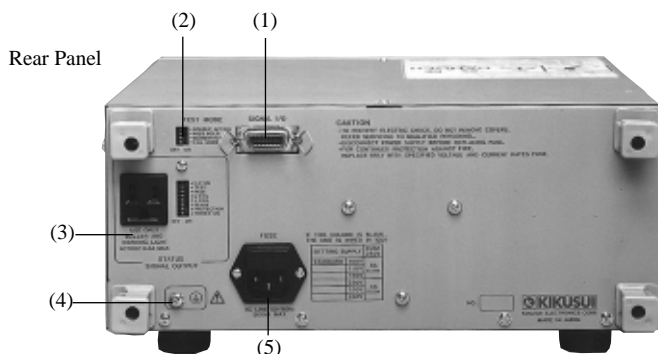
- Complies with various safety standards
- AC/DC output (0 to 5 kV)
- Large color display
- Digital voltmeter and ammeter
- Digital timer
- Window comparator type employed for Pass/fail judgement.
- Equipped with remote control function
- Various signal outputs
- Automatic discharge function (during DC operation)
- Provided with zero turn-on switch
- Compact size



A high-luminance, fluorescent display tube is employed for display of settings, status and judgement results.

### Specifications

■ Test Voltage	AC and DC
Applied Voltage	0 to 2.5/0 to 5 kV
Maximum Rated Output	AC: 500VA/5 kV, 100 mA (note 1) DC: 50W/5 kV, 10 mA (note 1)
Wattage Rating	500 VA
Waveform	Commercial line waveform
Voltage Regulation	AC: Max. 15% (for max. rated load to no load) DC: Max. 3% (for max. rated load to no load)
Switching	Use of a zero turn-on switch
Ripple (DC)	50 Vp-p typ. at 5 kV, no load 100 Vp-p typ. at max. rated output
■ Output Voltmeters	
Scale	Analog: 5 kV full scale, AC/DC
Accuracy	Analog: $\pm 5\%$ of full scale Digital: $\pm 1.5\%$ of full scale
AC Indication	Analog: Mean value response/rms value scale
Full Scale	Digital: 2.5 kV/5 kV full scale
AC Response	Digital: Mean value response/rms value display
■ Ammeter	
Accuracy	Digital: $\pm(5\% + 20\mu\text{A})$ of upper cutoff current
AC Response	Digital: 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 110 mA DC: 0.1 to 11 mA
Lower Cutoff Current Setting Range	AC: 0.1 to 110 mA DC: 0.1 to 11 mA
Judgement Accuracy	$\pm(5\%$ of upper cutoff current + 20 $\mu\text{A})$
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	Approx. 460V when set to 100 mA AC Approx. 100V when set to 10 mA DC



■ Test Time Setting Range	0.5 to 999 s ( $\pm 10$ ms) (timer-off function provided)
Accuracy	$\pm 20$ ms
■ Signal Outputs	H.V ON - Open collector DANGER - Lamp TEST - Open collector, fluorescent display tube PASS - Open collector, fluorescent display tube, buzzer U FAIL - Open collector, fluorescent display tube, buzzer L FAIL - Open collector, fluorescent display tube, buzzer READY - Open collector, fluorescent display tube PROTECTION - Open collector, fluorescent display tube STATUS SIGNAL OUTPUT 100V AC (0.3 A Max.) Rating of open collector: 4.5 to 30V DC/ 400 mA (Max. Total)
■ Remote Control	Test and reset operations can be remote controlled in the following cases: <ul style="list-style-type: none"> <li>● When using a separately sold remote control box</li> <li>● When using a separately sold highvoltage test probe</li> <li>● When controlling with a make contact signal such as a relay or switch</li> <li>● When using low active control by a logic device and so on</li> </ul>
■ Interlock Function	Testing can no longer be performed when an interlock signal is input (PROTECTION state).
■ Line Voltage	100V $\pm 10\%$ , 50/60 Hz (note 2)
■ Power Requirements	Max. 50 VA under no-load conditions Approx. 640 VA at rated load
■ Dimensions (MAX)	320W $\times$ 132H $\times$ 300D mm (330W $\times$ 150H $\times$ 365D mm)
■ Weight	Approx. 16 kg (for line voltage of 100V)
■ Accessories	High-voltage test lead TL01-TOS (max. allowable voltage: 5 kV/1.5 m) 14-pin amphenol plug (assembled)

Note 1: Continuous output time may be limited depending on current high limit reference value and ambient temperature.

Note 2: Nominal voltages of 110V, 120V, 220V, 230V and 240V available as factory options.

- (1) Signal I/O  
Input/output connectors for interlock function input/output signals, start/stop remote control input signals and status output signal.
- (2) Test Mode Switch  
This is a DIP switch for setting special test modes. Parameter settings such as test start and interruption operations can be changed with this switch.
- (3) Status Signal Output Terminal  
This is a 100V AC output terminal for operating an optional warning lamp unit or buzzer unit. Conditions during AC 100V output (status, judgement results) are set with DIP switches.
- (4) Ground Terminal
- (5) Line Input Terminal (integrated with fuse holder)



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