

# TOS5052

Hipot Tester

## Equipped with Rise Time Control Function



### TOS5052(ACW)

\* While Supplies Last



**Rise Time Control function is enable to comply to the Standard requirements for those degradation, destructive testing of sensitive materials**

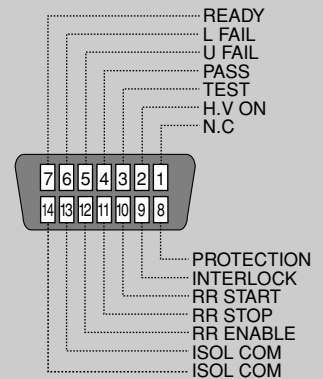
TOS5052 is a special tester designed for withstand voltage testing of electronic equipment and components conforming to various official safety standards. In addition to having an output of 5 kV AC at 100 mA, this model permits output voltage presetting, selection of output frequency (50 or 60 Hz), and rise-time control to control time for voltage to reach a preset level.

The display uses a large, high-brightness, color fluorescent tube for clear display of numbers, operation status, results, and other information.

For fast and accurate testing, the TOS5052 permits dual-axis operation of the test voltage range selector switch and voltage setting knob, and separate up-down keys for determination current and timer settings. Easier to use than ever before, the TOS5052 also incorporates various safety and security features, including key lock, interlock, high-voltage output terminals limiting the number of insertion holes, and large "DANGER" warning lamps. These features make using the TOS5052 safe and reliable.

- Complies with various standards
- Rise-time control function
- High-output test voltage
- Acceptance determination by the window comparator method

[Pin Configuration for the SIGNAL I/O Connector]



# TOS5052

## Hipot Tester

Output block		
Output voltage range	0.50 kV to 5.00 kVAC (100 mA output possible range)	
Voltage setting range	0.00 to 2.95 kV/0.00 to 5.45 kV,	
	2 ranges (3-digit digital setting)	
	Setting accuracy	±(2% of setting + 2 digits) at 0.20 kV or higher with no load
Resolution	10V	
Maximum rated output *1	500VA (5kV/100mA)	
Transformer capacity	500VA	
Output voltage waveform	Sine wave	
Distortion factor	Output voltage of 0.5 kV or higher: 2% or less (under no load or resistive load)	
Frequency	50 or 60 Hz selectable (0.5% of setting, except during voltage rise)	
Voltage regulation	9% or less (maximum rated load to no load)	
Output type	PWM switching	
Output voltage	Output is shut off and protection is effected when the output voltage exceeds the set value plus 200V. "kV" blinks when the output voltage falls below the set voltage minus 100V.	
Output voltmeter		
Analog	Scale	5 kV f.s
	Accuracy	±5% f.s
	Indication	Mean-value response/rms-value indication
Digital	Scale	2.5 kV/5 kV f.s
	Accuracy	±1.5% f.s when the measured voltage does not change within the digital voltmeter's response time.
	Response	Mean-value response/rms-value indication (400 ms response time)
	Hold function	The voltage measured at the end of test is held during the PASS or FAIL interval.
Ammeter		
Digital	Measuring range	0.00 to 110mA
	Accuracy	±(5% of upper cutoff current+ 20μA) when the measured current does not change within the digital ammeter's response time.
	Response	Mean-value response/rms-value indication (400 ms response time)
	Hold function	The current measured at the end of test is held during the PASS interval.
Judgement function		
Judgement system	Window comparator system <ul style="list-style-type: none"> <li>●FAIL is judged when a current greater than the upper cutoff current is detected.</li> <li>●FAIL is judged when a current smaller than the lower cutoff current is detected.</li> <li>●OUTPUT is shut off and FAIL SIGNAL is generated when FAIL is judged.</li> <li>●PASS SIGNAL is generated when no anomaly is found within the set time.</li> </ul>	
Upper cutoff current range	0.1 to 110mA	
Lower cutoff current range	0.1 to 110mA The TOS5052 makes no lower pass/fail judgment while the voltage is rising and for approximately 0.2s after the voltage is made constant.	
Judgement accuracy	±(5% of upper cutoff current +20μA)	
Current detection method	Absolute value of current is integrated and compared against the reference value.	
Calibration	The root mean square value of sine wave is calibrated using the pure resistive load.	
Illuminators and LEDs		
PASS	Lit for approximately 0.2 s when PASS is judged. Held on when PASS HOLD is enabled.	
UPPER FAIL	Lit when a current greater than the upper cutoff current is detected and FAIL is judged.	
LOWER FAIL	Lit when a current smaller than the lower cutoff current is detected and FAIL is judged.	
Buzzer	<ul style="list-style-type: none"> <li>●Turned on for approximately 0.2 s when PASS is judged.</li> <li>●Held on in the following cases:PASS is judged –when PASS HOLD is enabled. UPPER FAIL is judged. LOWER FAIL is judged. The volume of the FAIL or PASS buzzer may be adjusted. The volume setting is common to both FAIL and PASS conditions because the same adjuster is used.</li> </ul>	

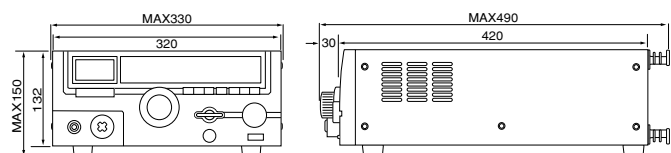
Time		
Voltage	Range	0.1 to 99.9s 0.1s step
	Accuracy	±20ms
Test time	Range	0.3 to 999 s(TIMER OFF function available)
	Accuracy	±20ms
Environment		
Warranty range	Temperature	5 to 35°C
	Humidity	20 to 80%rh (non condensing)
Operating range	Temperature	0 to 40°C
	Humidity	20 to 80%rh (non condensing)
Storage range	Temperature	-20 to 70°C
	Humidity	90%rh or less (non condensing)
Power requirement		
Allowable voltage range	90V to 110V The following power voltage options are factory options: (104 V to 125 V)(194 V to 236V) (207 V to 250 V)	
Power consumption	No load time (READY)	150 VA or less
	Rated load time	1,000 VA max.
Allowable frequency range	45Hz to 65Hz	
Insulation resistance	30MΩ min. (500VDC), between AC line and chassis	
Hipot	1,390 V AC (2 seconds), between AC line and chassis	
Ground continuity	25 A AC/ 0.1Ω max.	
Electromagnetic compatibility (EMC)*2		
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 <ol style="list-style-type: none"> <li>1. Used HV test leadwires which is supplied.</li> <li>2. No discharge in testing.</li> <li>3. Used the shielded cable which length is less than three meters when the SIGNAL I/O is used.</li> </ol>		
Safety*2, 3		
Conforms to the requirements of the following directive and standard. Low Voltage Directive 2006/95/EC EN61010-1 Class I, Pollution degree 2		
Dimensions (MAX)	320(330) W × 132(150) H × 420(490) Dmm	
Weight	Approx. 22kg	
Accessories		
AC Power cable	1 Piece.	
High-voltage test leadwire	TL01-TOS (1.5m) 1 set	
14-pin Amphenol plug	1 piece., assembly type	
"DANGER HIGH VOLTAGE" sticker	1 sheet	
AC power fuse	2 pieces. (One in present use and the other as spare in the fuse holder cap)	
Operation manual	1 copy	

\*1: Maximum testing time is 30 minutes. However, it may limit the continuous duration (time) of output by upper current limit and the environmental temperature.

\*2: Only on models that have CE marking on the panel. Not applicable to custom order models.

\*3: 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