

# ITC75300

unclamped inductive load tester



<b>utilities</b>	<p><i>AC Input Power:</i> 105 - 125 VAC 50/60 Hz      210 - 250 VAC 50/60 Hz</p> <p><i>AC Fuse:</i> 115 VAC - 6A      230 VAC = 3A</p> <p><i>Service:</i> 10 A      10 A</p> <p><i>Maximum Current:</i> 115 VAC - 6A      230 VAC - 3A</p>
<b>mechanical specifications</b>	<p><i>Physical Dimensions:</i></p> <p>Height: 12.25" (31cm)</p> <p>Width: 19" (48 cm)</p> <p>Depth: 22.5" (57cm)</p> <p>Weight: 60 lbs. (27 kg)</p>
<b>electrical specifications</b>	<p><i>Military Specifications:</i> ITC75300 Testers Conform to MIL-STD-750, Method 3470</p> <p><i>Output Energy Limits:</i> 1 millijoule to 0.00495 * (VDD)<sup>2</sup> joules in 1 millijoule steps (i.e., 50V = 12.375 joules, 100V = 49.5 joules, 150V = 111.375 joules)</p> <p><i>Output Current x Time (IT) Limit:</i> No Limit</p> <p><i>RTF Test Increment to Failure:</i> Increments ID or L with programmable inductive load box attached</p> <p><i>Current Sensor Scale Factor:</i> 250 mV/Amp @ 0.1A to 40.0A, 25 mV/Amp @ 40.1A to 400A</p> <p><i>Current Sensor Type:</i> Hall Effect Sensor</p> <p><i>Drain Current Range:</i> 0.1 to 400 amperes in 0.1 ampere steps</p> <p><i>Drain Voltage Range:</i> Plus or Minus (N- or P- Channel) 10 -150 volts in 1 volt steps</p> <p><i>Rated Drain-Source Avalanche Voltage Range: (BVDSS)</i> 10 to 2500 volts in 1.0 volt steps</p> <p><i>Gate Pulse Voltage Range:</i> 28V span, 1V steps, bi-polar drive</p> <p><i>Leakage Test (Pre &amp; Post Avalanche)</i> Forced Voltage = 2V to Programmed Drain Voltage (max.) I = 1.0 mA</p> <p><i>Solid State Power Switch:</i> 400 amps</p> <p><i>Gate Drive Resistance:</i> 25Ω (50Ω per Kelvin leg)</p> <p><i>Parameter Entry:</i> Tablet PC on front panel. GPIB or serial from host computer. Any entry or calculated parameter that produces an out-of-range value indicates the parameter to be changed and a Start Test cannot be initiated until the parameter error has been corrected.</p> <p><i>Waveform Capture &amp; Analysis:</i> Waveforms can be captured and viewed on the Tablet or via the GPIB.</p> <p><i>Outputs:</i> Two isolated test outputs for testing N, P or combination MOSFET's, IGBT's and single and dual diodes with optional RSF box.</p>
<b>interfaces</b>	<p><i>Handler Interface:</i> Tesec handler with 15-bin control, others are special order.</p> <p><i>ITC55MUX4:</i> PC Parallel Interface Supported</p> <p><i>IEEE 488 (GPIB) Interface:</i> Talker/Listener with Tesec protocol standard; other protocols are special order.</p>
<b>optional inductive load boxes</b>	<p><i>ITC5514A:</i> 0.01 - 159.9 mH - Inductance is manually selected</p> <p><i>ITC5514B:</i> 0.01 - 159.9 mH - Inductance selection is programmable</p> <p><i>ITC5515:</i> 0.1, 0.3, 1.0, 3.0, 10.0 mH - Inductance selection is programmable</p> <p><i>ITC5516:</i> 0.001 - 0.300 mH - Inductance selection is programmable</p> <p><i>ITC5517:</i> 0.01 - 79.9mH - Inductance selection is programmable</p> <p><i>ITC55140:</i> 0.01 - 159.9 mH - Inductance selection is programmable</p> <p><i>ITC55170:</i> 0.01 - 79.9mH - Inductance selection is programmable</p> <p><i>External Inductor:</i> 500 mH maximum limit</p> <p><i>Load Inductance Range (Software Limits):</i> Range 1 = 0.001 to 0.300 mH in 0.001 mH steps (using ITC5516) Range 2 = 0.01 to 99.99 mH in 0.01 mH steps (using ITC5514) Range 3 = 100.0 to 159.9 mH in 0.1 mH steps (using ITC 5514)</p>

Note: Specifications subject to change without notice.

**INTEGRATED TECHNOLOGY CORPORATION**  
 1228 North Stadem Drive • Tempe, Arizona 85281 USA • Phone 480-968-3459 • Fax 480-968-3099  
 Sales@IntTechCorp.com

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## ITC75300-Crowbar

<b>general</b>	<i>Maximum Drain Voltage :</i> 2500V <i>Maximum Current:</i> 400A
<b>drain voltage threshold</b>	<i>Range:</i> 10V to 500V <i>Resolution:</i> 1V <i>Triggering/Sensing Accuracy:</i> +/-5V <i>Response Time:</i> <10us
<b>overvoltage</b>	<i>Range:</i> 10V to 2500V <i>Resolution:</i> 1V <i>Accuracy:</i> +/-20V <i>Response Time:</i> <10us

## ITC75300-POD

<b>general</b>	<i>GDS Kelvin Resistance:</i> <5ohm
<b>Vds Sensing</b>	<i>Range:</i> +/- 20V <i>Resolution:</i> 150uV <i>Accuracy:</i> +/- 2mV or 1% (whichever is greater)
<b>Vf Sensing Pre or Post Avalanche Test</b>	<i>Range:</i> +/- 2V <i>Resolution:</i> 15uV <i>Accuracy:</i> +/-1mV or 1% (whichever is greater)
<b>If Sensing</b>	<i>Range:</i> 1mA to 40mA <i>Resolution:</i> 1mA <i>Accuracy:</i> +/- 0.5mA or 5% (whichever is greater)

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