

# Scorpion—Charged Device Model

## Scorpion

### Robotic CDM Tester for Simulating ESD threats

#### Scorpion at-a-glance

- Charged Device Model tester available with Legacy CDM Discharge Head and Contact First Technology Discharge Head
- Both Legacy Head and Contact First Head meet JEDEC/ESDA JS-002-2014
- Legacy style CDM heads for meeting JEDEC, ESDA and AEC standards.
- All waveforms captured and reviewable in GTS WaveAppraise data analysis software package
- Device under Test held in place using an internal vacuum pump
- GTS Maestro software — same user interface as GTS Pure Pulse systems

#### Scorpion Technology

- Flexible testing
  - \* high pin densities
  - \* pin pitches as small as 0.1 mm
  - \* modules up to 125x125 mm
- Easy alignment—adjustable L bracket supplied
- Self-cleaning, low maintenance
- Low Dry Air / N<sub>2</sub> usage
- Accurate mechanical motions with optical feedback



#### Legacy CDM Discharge Head

The Legacy Discharge Head from GTS is the traditional design approach to CDM device testing.

Dual high resolution cameras are used to align the Device Under Test (DUT). The position X and Y is found with a downward facing camera and Z is found with a camera positioned to look directly at the tip of the pogo pin.

The Scorpion CDM Tester from GTS comes standard with a Contact First CDM head and a Legacy Discharge Head that both meet the current Joint ESDA/JEDEC standards JS-002.

The Scorpion also offers optional Legacy Discharge CDM Heads that meet JEDEC, ESDA and AEC.

#### Contact First Technology Discharge Head

This patent pending technique of Contact CDM (CCDM) meets the latest CDM standards with higher accuracy for device classification.

The Contact First Discharge Head uses a sliding mechanism to allow the ground plate to be lowered and then touch the correct pin on the Device Under Test (DUT). The Discharge Pogo Pin then lowers and the spark occurs inside the discharge head.

The single high definition camera with joy stick control makes the X-Y alignment fast and *automatic* Z measurement makes setup easy.

# Scorpion Charged Device Model

## Features and Benefits

### JS-002, JEDEC, ESDA and AEC offered

Scorpion meets the current versions of the most popular specs

### Easy device alignment

Joystick pin/ball/pad for fast point-and-click  
Display of device simulation and actual camera views for easy position verification

### Accurate motions and DUT contacting

3  $\mu\text{m}$  accuracy in X, Y and Z  
Optical scale motion feedback on all movements

### Large package capable

X-Y motion system 6" x 6" and Z motion with 3" vertical travel above DUT  
Large charge plate 5" x 5"

### Small package capable

Small contact pin available  
High accuracy placement

### L bracket supplied for easy, repeat alignment

Adjustable for different packages

### Non-standard packages

Multiple regions with different pitch, offset, orientations

### Maestro software

All-in-one PC with Windows® 10 and Maestro Software

Fully automatic, fast operation

Same user interface as other GTS PurePulse systems

Graphical package design tools for easy entry of package and pin/ball locations

Enter pin patterns or Import pin/ball locations via Excel® files, csv, or text lists

### Data capture and review

Oscilloscope interface for pulse waveform measurements

Every pulse is recorded in Maestro's database for easy recall using GTS WaveAppraise

Post-stressing analysis software

Provides a PASS/FAIL report

Simple connection to company network(s) for data sharing

Export in XML or Excel® files with or without waveform graphs

### Support

Software Upgrades with Warranty and Service Contracts

## Specifications

<b>Large Test area:</b>	5 in. x 5 in. (12.7 cm x 12.7 cm)
<b>Motion system:</b>	X,Y axis - min. step size .001" with .00025" accuracy (x,y axis - min. step size 25.4 $\mu\text{m}$ with 6 $\mu\text{m}$ accuracy) Z axis - vertical travel to 1.5" with .00025" accuracy (z axis - vertical travel to 38.1mm with 6 $\mu\text{m}$ accuracy)
<b>Test voltage range:</b>	$\pm 75\text{ V}$ to $\pm 1500\text{ V}$ in 1V steps
<b>Humidity range:</b>	10-80%, non-condensing
<b>Dimensions:</b>	25"W x 33"D x 54.5"H (64cm x 84cm x 138.5cm)
<b>Weight:</b>	323 lbs. (147kg)
<b>Power:</b>	120-240 VAC 10A 50/60 Hz
<b>Vacuum:</b>	20" Hg @ 0.1 CFM.
<b>Dry air / nitrogen:</b>	0.05 scfm at 60 psi max

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