SFF-TA-1023 Outline

Chapter 1 – Methodology (Air cooled systems)

* Introduction
	+ Briefly talk about the different elements of the spec and how they are used.
		- Test fixture and how it is used to generate the different charts
		- Airflow Impedance (AIF) Level chart
		- Thermal Performance chart.
* Term definition
	+ Airflow Impedance Level (AFI)
	+ Maximum Thermal Level (MaxTherm)
	+ Degraded Thermal Level (DTherm)
	+ Maximum Approach Ambient Temperature (MaxAmbient)
	+ Warning Temperature Limit (WCTEMP)
	+ Critical Temperature Limit (CCTEMP)
* Airflow Impedance Level chart
	+ Use CFM/device
	+ Baseline impedance defined by three 1x (7.5mm) devices at a 9.3mm pitch
		- Minimum of 3 devices and 4 air gaps
	+ Define 3 impedance levels above (2x devices with a higher impedance than 2 1x devices)
		- Highest impedance level is a solid body 16.8mm device
	+ Define 3 impedance levels below (2x devices with a lower impedance than 2 1x devices)
	+ Airflow impedance characterized with no carriers (raw devices)
	+ Airflow impedance characterized without backplane or cables (unpowered)
* Thermal Performance Chart
	+ Airflow vs Ambient Temperature curves
	+ Measured with three devices powered up and under I/O stress
	+ Describe workload for I/O stress
		- Workload provided by device vendor to put device in max thermal condition
		- Vendor supplies expected power draw at max I/O stress (need to define power)
		- Define a common tool for I/O testing
		- Device must be in a steady state condition (SSDs must be pre-conditioning)
			* Possibly point to SNIA definition of pre-conditioning?
* Basic Characterization Flow chart
	+ Describe the flowchart and procedures vendor will follow to generate necessary data
	+ Power modes (do we want to test at each power mode setting?)

Chapter 2 – E3 Test Fixture Definition

* Provide detailed mechanical design for an E3 test fixture that supports the following
	+ Support for 1x or 2x devices (and a mix of 1x and 2x devices)
	+ Support for unpowered devices (impedance testing)
	+ Support for powered devices (thermal performance testing)
* Provide detailed description of how the devices are connected to a system
* Provide Airflow Impedance Level charts appropriate E3 data
* Provide Thermal Performance Charts with appropriate E3 data
* Provide guidance on expected airflow as a function of the Airflow Impedance Level

Chapter 3 – E1 Test Fixture Definition

* Provide detailed mechanical design for an E1 test fixture that supports the following
	+ ???
* Provide detailed description of how the devices are connected to a system