

NTS Services Spotlight: HIRF Testing

Specialists in High Intensity Radiated Field Testing



NTS has numerous facilities capable of conducting your HIRF testing in Arizona, California, Illinois, Massachusetts, New Jersey, and Texas

National Technical Systems
24007 Ventura Blvd, Suite 200
Calabasas, CA 91302

www.nts.com | 1.800.270.2516
sales@nts.com

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Ensuring the Safety of Vital Aircraft Electronics

As greater dependence is placed upon an aircraft's electrical and electronic systems performing functions required for safe flight operations, concern has increased for the protection of these systems. Concern for the protection of electrical and electronic systems in aircraft has increased substantially in recent years due to:

- ▶ Reduction in the electromagnetic shielding afforded by new composite materials
- ▶ Increased use of electrical and electronic systems to perform flight and landing functions
- ▶ Increased susceptibility of systems to HIRF due to increased data bus and processor operating speeds, higher density integrated circuits and cards, and greater sensitivities of electronic equipment
- ▶ Expansion of frequency usage above 1GHz
- ▶ Increasing severity of HIRF environment because of an increase in the number of RF transmitters

HIRF requirements are applied to ensure that the aircraft electrical and electronic systems are able to continue safe operation without interruption, failure or malfunction.

Specifications which include HIRF Certification:

- ▶ FAA HIRF Rule and Advisory Circular 20-158
- ▶ RTCA/DO-160E/F: Category A-L, All CW, SW and Pulse Test levels
- ▶ Boeing Requirements: All CW, SW and Pulse test levels
- ▶ Airbus Requirements: All CW, SW and Pulse test levels

Frequency Range	Modulation/Field Strength	
	CW/AM/FM	PM
10 kHz - 200 MHz	200 V/m	200 V/m
200 MHz - 400 MHz	200 V/m	200 V/m
400 MHz - 700 MHz	200 V/m	730 V/m
700 MHz - 1GHz	200 V/m	1400 V/m
1 GHz - 2 GHz	200 V/m	5000 V/m
2 GHz - 4 GHz	200 V/m	6000 V/m
4 GHz - 6 GHz	200 V/m	7200 V/m
6 GHz - 8 GHz	200 V/m	1100 V/m
8 GHz - 12 GHz	200 V/m	5000 V/m
12 GHz - 18 GHz	200 V/m	2000 V/m
18 GHz - 40 GHz	200 V/m	200 V/m

About NTS

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