

Laboratory's Scopes of Calibration

Field of Calibration	Properties of Measured	Range	Calibration Methods
Frequency & RF Power	Frequency and Time Calibrations Group		
	Quartz Oscillators (TCXO Class, $\leq 5E-7$)	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz	Direct measurement and direct comparison to Frequency Standard from Rubidium Freq. Standard and GPS Freq. Ref. Receiver
	Quartz Oscillators (MCXO Class, $\leq 5E-8$)		
	Quartz Oscillators (OCXO Class, $\leq 5E-9$)		
	Rubidium Frequency Standards ($\leq 2E-10$)		
	GPS Frequency Ref. Receivers		
	Freq./Universal Counters ($\leq 5E-6$)		
	Freq./Universal Counters ($\leq 5E-7$)		
	Freq./Universal Counters ($\leq 5E-8$)		
	Freq./Universal Counters ($\leq 5E-9$)		
	Freq./Universal Counters ($> 5E-9$)		
	Microwave Frequency Meters		
	Frequency Converters		
	Frequency Multipliers		
	Frequency Comparators		
	Modulation Domain/Time Interval Analyzer		
	Tachometers		
	Stroboscopes		
	Revolutionmeters		
	Digital Timers		
	Timers		
	Stopwatches		
	Watches & Clocks		
	Phase Meters		
	Vector Voltmeters / Gain-Phase Meters		
	Delay Line / Phase Shifters		

Laboratory's Scopes of Calibration

Field of Calibration	Properties of Measured	Range	Calibration Methods
Frequency & RF Power	Communications Equipment Calibration Group		
	Signal Generators	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz AC Level: Up-10V (1Hz-10MHz) RF Level: Up-10V (10MHz-18.6GHz) RF Attenuator: Up-100dB (DC-40GHz) RF Impedance: 50Ω, 75Ω, 600Ω (DC-40GHz)	As choose of - In-house methods of laboratory or - Maker's performance verification tests
	Digital Modulation Signal Generators		
	Microwave Signal Generators		
	Function Generators		
	Frequency Synthesizers (Low accuracy)		
	Frequency Synthesizers (High accuracy)		
	Sweep Oscillators		
	Synthesized Sweep Oscillator		
	Pulse Generators		
	Universal Sources		
	Clock Generators		
	Pulse Pattern Generators		
	Data Generators / Word Generators		
	Speaker Test Oscillators		
	Time Synthesizers		
	Phase Generators		
	Noise Generators (White/Pink)		
	IF/RF Noise Generators		
	FM Linear Detectors		
	FM/AM Modulation Meters		
	Modulation Analyzers		
	Modulation Analyzer With Power Sensors		
	Measuring Receivers		
Measuring Receiver With Power Sensors			
Receiver / Test Receivers			
Interference / Field Strength Meters			
TV Field Intensity Meters / CN Checkers			
Radio Communication Analyzers			
Radio Test Set			

Laboratory's Scopes of Calibration

Field of Calibration	Properties of Measured	Range	Calibration Methods
Frequency & RF Power	Cellular Testers / MCA Testers	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz AC Level: Up-10V (1Hz-10MHz) RF Level: Up-10V (10MHz-18.6GHz) RF Attenuator: Up-100dB (DC-40GHz) RF Impedance: 50Ω, 75Ω, 600Ω (DC-40GHz)	As choose of - In-house methods of laboratory or - Maker's performance verification tests
	Personal Checkers / Output Testers		
	Digital Modulation Radio Communication Analyzers		
	Digital Mobile Radio Transmitter Testers		
	Modulation Spectrum Analyzers		
	Signalling Testers		
	PDC/PHS Testers		
	Digital Modulators		
	Standard Level Meters		
	Level Meters		
	Selective Level Meters		
	Psophometers / Noise Meters		
	Noise Loading Test Set		
	Attenuators (600Ω, 75Ω Balance, $f \leq 1.3\text{GHz}$)		
	Attenuators (75Ω, 50Ω Un-balance, $f \leq 1.3\text{GHz}$)		
	Filters (LP / HP / BP)		
	Universal Filters		
	Key Box / Level Comparators		
	Switching Unit / Key Box With Attenuator		
	Distortion Meters		
	Distortion Calibrators		
	Distortion Meters With Oscillators		
	Audio Analyzers		
Error Rate Testers			
Error Detectors			
Error Analyzers			
Repeater Testers			
Jitter Generator Receivers			
PCM Line Test Set			
PCM Multiplex Testers			

Laboratory's Scopes of Calibration

Field of Calibration	Properties of Measured	Range	Calibration Methods
Frequency & RF Power	DSU Testers	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz AC Level: Up-10V (1Hz-10MHz) RF Level: Up-10V (10MHz-18.6GHz) RF Attenuator: Up-100dB (DC-40GHz) RF Impedance: 50Ω, 75Ω, 600Ω (DC-40GHz)	As choose of - In-house methods of laboratory or - Maker's performance verification tests
	Digital Transmission Analyzers		
	Superdigital Line Analyzers		
	PCM Terminal Test Set / PCM Channel Test Set		
	Multimedia MUX Analyzers		
	PCM Codec Analyzers		
	NNI Analyzers		
	ATM Analyzers		
	SMD Analyzers		
	PCM/FDM/TDM Analyzers		
	Encoders		
	Interface Testers		
	Code Generators / Code Distortion Generators		
	Telecom / Datacom Analyzers		
	Television Test Generators		
	Modular TV Test Generators		
	NTSC / PAL Generators		
	Television Test Digital Generators		
	Television Color Bar / Pattern Generators		
	Video Sweep Generators		
	Related Television Test Generators		
	Television Monochrome / Color Monitors		
	Television Waveform Monitors		
Television Vector Waveforms Monitors			
Video Analyzers			
Multiplex Video Analyzers			
Video Noise Meters			
Stereo Modulators			
Telephone Unit Testers			
Telephone Dial Testers			

Laboratory's Scopes of Calibration

Field of Calibration	Properties of Measured	Range	Calibration Methods
Frequency & RF Power	MF-DP Dial Memory Testers	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz AC Level: Up-10V (1Hz-10MHz) RF Level: Up-10V (10MHz-18.6GHz) RF Attenuator: Up-100dB (DC-40GHz) RF Impedance: 50Ω, 75Ω, 600Ω (DC-40GHz)	As choose of - In-house methods of laboratory or - Maker's performance verification tests
	Telephone Impedance Testers		
	PBX Testers		
	Transmitter Sensitivity Testers		
	Bell Ringer Generators		
	Impulse Senders		
	Bon.DSU/OCU Testers		
	Wow Flutter Meters		
	CD Jitter Meters		
	Logic Analyzers		
	Logic Analyzer Systems		
Microwave Equipment and RF Component Calibrations Group			
	Termination Power Meters (50Ω, 1Hz-1GHz, Max. 50W)	Freq. Standard: 0.5MHz, 1MHz, 5MHz, 10MHz Freq. Range: 1Hz-40GHz AC Level: Up-10V (1Hz-10MHz) RF Level: Up-10V (10MHz-18.6GHz) RF Attenuator: Up-100dB (DC-40GHz) RF Impedance: 50Ω, 75Ω, 600Ω (DC-40GHz)	As choose of - In-house methods of laboratory or - Maker's performance verification tests
	Through Line Power Meters (50Ω, 1Hz-1GHz, Max. 50W)		
	Microwave Power Meters + Power Sensors		
	Power Meters (Indicator only)		
	Power Sensors (Thermocouple and Diod Type)		
	Thermistor Mounts		
	Peak Power Meters		
	Modulation Power Meters		
	Power Meter Calibrators (Range Calibrator)		
	Network Analyzers		
	Network Analyzers + S-Parameter Test Sets		
	Network / Spectrum Analyzers		
	RF Analyzers		
	Scalar Network Analyzers		
	Transmission / Reflection Test Sets		
VSWR Bridge / Reflection Bridge			

