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Nota di contenuto	The VNA Applications Handbook; Contents; Preface; 1 Architecture of the Modern Vector Network Analyzer; 1.1 What Is a Vector Network Analyzer?; 1.2 Wave Quantities and S-Parameters; 1.2.1 One-Port Measurements; 1.2.2 Two-Port Measurements; 1.3 Architecture of an N-Port Network Analyzer; 1.3.1 Main Blocks; 1.3.2 Errors; 1.3.3 Test Set Challenges; 1.4 Swept Versus Stepped Mode; 1.4.1 Chopped Versus Alternate Mode; 2 Calibration; 2.1 VNA Measurements in an Ideal World; 2.2 Measurement Errors in the Real World; 2.2.1 Random Errors; 2.2.2 Systematic Errors; 2.3 Calibration Standards 2.3.1 Open (O)2.3.2 Short (S); 2.3.3 Match (M); 2.3.4 Sliding Match (Sliding Load); 2.3.5 Thru (T); 2.3.6 Reflect (R); 2.3.7 Line (L); 2.3.8 Symmetrical Network (N); 2.3.9 Attenuator Standard (A); 2.3.10 Unknown Thru (U); 2.4 Calibration Techniques; 2.4.1 Normalization; 2.4.2 Full Single-Port Correction (OSM); 2.4.3 One-Path, Two-Port Correction; 2.4.4 Seven-Term Error Correction; 2.4.5 12-Term Error Correction; 2.5 Power Calibration; 2.5.1 Source Power Calibration; 2.5.2 Receiver Power Cal; 2.5.3 SMARTerCal; 2.5.4 Automatic Level Control (ALC); References; Selected Bibliography 3 Passive and Active One-Port Device Measurements3.1 Passive One-Port Devices; 3.1.1 Steps for Setting Up a Single-Port Measurement; 3.1.2 Calibration for Multiple Single-Port Devices; 3.1.3 Port Configuration for Multiple Simultaneous Single-Port Measurements; 3.2 Impedance Measurements; 3.2.1 Impedance Traces; 3.2.2 Impedance

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