



**Verizon NEBS™ Compliance: NEBS
Requirements By Location**
Verizon Technical Purchasing Requirements
VZ.TPR.9203
Issue 4, March 2009





CHANGE CONTROL RECORD:

Version	Date	Action*	Reason for Revision
1	2/6/2007	Reissue	SIT.NEBS.RQS.NPI.2005.031, reissued and updated into new format, original issue date 11/14/2005.
2	2/5/2009	Change	Removed Wall-Mounted Criteria from SHE/VHO Criteria
3	3/6/2009	Add	Update Table to include VzW MTSO / BTS
4	3/23/2009	Add	Update Table to include VZ.TPR.9205
* New, Add, Delete, Change, Reissue			

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1.0 PURPOSE

The purpose of this Verizon Technical Purchasing Requirement document is to outline the minimum requirements for NEBS testing based on location. Verizon designates which NEBS tests are applicable based on the location the equipment is deployed.

2.0 SCOPE

This Technical Purchasing Requirement document provides a matrix of NEBS requirements by location.

The NEBS requirements, to which has been added UL 60950 and VZ.TPR.9205, are organized by sections from GR-63-CORE and GR-1089-CORE.

Most equipment in Verizon can be designated as being deployed to one of the following seven general types of locations: Central offices (including controlled environmental vaults, or CEVs); Collocation equipment areas; Data centers; Video equipment centers; Test lab centers, Customer premises and; VzW MTSO/BTS.

The “punchlist” of tests contained herein shall be used by equipment suppliers and the Verizon approved Independent Testing Laboratories as a baseline of test requirements to create NEBS Test Plans. In all instances of test planning and test execution, the most recent and accepted versions of the GR standards shall be used.

Verizon reserves the right to modify this or other policies to meet the needs of the business.

3.0 REFERENCES

GR-63-CORE	NEBS™ Requirements: Physical Protection
GR-1089-CORE	Electromagnetic Compatibility and Electrical Safety
UL 60950	Safety for Information Technology Equipment
VZ.TPR.9205	Energy Efficiency Requirements for Telecommunications Equipment



4.0 ACRONYMS

AC	Alternating Current
BTS	Base Transceiver Station
CEV	Controlled Environmental Vault
CFR	Code of Federal Regulations
CLEC	Competitive Local Exchange Carrier
CO	Central Office
CPE	Customer Premises Equipment
DC	Direct Current
Doc.	document
EMI	Electromagnetic Interference
FCC	Federal Communications Commission
GR	Generic Requirement
ITL	Independent Testing Laboratory
MTSO	Mobile Telephone Switching Office
NEBS	Network Equipment-Building Systems
SHE	Super Head End
SIT	Systems Integration & Testing
Temp	temperature
VHO	Video Hub Office
VZ	Verizon
VzW	Verizon Wireless

5.0 DEFINITIONS

CLEC Level 1 – Minimal level of equipment safety, applied to equipment installed in Verizon locations but owned and operated by CLEC.

Code R – NEBS criteria that generally address reliability of equipment.

Code S – NEBS criteria that generally address equipment safety.

Punchlist – A matrix of test requirements



6.0 GENERAL REQUIREMENTS

For network equipment to be acceptable for deployment in Verizon, it must meet the applicable NEBS criteria. Since NEBS test requirements are influenced by the deployment locations, Verizon has reviewed the different categories of deployment locations and detailed the different requirements applicable to those locations in the following matrix.



Table 1 – Requirements by Location

NEBS Doc.	CODE	VzT Central Office (S,R)	CLEC Level 1 (VZ CO) (S)	Data Centers (S)	SHE / VHO (S)	SIT Lab Entry (S)	Customer Premises (S,R)	VzW MTSO / BTS (S,R)
GR-63 Issue 3	S	2.0 Spatial						2.0 Spatial
	R	4.1.1 Transportation & Storage						4.1.1 Transportation & Storage
	R	4.1.2 Operating Temp & Relative Humidity					4.1.2 Operating Temp & Relative Humidity	4.1.2 Operating Temp & Relative Humidity
	R	4.1.3 Altitude					4.1.3 Altitude	4.1.3 Altitude
	R	4.1.4 Hi-Temp Margin						4.1.4 Hi-Temp Margin
	R	4.1.5 Fan Cooling						4.1.5 Fan Cooling
	R	4.1.6 Heat Dissipation	4.1.6 Heat Dissipation					4.1.6 Heat Dissipation
	S	4.1.7 Surface Temp					4.1.7 Surface Temperature	4.1.7 Surface Temp
	S	4.2 Fire Resistance	4.2 Fire Resistance	4.2 Fire Resistance	4.2 Fire Resistance	4.2 Fire Resistance	4.2 Fire Resistance	4.2 Fire Resistance
	R	4.3 Eqmt Handling						4.3 Eqmt Handling
	S	4.4.1 Earthquake	4.4.1 Earthquake	4.4.1 Earthquake	4.4.1 Earthquake			4.4.1 Earthquake
	S	4.4.2 Framework and Anchor	4.4.2 Framework and Anchor	4.4.2 Framework and Anchor	4.4.2 Framework and Anchor			4.4.2 Framework and Anchor
	S	4.4.3 Wall-Mounted Anchors	4.4.3 Wall-Mounted Anchors	4.4.3 Wall-Mounted Anchors				4.4.3 Wall-Mounted Anchors
	R	4.4.4 Office Vibration						4.4.4 Office Vibration
	R	4.4.5 Transportation Vibration						4.4.5 Transportation Vibration
	R	4.5 Airborne Contaminants						4.5 Airborne Contaminants
	S	4.6 Acoustic Noise	4.6 Acoustic Noise					4.6 Acoustic Noise
R	4.7 Illumination						4.7 Illumination	
UL 60950	S						* All Parts	
GR-1089 Issue 4	R	2 ESD/EFT Immunity						2 ESD/EFT Immunity
	S	3.2 EMI Emission	3.2 EMI Emission	3.2 EMI Emission	3.2 EMI Emission	3.2 EMI Emissions	* FCC Emissions (CFR Title 47, Part 15)	3.2 EMI Emission
	R	3.3 EMI Immunity		3.3 EMI Immunity			3.3 EMI Immunity	3.3 EMI Immunity
	R	4 Lightning and AC Power Fault (1st Level)		4 Lightning and AC Power Fault (1st Level)				4 Lightning and AC Power Fault (1st Level)
	S	4 Lightning and AC Power Fault (2nd Level)	4 Lightning and AC Power Fault (2nd Level)	4 Lightning and AC Power Fault (2nd Level)	4 Lightning and AC Power Fault (2nd Level)		4 Lightning and AC Power Fault	4 Lightning and AC Power Fault (2nd Level)
	R	5 Steady State Power Induction						5 Steady State Power Induction
	R	6 DC Potential						6 DC Potential
	S	7 Electrical Safety	7 Electrical Safety	7 Electrical Safety	7 Electrical Safety	7 Electrical Safety	7 Electrical Safety	7 Electrical Safety
	R	8 Corrosion						8 Corrosion
	S	9 Bonding and Grounding	9 Bonding and Grounding	9 Bonding and Grounding	9 Bonding and Grounding	9 Bonding and Grounding		9 Bonding and Grounding
R	10 DC Power Ports						10 DC Power Ports	
VZ.TPR.9205		Applicable Sections	Applicable Sections	Applicable Sections	Applicable Sections	Applicable Sections	Applicable Sections	Applicable Sections