

附件：YD/T 2583.18-2024 与 YD/T 2583.18-2019 标准主要差异和补充试验要求

| 序号 | 新标准章节 | YD/T 2583.18-2019 | YD/T 2583.18-2024 | 是否补充试验 | | | | | | | | | | | | | | |
|------|----------------------|--|--|--------|----|--------------------|----|----------------------|---|----|------|----|--------------------|------|---------------------|------|---------------------|---|
| 1 | 第 4 章 | <p>YD/T 2583.18-2019 的 4.1，频率范围如下表：</p> <p>表 1 频率范围的定义</p> <table><tr><td>频段</td><td>频率范围</td></tr><tr><td>F1</td><td>150 MHz ~ 6000 MHz</td></tr><tr><td>F2</td><td>7125 MHz ~ 55000 MHz</td></tr></table> | 频段 | 频率范围 | F1 | 150 MHz ~ 6000 MHz | F2 | 7125 MHz ~ 55000 MHz | <p>更新了 5G 工作的频率范围，更改后频率范围如下表：</p> <p>表1 频率范围的定义</p> <table><tr><td>频段</td><td>频率范围</td></tr><tr><td>F1</td><td>150 MHz ~ 7125 MHz</td></tr><tr><td>F1-1</td><td>2425 MHz ~ 3700 MHz</td></tr><tr><td>F1-2</td><td>5200 MHz ~ 7125 MHz</td></tr></table> | 频段 | 频率范围 | F1 | 150 MHz ~ 7125 MHz | F1-1 | 2425 MHz ~ 3700 MHz | F1-2 | 5200 MHz ~ 7125 MHz | 否 |
| 频段 | 频率范围 | | | | | | | | | | | | | | | | | |
| F1 | 150 MHz ~ 6000 MHz | | | | | | | | | | | | | | | | | |
| F2 | 7125 MHz ~ 55000 MHz | | | | | | | | | | | | | | | | | |
| 频段 | 频率范围 | | | | | | | | | | | | | | | | | |
| F1 | 150 MHz ~ 7125 MHz | | | | | | | | | | | | | | | | | |
| F1-1 | 2425 MHz ~ 3700 MHz | | | | | | | | | | | | | | | | | |
| F1-2 | 5200 MHz ~ 7125 MHz | | | | | | | | | | | | | | | | | |
| 2 | 第 4 章 | <p>4.2 试验布置</p> <p>4.2.1 通用条件 同 YD/T 2583.2 的 4.2.1 节。</p> <p>4.2.2 发信机输入端试验布置 同 YD/T 2583.2 的 4.2.2 节。</p> <p>4.2.3 发信机输出端试验布置 同 YD/T 2583.2 的 4.2.3 节。</p> <p>4.2.4 收信机输入端试验布置 同 YD/T 2583.2 的 4.2.4 节。</p> <p>4.2.5 收信机输出端试验布置 同 YD/T 2583.2 的 4.2.5 节。</p> | <p>更改了试验条件，试验布置由引用 YD/T 2583.2 改为文字描述</p> <p>4.3 试验布置</p> <p>4.3.1 通用条件 同 YD/T 2583.2 的 4.2.1 节。</p> <p>4.3.2 发信机输入端试验布置 提供有用 RF 信号的 SS 应置于试验环境外，为发信机提供正常工作的信号。SS 应使 EUT 连续发射。</p> <p>4.3.3 发信机输出端试验布置 连接收发信机输出信号的辅助测试设备应置于试验环境外。试验前应建立通信链路，在测试过程中保持通信的连接。具有一体化天线的发信机，建立通信连接的有用 RF 输出信号应通过试验环境内的天线馈出。具有天线接口的发信机，建立通信连接的有用 RF 输出信号应通过屏蔽线（如同轴线）从天线接口连接到 SS。应采取适当的措施，减小无用共模电流对发信机连接处的屏蔽线外导体的影响。</p> <p>4.3.4 收信机输入端试验布置 提供有用 RF 信号的 SS 应置于试验环境外，为收信机提供正常工作的信号。具有一体化天线的收信机，建立通信连接的有用 RF 输入信号应通过试验环境内的天线馈入。具有天线接口的收信机，建立通信连接的</p> | 否 | | | | | | | | | | | | | | |

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| | | | <p>有用 RF 输入信号应通过屏蔽线(如同轴线)从天线接口连接到 SS。应采取适当的措施,减小无用共模电流对收信机连接处的屏蔽线外导体的影响。有用 RF 输入信号电平应设置为高于 EUT 的参考灵敏度电平(最小可接收信号电平),但不高于 40dB。对于射频电磁场辐射抗扰度试验,当试验系统的功率放大器开启但不进行激励时,再进行测量收信机的有用 RF 输入信号电平值,有用 RF 输入信号电平宜设置为高于 EUT 的参考灵敏度电平 15dB (±3dB)。</p> <p>4.3.5 收信机输出端试验布置 连接收信机输出信号的辅助测试设备应置于试验环境外。如果收信机具有信号输出的接口,应通过收信机正常使用时的线缆将信号输出接口与位于试验环境外的辅助测试设备连接。如果收信机不具有信号输出的接口,具有视觉或声学输出功能,应通过非金属装置(如用摄像机读取显示器的内容)耦合到位于试验环境外的辅助测试设备上。如果收信机具有模拟语音输出功能,输出应通过非金属声波管耦合到位于试验环境外的音频分析仪或其它适当的辅助测试设备上,如果不使用非金属声波管的方式,应将使用的方式记录在测试报告中。应采取预防措施,减小耦合装置对试验的影响。</p> | |
| 3 | 第 8 章 | 8.2 辐射骚扰、8.3~8.5 传导骚扰测量方法引用的标准为 GB/T 9254。 | 因 GB/T 9254 版本升级为 GB/T 9254.1,测量方法引用标准更改为 GB/T 9254.1 | 否 |
| 4 | 第 8 章 | <p>8.1.1 测试方法:</p> <p>测量时,UE使用正常的供电方式,应使UE正常工作。</p> <p>测量时,UE放置在非导电的支架上,如使用外部电源为UE供电,供电应通过电源滤波器后与UE相连,避免</p> | <p>更改测试方法,对 SA 和 NSA 分别做要求:</p> <p>测量时,UE 的供电方式与实际使用时一致,应使 UE 正常工作。</p> <p>测量时,UE 放置在非导电的支架上,如使用外部电源为 UE 供电,供电应通过电源滤波器后与 UE 相连,应避免供电</p> | 否 |

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| | | <p>电源和电缆影响测量结果。</p> <p>测量时，UE 的配置宜进行如下设置：</p> <ul style="list-style-type: none"> ——信道带宽设置为 UE 支持的最小信道带宽； ——信道设置为 UE 支持频段的中间信道； ——子载波间隔设置为 UE 支持的最小子载波间隔； ——调制方式设置为 CP-OFDM QPSK； ——RB 数量设置为 1。 | <p>电源和连接电缆影响测量结果。</p> <p>测量时，对于独立组网（SA）方式，UE 宜进行如下设置：</p> <ul style="list-style-type: none"> ——信道带宽，为 UE 支持的最小信道带宽，FR1 设置为最小信道带宽，FR2 设置为最大信道带宽； ——信道，设置为 UE 支持频段的中间信道； ——子载波间隔，为 UE 支持的最小子载波间隔，FR1 设置为最小子载波间隔，FR2 设置为 120 kHz； ——调制方式，FR1 设置为 CP-OFDM QPSK，FR2 设置为 DFT-s-OFDM QPSK； ——RB 数量，FR1 设置为 1@0，FR2 设置为 1@1。 <p>测量时，对于非独立组网（NSA）方式，UE 宜进行如下设置：</p> <ul style="list-style-type: none"> ——信道带宽，E-UTRA 设置为 5 MHz。NR 为 UE 支持的最小信道带宽，FR1 设置为最小信道带宽，FR2 设置为最大信道带宽； ——信道，E-UTRA 设置为中间信道。NR 设置为支持频段的中间信道； ——子载波间隔，E-UTRA 设置为 15 kHz。NR 为 UE 支持的最小子载波间隔，FR1 设置为最小子载波间隔，FR2 设置为 120 kHz； ——调制方式，E-UTRA 设置为 QPSK。NR FR1 设置为 CP-OFDM QPSK，FR2 设置为 DFT-s-OFDM QPSK； ——RB 数量，E-UTRA 设置为 1@0。NR FR1 设置为 1@0，FR2 设置为 1@1； ——NSA 频段组合，参考 YD/T 3627，可选择实际使用时典型的频段进行组合； ——NSA 功率，FR1 设置为支持的最大功率减 3dB，FR2 设置为支持的最大功率。 | |

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|-------------------------------------|--------------------|--|-------------------|--------|-------------|-------|---------------------------|------|------|--------------------|-------------|--------|---------------------------|--------|----------------------------------|--------|------|--------------------|-------------|--------|---------------------------|--------|---|------|------|----------------|-------|-------------------------------------|------|------|--------------------|-------------|--------|---------------------------|--------|----------------------------------|--------|---|
| 5 | 第8章 | <p>8.1, 辐射杂散骚扰的测试频段、测量带宽和测量时被测设备的工作模式要求:</p> <p>表4 机箱开口的辐射杂散测量带宽 FR1</p> <table><tr><th>频率范围</th><th>测量带宽</th></tr><tr><td>90MHz~10GHz</td><td>10MHz</td></tr><tr><td>10GHz~12.75GHz(含) 3GPP 5G</td><td>1MHz</td></tr></table> <p>注1: 最大测试频率为12.75GHz, 4G+5G频率未覆盖范围按4G处理 注2: 5G频段带宽按5G信道带宽处理</p> <p>8.1.2 限值</p> <p>8.1.2.1 业务模式</p> <p>FR1的限值见表5, FR2的限值在附录中</p> <p>表5 机箱开口的辐射杂散限值 FR1, 业务模式</p> <table><tr><th>频率范围</th><th>杂散限值(在1m处, 10dB带宽)</th></tr><tr><td>90MHz~10GHz</td><td>-60dBm</td></tr><tr><td>10GHz~12.75GHz(含) 3GPP 5G</td><td>-60dBm</td></tr><tr><td>12.75~12.75GHz+12.75GHz+12.75GHz</td><td>-40dBm</td></tr></table> <p>注1: 最大测试频率为12.75GHz, 4G+5G频率未覆盖范围按4G处理 注2: 10MHz, 5MHz, 10MHz, 5MHz, 10MHz</p> <p>8.1.2.2 空闲模式</p> <p>图例见表6</p> <p>表6 机箱开口的辐射杂散限值(空闲模式)</p> <table><tr><th>频率范围</th><th>杂散限值(在1m处, 10dB带宽)</th></tr><tr><td>90MHz~10GHz</td><td>-60dBm</td></tr><tr><td>10GHz~12.75GHz(含) 3GPP 5G</td><td>-60dBm</td></tr></table> <p>注: 最大测试频率为12.75GHz, 4G+5G频率未覆盖范围按4G处理</p> | 频率范围 | 测量带宽 | 90MHz~10GHz | 10MHz | 10GHz~12.75GHz(含) 3GPP 5G | 1MHz | 频率范围 | 杂散限值(在1m处, 10dB带宽) | 90MHz~10GHz | -60dBm | 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | 12.75~12.75GHz+12.75GHz+12.75GHz | -40dBm | 频率范围 | 杂散限值(在1m处, 10dB带宽) | 90MHz~10GHz | -60dBm | 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | <p>更改测量带宽的频率范围:</p> <p>表4 壳体开口的辐射杂散测量带宽</p> <table><tr><th>频率范围</th><th>测量带宽</th></tr><tr><td>90MHz~12.75GHz</td><td>10MHz</td></tr><tr><td>12.75GHz~12.75GHz+12.75GHz+12.75GHz</td><td>1MHz</td></tr></table> <p>FR1 测试频率范围上限增加“或 26G”, 增加 FR2 频段的测试</p> <p>8.1.2.1 业务模式</p> <p>FR1的限值见表5, FR2的限值见表6</p> <p>表5 壳体开口的辐射杂散限值 FR1, 业务模式</p> <table><tr><th>频率范围</th><th>杂散限值(在1m处, 10dB带宽)</th></tr><tr><td>90MHz~10GHz</td><td>-60dBm</td></tr><tr><td>10GHz~12.75GHz(含) 3GPP 5G</td><td>-60dBm</td></tr><tr><td>12.75~12.75GHz+12.75GHz+12.75GHz</td><td>-40dBm</td></tr></table> <p>注1: 最大测试频率为12.75GHz, 4G+5G频率未覆盖范围按4G处理 注2: 10MHz, 5MHz, 10MHz, 5MHz, 10MHz 注3: 5G频段带宽按5G信道带宽处理</p> | 频率范围 | 测量带宽 | 90MHz~12.75GHz | 10MHz | 12.75GHz~12.75GHz+12.75GHz+12.75GHz | 1MHz | 频率范围 | 杂散限值(在1m处, 10dB带宽) | 90MHz~10GHz | -60dBm | 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | 12.75~12.75GHz+12.75GHz+12.75GHz | -40dBm | <p>否</p> <p>说明: 目前国内销售的5G用户设备只包含FR1频段, 不包含FR2频段。标准增加FR2频段是为了后续国内开放FR2频段提前做准备。</p> |
| 频率范围 | 测量带宽 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90MHz~10GHz | 10MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10GHz~12.75GHz(含) 3GPP 5G | 1MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 杂散限值(在1m处, 10dB带宽) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90MHz~10GHz | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75~12.75GHz+12.75GHz+12.75GHz | -40dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 杂散限值(在1m处, 10dB带宽) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90MHz~10GHz | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 测量带宽 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90MHz~12.75GHz | 10MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75GHz~12.75GHz+12.75GHz+12.75GHz | 1MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 杂散限值(在1m处, 10dB带宽) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90MHz~10GHz | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10GHz~12.75GHz(含) 3GPP 5G | -60dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75~12.75GHz+12.75GHz+12.75GHz | -40dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|---------------------------------|---------|--|--|--------|----|----------------|---------|-------------------|---------|-------------------|---------|---------------------------------|--------|--|------|----------------|---------|-------------------|---------|-------------------|---------|------|-------------------|----------------|---------|-------------------|---------|-------------------|-------------------|------|------|-------------------|------|------|-------------------------------------|
| | | | <div>表6 壳体端口的辐射杂散限值 (FR2, 业务模式)</div> <table><tr><th>频率范围</th><th>限值</th></tr><tr><td>30 MHz ~ 1 GHz</td><td>-20 dBm</td></tr><tr><td>1 GHz ~ 12.75 GHz</td><td>-25 dBm</td></tr><tr><td>12.75 GHz ~ 2 次谐波</td><td>-15 dBm</td></tr><tr><td>2 ~ 3 GHz, 4 ~ 5 GHz, 6 ~ 7 GHz</td><td>-5 dBm</td></tr></table> <div>注 1: 最大测试频率为 12.75 GHz 以上频率未测的 2 次谐波。 注 2: $1-1000(1/2) \times 0.01$ dBm。 注 3: 在设备频率处采用加权平均限值。 注 4: 对于 SA 方式, 限值可为 +3.3 dB 限值, 测量方法见本文件的表 1.1。如果 +3.3 dB 限值由限值, 则限值为 100 dB, 测量方法见 TS1 TS 1.36.521.2。 注 5: 对于 SA 方式, 对于 FR2 限值为 +3.3 dB 限值, SA 限值可为 +3.3 dB 限值, 测量方法见本文件的表 1.1。如果 +3.3 dB 限值由限值, 则限值为 100 dB, 测量方法见 TS1 TS 1.36.521.2。</div> <div># 5.2.2 空闲模式</div> <div>FR1 的限值见表 7, FR2 的限值见表 8。</div> <div>表7 壳体端口的辐射杂散限值 (FR1, 空闲模式)</div> <table><tr><th>频率范围</th><th>限值</th></tr><tr><td>30 MHz ~ 1 GHz</td><td>-20 dBm</td></tr><tr><td>1 GHz ~ 12.75 GHz</td><td>-25 dBm</td></tr><tr><td>12.75 GHz ~ 2 次谐波</td><td>-15 dBm</td></tr></table> <div>注 1: 最大测试频率为 12.75 GHz 以上频率未测的 2 次谐波。 注 2: 在设备频率处采用加权平均限值。</div> <div>表8 壳体端口的辐射杂散限值 (FR2, 空闲模式)</div> <table><tr><th>频率范围</th><th>限值</th></tr><tr><td>30 MHz ~ 1 GHz</td><td>-20 dBm</td></tr><tr><td>1 GHz ~ 12.75 GHz</td><td>-25 dBm</td></tr><tr><td>12.75 GHz ~ 2 次谐波</td><td>-15 dBm</td></tr></table> <div>注 1: 最大测试频率为 12.75 GHz 以上频率未测的 2 次谐波。 注 2: 在设备频率处采用加权平均限值。 注 3: 对于 SA 方式, 限值可为 +3.3 dB 限值, 测量方法见本文件的表 1.1。如果 +3.3 dB 限值由限值, 则限值为 100 dB, 测量方法见 TS1 TS 1.36.521.2。 注 4: 对于 SA 方式, 对于 FR2 限值为 +3.3 dB 限值, SA 限值可为 +3.3 dB 限值, 测量方法见本文件的表 1.1。如果 +3.3 dB 限值由限值, 则限值为 100 dB, 测量方法见 TS1 TS 1.36.521.2。</div> | 频率范围 | 限值 | 30 MHz ~ 1 GHz | -20 dBm | 1 GHz ~ 12.75 GHz | -25 dBm | 12.75 GHz ~ 2 次谐波 | -15 dBm | 2 ~ 3 GHz, 4 ~ 5 GHz, 6 ~ 7 GHz | -5 dBm | 频率范围 | 限值 | 30 MHz ~ 1 GHz | -20 dBm | 1 GHz ~ 12.75 GHz | -25 dBm | 12.75 GHz ~ 2 次谐波 | -15 dBm | 频率范围 | 限值 | 30 MHz ~ 1 GHz | -20 dBm | 1 GHz ~ 12.75 GHz | -25 dBm | 12.75 GHz ~ 2 次谐波 | -15 dBm | | | | | | |
| 频率范围 | 限值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 MHz ~ 1 GHz | -20 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 GHz ~ 12.75 GHz | -25 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75 GHz ~ 2 次谐波 | -15 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 ~ 3 GHz, 4 ~ 5 GHz, 6 ~ 7 GHz | -5 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 限值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 MHz ~ 1 GHz | -20 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 GHz ~ 12.75 GHz | -25 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75 GHz ~ 2 次谐波 | -15 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率范围 | 限值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 MHz ~ 1 GHz | -20 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 GHz ~ 12.75 GHz | -25 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.75 GHz ~ 2 次谐波 | -15 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 第 8 章 | <div>8.8, 瞬态传导骚扰限值:</div> <div>表 12 DC 电源端口瞬态传导骚扰</div> <table><tr><th rowspan="2">骚扰频率</th><th colspan="2">限值 A</th></tr><tr><th>17V 系统</th><th>54V 系统</th></tr><tr><td>1</td><td>75</td><td>170</td></tr><tr><td>2</td><td>-100</td><td>-170</td></tr></table> | 骚扰频率 | 限值 A | | 17V 系统 | 54V 系统 | 1 | 75 | 170 | 2 | -100 | -170 | <div>更改了电瞬态传导骚扰的限值:</div> <div>表14 瞬态传导骚扰 (车载设备 DC 电源端口)</div> <table><tr><th rowspan="2">脉冲特性</th><th colspan="2">限值</th></tr><tr><th>12V 系统</th><th>24V 系统</th></tr><tr><td>正弦脉冲 (窄带范围或窄带)</td><td><75</td><td><75</td></tr><tr><td>正弦脉冲 (窄带范围或宽带)</td><td><100</td><td><100</td></tr><tr><td>正弦脉冲 (宽带全频带范围)</td><td><100</td><td><100</td></tr><tr><td>正弦脉冲 (宽带全频带范围)</td><td><100</td><td><100</td></tr><tr><td>正弦脉冲 (宽带全频带范围)</td><td><100</td><td><100</td></tr></table> | 脉冲特性 | 限值 | | 12V 系统 | 24V 系统 | 正弦脉冲 (窄带范围或窄带) | <75 | <75 | 正弦脉冲 (窄带范围或宽带) | <100 | <100 | 正弦脉冲 (宽带全频带范围) | <100 | <100 | 正弦脉冲 (宽带全频带范围) | <100 | <100 | 正弦脉冲 (宽带全频带范围) | <100 | <100 | 是 (对车载的 5G 用户设备需要按照 2024 版补测瞬态传导骚扰) |
| 骚扰频率 | 限值 A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 17V 系统 | 54V 系统 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 75 | 170 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | -100 | -170 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 脉冲特性 | 限值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12V 系统 | 24V 系统 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 正弦脉冲 (窄带范围或窄带) | <75 | <75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 正弦脉冲 (窄带范围或宽带) | <100 | <100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 正弦脉冲 (宽带全频带范围) | <100 | <100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 正弦脉冲 (宽带全频带范围) | <100 | <100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 正弦脉冲 (宽带全频带范围) | <100 | <100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 序号 | 新标准章节 | YD/T 2583.18-2019 | YD/T 2583.18-2024 | 是否补充试验 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------------|---|--|--|--------|------|--|--|--|--|----|----|---|-----------|-------|------|----|----|-----------|-------|------|----|----|-----------|-------|------|----|----|------------|------|------|-------|----|-----------|------|------|-------|---|----------|-------|------|--|------|--------|--------|------|--|--|--|--|----|----|---|------------|-------|------|----|----|------------|-------|------|----|----|-----------|-------|------|----|----|------------|------|------|-------|----|------------|------|------|-------|---|-----------|-------|------|--|--|------|--------|--------|------|--|--|--|--|----|----|---|----|-------|-------|-----|----|----|-------|-------|-----|----|----|-------|-------|-----|----|-----|--------|-------|--------|----|----|--------|-------|--------|------|--------|--------|------|--|--|--|--|----|----|---|-----|-------|-------|-----|----|-----|-------|-------|-----|----|----|-------|-------|-----|----|-----|--------|-------|--------|----|-----|--------|-------|--------|---|
| 7 | 第9章 | <p>第9章的9.1, 静电放电抗扰度试验等级:</p> <p>——对于接触放电, EUT 应能通过$\pm 2\text{kV}$ 和$\pm 4\text{kV}$ 的试验等级;</p> <p>——对于空气放电, EUT 应能通过$\pm 2\text{kV}$、$\pm 4\text{kV}$ 和$\pm 8\text{kV}$ 的试验等级。</p> | <p>更改了静电放电抗扰度试验电压的表述:</p> <p>——对于接触放电, 试验电压为$\pm 2\text{ kV}$ 和$\pm 4\text{ kV}$;</p> <p>——对于空气放电, 试验电压为$\pm 2\text{ kV}$、$\pm 4\text{ kV}$ 和$\pm 8\text{ kV}$;</p> <p>——对于间接放电, 试验电压为$\pm 2\text{ kV}$ 和$\pm 4\text{ kV}$。</p> | <p>否</p> <p>新版本对间接放电的要求不是提出的新要求, 而是对原标准内容的细化</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 第9章 | <p>第9章的9.8, 瞬变和浪涌抗扰度试验等级:</p> <p>表16 12V系统车载UE试验等级</p> <table border="1"> <thead> <tr> <th>试验脉冲</th><th>试验等级 V</th><th>脉冲持续时间</th><th colspan="2">重复时间</th></tr> <tr> <th></th><th></th><th></th><th>最小</th><th>最大</th></tr> </thead> <tbody> <tr> <td>1</td><td>~ 75</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>2a</td><td>~ 50</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>2b</td><td>~ 10</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>3a</td><td>~ 110</td><td>20分钟</td><td>90ms</td><td>100ms</td></tr> <tr> <td>3b</td><td>~ 75</td><td>20分钟</td><td>90ms</td><td>100ms</td></tr> <tr> <td>4</td><td>~ 8</td><td>10个脉冲</td><td colspan="2">2min</td></tr> </tbody> </table> <p>表17 24V系统车载UE试验等级</p> <table border="1"> <thead> <tr> <th>试验脉冲</th><th>试验等级 V</th><th>脉冲持续时间</th><th colspan="2">重复时间</th></tr> <tr> <th></th><th></th><th></th><th>最小</th><th>最大</th></tr> </thead> <tbody> <tr> <td>1</td><td>~ 150</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>2a</td><td>~ 100</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>2b</td><td>~ 50</td><td>10个脉冲</td><td>0.5s</td><td>5s</td></tr> <tr> <td>3a</td><td>~ 180</td><td>20分钟</td><td>90ms</td><td>100ms</td></tr> <tr> <td>3b</td><td>~ 150</td><td>20分钟</td><td>90ms</td><td>100ms</td></tr> <tr> <td>4</td><td>~ 12</td><td>10个脉冲</td><td colspan="2">2min</td></tr> </tbody> </table> | 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | 最小 | 最大 | 1 | ~ 75 | 10个脉冲 | 0.5s | 5s | 2a | ~ 50 | 10个脉冲 | 0.5s | 5s | 2b | ~ 10 | 10个脉冲 | 0.5s | 5s | 3a | ~ 110 | 20分钟 | 90ms | 100ms | 3b | ~ 75 | 20分钟 | 90ms | 100ms | 4 | ~ 8 | 10个脉冲 | 2min | | 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | 最小 | 最大 | 1 | ~ 150 | 10个脉冲 | 0.5s | 5s | 2a | ~ 100 | 10个脉冲 | 0.5s | 5s | 2b | ~ 50 | 10个脉冲 | 0.5s | 5s | 3a | ~ 180 | 20分钟 | 90ms | 100ms | 3b | ~ 150 | 20分钟 | 90ms | 100ms | 4 | ~ 12 | 10个脉冲 | 2min | | <p>试验等级中, 删除脉冲4</p> <p>表18 12V系统车载UE试验等级</p> <table border="1"> <thead> <tr> <th>试验脉冲</th><th>试验等级 V</th><th>脉冲持续时间</th><th colspan="2">重复时间</th></tr> <tr> <th></th><th></th><th></th><th>最小</th><th>最大</th></tr> </thead> <tbody> <tr> <td>1</td><td>75</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>2a</td><td>50</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>2b</td><td>10</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>3a</td><td>110</td><td>20 min</td><td>90 ms</td><td>100 ms</td></tr> <tr> <td>3b</td><td>75</td><td>20 min</td><td>90 ms</td><td>100 ms</td></tr> </tbody> </table> <p>表19 24V系统车载UE试验等级</p> <table border="1"> <thead> <tr> <th>试验脉冲</th><th>试验等级 V</th><th>脉冲持续时间</th><th colspan="2">重复时间</th></tr> <tr> <th></th><th></th><th></th><th>最小</th><th>最大</th></tr> </thead> <tbody> <tr> <td>1</td><td>150</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>2a</td><td>100</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>2b</td><td>50</td><td>10个脉冲</td><td>0.5 s</td><td>5 s</td></tr> <tr> <td>3a</td><td>180</td><td>20 min</td><td>90 ms</td><td>100 ms</td></tr> <tr> <td>3b</td><td>150</td><td>20 min</td><td>90 ms</td><td>100 ms</td></tr> </tbody> </table> | 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | 最小 | 最大 | 1 | 75 | 10个脉冲 | 0.5 s | 5 s | 2a | 50 | 10个脉冲 | 0.5 s | 5 s | 2b | 10 | 10个脉冲 | 0.5 s | 5 s | 3a | 110 | 20 min | 90 ms | 100 ms | 3b | 75 | 20 min | 90 ms | 100 ms | 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | 最小 | 最大 | 1 | 150 | 10个脉冲 | 0.5 s | 5 s | 2a | 100 | 10个脉冲 | 0.5 s | 5 s | 2b | 50 | 10个脉冲 | 0.5 s | 5 s | 3a | 180 | 20 min | 90 ms | 100 ms | 3b | 150 | 20 min | 90 ms | 100 ms | 否 |
| 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 最小 | 最大 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ~ 75 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a | ~ 50 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b | ~ 10 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a | ~ 110 | 20分钟 | 90ms | 100ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b | ~ 75 | 20分钟 | 90ms | 100ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | ~ 8 | 10个脉冲 | 2min | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 最小 | 最大 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ~ 150 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a | ~ 100 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b | ~ 50 | 10个脉冲 | 0.5s | 5s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a | ~ 180 | 20分钟 | 90ms | 100ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b | ~ 150 | 20分钟 | 90ms | 100ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | ~ 12 | 10个脉冲 | 2min | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 最小 | 最大 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 75 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a | 50 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b | 10 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a | 110 | 20 min | 90 ms | 100 ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b | 75 | 20 min | 90 ms | 100 ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 试验脉冲 | 试验等级 V | 脉冲持续时间 | 重复时间 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 最小 | 最大 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 150 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a | 100 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b | 50 | 10个脉冲 | 0.5 s | 5 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a | 180 | 20 min | 90 ms | 100 ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b | 150 | 20 min | 90 ms | 100 ms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |