**USB_DEVTRSAC**

**Verification table**

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| № | Testcase description | Testcase in testbench |
|---|---|---|
| 1 | POWERED state.<br>All EPs is not active at any USB transactions. Transaction interface has no any activity. | tcase_powered |
| 2 | DEFAULT state.<br>  - Detecting USB reset.<br>  - EP0 is available through Control transfers.<br>  - EP15-1 is not active at any USB transactions. | tcase_default |
| 3 | ADDRESSED state.<br>  - Processing SetAddress() request. Applying new address.<br>  - EP0 is available through Control transfers.<br>  - EP15-1 is not active at any USB transactions.<br>  - EP15-0 is not respond at transaction with previous address.<br>  - Transition to DEFAULT state with SetAddress(0).<br>  - Transition to DEFAULT state with USB reset. | tcase_addressed |
| 4 | CONFIGURED state.<br>  - Processing SetConfiguration() request.<br>  - All EP15-0 is available through transactions.<br>  - Transition to ADDRESSED state with SetConfiguration(0).<br>  - Transition to DEFAULT state with USB reset. | tcase_configured |
| 5 | SUSPENDED state.<br>  - POWERED to SUSPENDED and back. Wakeup signaling is not available in POWERED state.<br>  - DEFAULT to SUSPENDED and back. Wakeup signaling is not available in DEFAULT state.<br>  - ADDRESSED to SUSPENDED and back. Wakeup signaling is not available in ADDRESSED state.<br>  - CONFIGURED to SUSPENDED and back. Wakeup signaling is not available in CONFIGURED state.<br>  - Remote wakeup signaling. | tcase_suspended |
| 6 | Bulk/Interrupt transfers.<br>  - BulkIn with packet size=64 bytes for full-speed and packet size=8 bytes for low-speed.<br>  - BulkIn with packet size<64 bytes for full-speed and packet size<8 bytes for low-speed.<br>  - BulkIn with NAK.<br>  - BulkIn with STALL.<br>  - BulkIn host don't reply by handshake.<br>  - BulkOut with packet size=64 bytes for full-speed and packet size=8 bytes for low-speed.<br>  - BulkOut with packet size<64 bytes for full-speed and packet size<8 bytes for low-speed.<br>  - BulkOut with NAK.<br>  - BulkOut with STALL.<br>  - BulkOut host send data with previous DATA PID. | tcase_bulkint |

| № | Testcase description | Testcase in testbench |
|---|---|---|
| | - InterruptIn with don't çare about ACK (always toggle bit).<br>- Resetting toggle bits with SetConfiguration().<br>- Not resetting toggle bits with failed SetConfiguration().<br>- Resetting toggle bits with ClearFeature(EP_HALT).<br>- Not resetting toggle bits with failed SetConfiguration(EP_HALT).<br>- Resetting toggle bits with ep_enable inputs. | |
| 7 | Isochronous transfers.<br>- IsochronousIn with packet size=64 bytes for full-speed and packet size=8 bytes for low-speed.<br>- IsochronousIn with packet size<64 bytes for full-speed and packet size<8 bytes for low-speed.<br>- IsochronousOut with packet size=64 bytes for full-speed and packet size=8 bytes for low-speed.<br>- IsochronousOut with packet size<64 bytes for full-speed and packet size<8 bytes for low-speed.<br>- SOF receiving | tcase_trfer_isoch |
| 8 | Control transfers.<br>- ControlIn interleaved BulkIn.<br>- ControlIn interleaved BulkOut.<br>- ControlIn interrupted by ControlIn.<br>- ControlIn with multiple Status stage.<br>- ControlOut interleaved BulkIn.<br>- ControlOut interleaved BulkOut.<br>- ControlIn interrupted by ControlOut.<br>- ControlOut with multiple Status stage. | tcase_trfer_control |
| 9 | Bit stream receiving.<br>- Consecutive jitter equal +20ns for full-speed and +141ns for low-speed. DUT must receive packet with no error.<br>- Consecutive jitter equal -20ns for full-speed and -141ns for low-speed. DUT must receive packet with no error.<br>- Invalid value of two first SYNC bits. DUT must receive packet with no error.<br>- Invalid duration (up 90% shrinking) of two first SYNC bits. DUT must receive packet with no error.<br>- Error PID. DUT must ignore packet.<br>- Error CRC5, CRC16. DUT must ignore packet.<br>- Packet with stuffed last bit. DUT must receive/send packet with no error.<br>- Packet with lengthened last bit by as mach as 75ns for full-speed and 260ns for low-speed. DUT must receive packet with no error. | tcase_bitstream |
| 10 | Reply delay.<br>Checking that is no error when DUT receive reply with 35 cycles delay on transaction interface. | tcase_reply_delay |