

Selected Certification - PD3

SI No	Applicable MOI
1	Power Delivery 3.1 Tests
2	USB-C Functional Tests

Test Summary - Overall

MOI Name	Total	PASS	FAIL	INCOMPLETE	NOT_SELECTED	OTHERS
PD_Merged	128	3	1	0	124	0

PD_Merged Result

SI No	Test ID	Test Name	Test Result
1	TEST.PD.PROT.SNK.3	TEST.PD.PROT.SNK.3 SinkWaitCapTimer Deadline	PASS
		COMMON.PROC.BU.2	PASS
		COMMON.PROC.BU.2 - REVISION_2_0 Rev2Snk >>SourceCap Packet14	PASS
		UUT should respond with request - - COMMON.PROC.BU.2#1 >>Request Packet28	PASS
		COMMON.PROC.BU.2 - REVISION_3_0 Rev3ChkdSnk >>SourceCap Packet62	PASS
		UUT should respond with request - - COMMON.PROC.BU.2#1 >>Request Packet73	PASS
		Rev2Snk	PASS

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
		Hard_Reset check - TEST.PD.PROT.SNK.3#1 >>Tester sent Hard_Reset message Packet 37 Tester sent SourceCap message Packet 39 Tester transmits SourceCap within tTypeCSinkWaitCap min (0,31) S	PASS
		Request message check - TEST.PD.PROT.SNK.3#2 >>PASS : UUT sent Request message at protocol index 42	PASS
		Rev3ChkdSnk	PASS
		Hard_Reset check - TEST.PD.PROT.SNK.3#1 >>Tester sent Hard_Reset message Packet 87 Tester sent SourceCap message Packet 90 Tester transmits SourceCap within tTypeCSinkWaitCap min (0,31) S Tester Rp set to SinkTxNG(1.5A)	PASS
		Request message check - TEST.PD.PROT.SNK.3#2 >>PASS : UUT sent Request message at protocol index 95	PASS
2	TEST.PD.PROT.SNK.4	TEST.PD.PROT.SNK.4 SinkWaitCapTimer Timeout	FAIL
		COMMON.PROC.BU.2	PASS
		COMMON.PROC.BU.2 - REVISION_2_0 Rev2Snk >>SourceCap Packet14	PASS
		UUT should respond with request - - COMMON.PROC.BU.2#1 >>Request Packet28	PASS
		COMMON.PROC.BU.2 - REVISION_3_0 Rev3ChkdSnk >>SourceCap Packet53	PASS
		UUT should respond with request - - COMMON.PROC.BU.2#1 >>Request Packet64	PASS
		Rev2Snk	FAIL
		SinkWaitCapTimer Timeout - TEST.PD.PROT.SNK.4#1 >>UUT failed to send HardReset message	FAIL
		Rev3ChkdSnk	FAIL
		SinkWaitCapTimer Timeout - TEST.PD.PROT.SNK.4#1 >>UUT failed to send HardReset message	FAIL

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
3	2.1	Common Checks	PASS
		Common_Check_PD_1_Check_Preamble - COMMON.CHECK.PD.1	PASS
		Check Preamble sequence and count - COMMON.CHECK.PD.1#1	PASS
		Common_Check_PD_2_Check_Message_Header - COMMON.CHECK.PD.2	PASS
		Check message header fields - COMMON.CHECK.PD.2#1	PASS
		Common_Check_PD_3_Check_GoodCRC - COMMON.CHECK.PD.3	PASS
		Check goodCRC response time - COMMON.CHECK.PD.3#1	PASS
		Check goodCRC message header fields - COMMON.CHECK.PD.3#2	PASS
		Common_Check_PD_4_Check_Atomic_Message_Sequence - COMMON.CHECK.PD.4	PASS
		Check Atomic message sequence - COMMON.CHECK.PD.4#1	PASS
		Common_Check_PD_5_Check_Unexpected_Messages_And_Signals - COMMON.CHECK.PD.5	PASS
		Unexpected Soft reset - COMMON.CHECK.PD.5#1	PASS
		Unexpected Hard Reset or a cable reset - COMMON.CHECK.PD.5#2	PASS
		Unexpected messages - COMMON.CHECK.PD.5#4	PASS
		Common_Check_PD_6_Control_Message - COMMON.CHECK.PD.6	PASS
		Number of data objects in header should be zero - COMMON.CHECK.PD.6#1	PASS
		Common_Check_PD_7_Source_Capability_Message - COMMON.CHECK.PD.7	PASS
		Check Source Capability message - COMMON.CHECK.PD.7#1	PASS
		Check Source Capability message - COMMON.CHECK.PD.7#2	PASS
		Check Data Objects field - COMMON.CHECK.PD.7#3	PASS
		Check First PDO - COMMON.CHECK.PD.7#4	PASS
		Check Fixed PDO - COMMON.CHECK.PD.7#5	PASS
		Check PPS Validation - COMMON.CHECK.PD.7#6	PASS
		Check Power Rules - COMMON.CHECK.PD.7#7	PASS
		Check PDO Consistency - COMMON.CHECK.PD.7#8	PASS
		Check PDO Sequence - COMMON.CHECK.PD.7#9	PASS
		Check Fixed PDO Voltage - COMMON.CHECK.PD.7#10	PASS
		Check Variable PDO Voltage - COMMON.CHECK.PD.7#11	PASS
		Check Battery PDO Voltage - COMMON.CHECK.PD.7#12	PASS
		Check AVS Validation - COMMON.CHECK.PD.7#13	PASS

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
		Common_Check_PD_8_Request_Message - COMMON.CHECK.PD.8	PASS
		Request messages fields check - COMMON.CHECK.PD.8#1	PASS
		Common_Check_PD_9_Structured_VDM - COMMON.CHECK.PD.9	PASS
		Structured VDM header field check - COMMON.CHECK.PD.9#1	PASS
		Common_Check_PD_10_Extended_Message_Header - COMMON.CHECK.PD.10	PASS
		Check Extended Message Header - COMMON.CHECK.PD.10#1	PASS
		Common_Check_PD_11_Source_Capability_Extended_Message - COMMON.CHECK.PD.11	PASS
		Source capabilities extended message fields check - COMMON.CHECK.PD.11#1	PASS
		Common_Check_PD_12_Check_Sink_Capabilities - COMMON.CHECK.PD.12	PASS
		Sink capabilities fields check - COMMON.CHECK.PD.12#1	PASS
		Common_Check_PD_13_Check_Correct_Use_of_Rp - COMMON.CHECK.PD.13	PASS
		Rp Level Validation - COMMON.CHECK.PD.13#1	PASS
		Common_Check_PD_14_Check_Hard_Reset - COMMON.CHECK.PD.14	PASS
		Check Hard_Reset basic timing - COMMON.CHECK.PD.14#1	PASS
		Common_Check_PD_15_Check_Sink_Capabilities_Extended_Message - COMMON.CHECK.PD.15	PASS
		Sink capabilities extended message fields check - COMMON.CHECK.PD.15#1	PASS
		COMMON_CHECK_PD3_1_Check_EPR_Request_Message - COMMON.CHECK.PD3.1	PASS
		EPR_Request messages fields check - COMMON.CHECK.PD3.1#1	PASS
		COMMON_CHECK_PD3_2_Check_EPR_Mode_Message - COMMON.CHECK.PD3.2	PASS
		EPR_Mode messages fields check - COMMON.CHECK.PD3.2#1	PASS
		COMMON_CHECK_PD3_3_Check_EPR_Source_Capabilities_Message - COMMON.CHECK.PD3.3	PASS
		VIF field EPR_Supported_As_Src check - COMMON.CHECK.PD3.3#1	PASS
		First Fixed PDO consistency check - COMMON.CHECK.PD3.3#2	PASS
		Fixed PDO check - COMMON.CHECK.PD3.3#3	PASS

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
		Programmable Power Supply APDO check - COMMON.CHECK.PD3.3#4	PASS
		EPR PDOs power rules check - COMMON.CHECK.PD3.3#5	PASS
		EPR PDOs consistency check - COMMON.CHECK.PD3.3#6	PASS
		Extended field check - COMMON.CHECK.PD3.3#8	PASS
		Data size extended header check - COMMON.CHECK.PD3.3#9	PASS
		SPR PDO check - COMMON.CHECK.PD3.3#10	PASS
		COMMON_CHECK_PD3_4_Check_EPR_Sink_Capabilities_Message - COMMON.CHECK.PD3.4	PASS
		EPR Sink Capabilities fields check - COMMON.CHECK.PD3.4#1	PASS
4	2.2	Common Procedures	PASS
		COMMON_PROC_PD_2_UUT_Sent_Get_Source_Cap - COMMON.PROC.PD.2	PASS
		Validate Get source capabilities message initiated by DUT - COMMON.PROC.PD.2#1	PASS
		DUT's Request message validation - COMMON.PROC.PD.2#2	PASS
		COMMON_PROC_PD_3_UUT_Sent_Get_Sink_Cap - COMMON.PROC.PD.3	PASS
		Validate Get sink cap message initiated by DUT - COMMON.PROC.PD.3#1	PASS
		COMMON_PROC_PD_4_UUT_Sent_Ping - COMMON.PROC.PD.4	PASS
		Ping message initiated by DUT - COMMON.PROC.PD.4#1	PASS
		COMMON_PROC_PD_5_UUT_Sent_PR_Swap - COMMON.PROC.PD.5	PASS
		PR_Swap valid condition check - COMMON.PROC.PD.5#1	PASS
		PR_Swap init and VIF field value comparison - COMMON.PROC.PD.5#2	PASS
		PR_Swap init and VIF field value comparison - COMMON.PROC.PD.5#3	PASS
		COMMON_PROC_PD_6_UUT_Sent_VCONN_Swap - COMMON.PROC.PD.6	PASS
		Vconn_Swap valid condition check - Tester Vconn Source - COMMON.PROC.PD.6#1	PASS
		Vconn_Swap init and VIF field value comparison - COMMON.PROC.PD.6#2	PASS
		tVCONNSourceOn Timer Validation - COMMON.PROC.PD.6#3	PASS
		Vconn_Swap valid condition check - DUT Vconn Source - COMMON.PROC.PD.6#4	PASS
		COMMON_PROC_PD_7_UUT_Sent_Discover_Identity_Request - COMMON.PROC.PD.7	PASS

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
		Validate Discover ID request message initiated by DUT - COMMON.PROC.PD.7#1	PASS
		Structured VDM Message Header check - COMMON.PROC.PD.7#2	PASS
		Tester's VDM response check - COMMON.PROC.PD.7#3	PASS
		COMMON_PROC_PD_8_UUT_Sent_Discover_SVIDs_Request - COMMON.PROC.PD.8	PASS
		Validate Discover ID request message initiated by DUT - COMMON.PROC.PD.8#1	PASS
		Structured VDM Message Header check - COMMON.PROC.PD.8#2	PASS
		Tester's VDM response check - COMMON.PROC.PD.8#3	PASS
		COMMON_PROC_PD_9_UUT_Sent_Attention - COMMON.PROC.PD.9	PASS
		Validate attention request message initiated by DUT - COMMON.PROC.PD.9#1	PASS
		Structured VDM message header check - COMMON.PROC.PD.9#2	PASS
		COMMON_PROC_PD_10_UUT_Sent_Request - COMMON.PROC.PD.10	PASS
		Validate request message initiated by DUT - COMMON.PROC.PD.10#1	PASS
		COMMON_PROC_PD_11_UUT_Sent_Source_Capabilities - COMMON.PROC.PD.11	PASS
		Validate Source capabilities message initiated by DUT - COMMON.PROC.PD.11#1	PASS
		DUT should respond with Accept - COMMON.PROC.PD.11#2	PASS
		DUT should send PS_RDY - COMMON.PROC.PD.11#3	PASS
		Wait Message - COMMON.PROC.PD.11#4	PASS
		COMMON_PROC_PD_12_UUT_Sent_DR_Swap - COMMON.PROC.PD.12	PASS
		Validate DR_Swap message initiated by DUT - COMMON.PROC.PD.12#1	PASS
		COMMON_PROC_PD_17_Tester_Sent_Vconn_swap_message - COMMON.PROC.PD.17	PASS
		VCONN present check - COMMON.PROC.PD.17#1	PASS
		PS_RDY is missing - COMMON.PROC.PD.17#2	PASS
		VCONN present check - COMMON.PROC.PD.17#3	PASS
		tVONNSourceOff timer check - COMMON.PROC.PD.17#4	PASS
		COMMON_PROC_PD3_1_Sink_Start_an_AMS - COMMON.PROC.PD3.1	PASS

GRL-USB-PD Compliance Test Solution

SI No	Test ID	Test Name	Test Result
		Sink Start AMS - COMMON.PROC.PD3.1#1	PASS
		COMMON_PROC_PD3_2_UUT_Sent_EPR_Source_Cap_message - COMMON.PROC.PD3.2	PASS
		Validate EPR_Source_Capabilities message initiated by UUT - COMMON.PROC.PD3.2#1	PASS
		UUT should respond with Accept - COMMON.PROC.PD3.2#2	PASS
		UUT should send PS_RDY - COMMON.PROC.PD3.2#3	PASS
		COMMON_PROC_PD3_3_UUT_Sent_EPR_Get_Source_Cap - COMMON.PROC.PD3.3	PASS
		Validate EPR Get Source Capabilities message initiated by DUT - COMMON.PROC.PD3.3#1	PASS
		DUT's EPR Request message validation - COMMON.PROC.PD3.3#2	PASS
		Requested Voltage and PDP - COMMON.PROC.PD3.3#3	PASS
		COMMON_PROC_PD3_4_UUT_Sent_EPR_Request - COMMON.PROC.PD3.4	PASS
		Validate EPR Request message initiated by DUT - COMMON.PROC.PD.3.4#1	PASS
		COMMON_PROC_PD3_5_Tester_Sent_EPR_Mode_Enter - COMMON.PROC.PD3.5	PASS
		Validate EPR Enter Enter fail initiated by DUT - COMMON.PROC.PD3.5#1	PASS
		VIF Field Has Invariant PDOs check - COMMON.PROC.PD3.5#2	PASS
		UUT Request message check - COMMON.PROC.PD3.5#3	PASS
		UUT sends a wait message - COMMON.PROC.PD3.5#4	PASS
		UUT sends PSRdy Message - COMMON.PROC.PD3.5#5	PASS
		VIF specified Source Capabilities - COMMON.PROC.PD3.5#6	PASS
		Source Cap message - COMMON.PROC.PD3.5#7	PASS
		UUT EPR_Mode_Enter_Failed - COMMON.PROC.PD3.5#8	PASS
		UUT Not_Supported Message - COMMON.PROC.PD3.5#9	PASS
		UUT EPR_Mode_Enter_Acknowledged - COMMON.PROC.PD3.5#10	PASS
		UUT VCONN_Swap Message - COMMON.PROC.PD3.5#11	PASS
		UUT EPR_Source_Capabilities Message - COMMON.PROC.PD3.5#12	PASS
		UUT EPR Contract - COMMON.PROC.PD3.5#13	PASS

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SI No	Test ID	Test Name	Test Result
		COMMON_PROC_PD3_6_UUT_Sent_EPR_Mode_Enter - COMMON.PROC.PD3.6	PASS
		Validate EPR_Mode_Enter initiated by DUT - COMMON.PROC.PD3.6#1	PASS
		Validate EPR_Mode_Enter response - COMMON.PROC.PD3.6#2	PASS
		Tester sends a Vconn_Swap message - COMMON.PROC.PD3.6#3	PASS
		Validate EPR_Mode_Enter failed message - COMMON.PROC.PD3.6#4	PASS
		Validate SOP' Discover_Id and EPR_Mode_Enter Succeeded message - COMMON.PROC.PD3.6#5	PASS
		EPR_Source_Cap message - COMMON.PROC.PD3.6#6	PASS
		UUT establishes EPR contract - COMMON.PROC.PD3.6#7	PASS
		COMMON_PROC_PD3_7_Tester_Sends_EPR_KeepAlive_Message - COMMON.PROC.PD3.7	PASS
		Validate EPR_KeepAlive response message initiated by DUT - COMMON.PROC.PD3.7#1	PASS

