USB-IF USB 2.0 Certification
Mandatory Test Matrix

USB Peripherals

Category	Upstream									Function/Interface			
	Inrush	Back-voltage	LSSQ	FSSQ	HSSQ	Electrical Protocols	Receiver Sensitivity	BC v1.2 Check PET Test	Battery Charging v1.2	Gold-tree Interoperability	Avg Current Draw	USB20CV	USB30CV
Low-speed Peripheral	✔	✔	✔					✔	①	✔	✔	✔	✔
Full-speed Peripheral	✔	✔		✔				✔	①	✔	✔	✔	✔
High-speed Peripheral	✔	✔		✔	✔	✔	✔	✔	①	✔	✔	✔	✔
SuperSpeed Peripheral	✔	✔		✔	✔	✔	✔	✔	①	✔	✔	✔	✔

USB Hubs

Category	Upstream								Downstream								Function/Interface			
	Inrush	Back-voltage	FSSQ Upstream	HSSQ Upstream	Electrical Protocols	Receiver Sensitivity	BC v1.2 Check PET Test	Battery Charging v1.2	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Drop	Droop	USBHTT	BC v1.2 Check PET Test	Battery Charging v1.2	Gold-tree Interoperability	Avg Current Draw	USB20CV	USB30CV
High-speed Hub	✔	✔	✔	✔	✔	✔	✔	①	✔	✔	✔	✔	✔	✔	✔	①	✔	✔	✔	✔
Full-speed Hub (prohibited)																				

Compound USB Devices

Category	Upstream								Each Exposed Downstream Port								Function/Interface			
	Inrush	Back-voltage	FSSQ Upstream	HSSQ Upstream	Electrical Protocols	Receiver Sensitivity	BC v1.2 Check PET Test	Battery Charging v1.2	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Drop	Droop	USBHTT	BC v1.2 Check PET Test	Battery Charging v1.2	Gold-tree Interoperability	Avg Current Draw	USB20CV	USB30CV
High-speed Hub	✔	✔	✔	✔	✔	✔	✔	①	✔	✔	✔	✔	✔	✔	✔	①	✔	✔	✔	✔
Full-speed Hub	✔	✔	✔			✔	✔	①	✔	✔		✔	✔		✔	①	✔	✔	✔	✔

Systems (standard hosts)

Category	Each Exposed Downstream Port								
	Gold-tree Interoperability	Drop	Droop	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Electrical Protocols	BC v1.2 Check PET Test	Battery Charging v1.2
High-speed host	✔	✔	✔	✔	✔	✔	✔	✔	①
Full-speed host (prohibited)									

Embedded USB Hosts

Category	Each Exposed Downstream Port									
	EH Interoperability	Drop	Droop	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Electrical Protocols	PET EH Test Scripts	BCv1.2 Check PET Test	Battery Charging v1.2
High-speed host	✔	✔	②	①	✔	✔	✔	✔	✔	①
Full-speed host	✔	✔	②	①	✔			✔	✔	①
Low-speed host	✔	✔	②	✔			✔	✔		①

Dual Role USB Devices

Category	Function/Interface			Peripheral									Host								
	Gold-tree Interoperability	Avg Current Draw	USB20CV USB30CV	Inrush	Back-voltage	LSSQ Upstream	FSSQ Upstream	HSSQ Upstream	Electrical Protocols	Receiver Sensitivity	BCv1.2 Check PET Test	Battery Charging v1.2	TPL Interoperability	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Electrical Protocols	Drop	Droop	BCv1.2 Check PET Test	Battery Charging v1.2
Low-speed peripheral/Low-speed host	✔	✔	✔	✔	✔	✔					✔	①	✔	✔				✔	②	✔	①
Full-speed peripheral/Low-speed host	✔	✔	✔	✔	✔		✔				✔	①	✔	✔				✔	②	✔	①
High-speed peripheral/Low-speed host	✔	✔	✔	✔	✔		✔	✔	✔		✔	①	✔	✔				✔	②	✔	①
Low-speed peripheral/Full-speed host	✔	✔	✔	✔	✔	✔					✔	①	✔	①	✔			✔	②	✔	①
Full-speed peripheral/Full-speed host	✔	✔	✔	✔	✔		✔				✔	①	✔	①	✔			✔	②	✔	①
High-speed peripheral/Full-speed host	✔	✔	✔	✔	✔		✔	✔	✔		✔	①	✔	①	✔			✔	②	✔	①
Low-speed peripheral/High-speed host	✔	✔	✔	✔	✔	✔					✔	①	✔	①	✔	✔	✔	✔	②	✔	①
Full-speed peripheral/High-speed host	✔	✔	✔	✔	✔		✔				✔	①	✔	①	✔	✔	✔	✔	②	✔	①
High-speed peripheral/High-speed host	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	①	✔	①	✔	✔	✔	✔	②	✔	①

USB OTG

Category	Function/Interface			Peripheral						Host						Host and Peripheral					
	Gold-tree Interoperability	Avg Current Draw	USB20CV USB30CV	Inrush	Back-voltage	FSSQ Upstream	HSSQ Upstream	Electrical Protocols	Receiver Sensitivity	LSSQ Downstream	FSSQ Downstream	HSSQ Downstream	Electrical Protocols	Drop	TPL Interoperability	OET	FS OPT	HS OPT	BCv1.2 Check PET Test	Battery Charging v1.2	PET OTG Test Scripts
Full-speed peripheral/Full-speed OTG host	✔	✔	✔	✔	✔	✔				①	✔			✔	✔	✔	✔		✔	①	✔
High-speed peripheral/Full-speed OTG host	✔	✔	✔	✔	✔	✔	✔	✔	✔	①	✔	✔		✔	✔	✔	✔	✔	✔	①	✔
Full-speed peripheral/High-speed OTG host	✔	✔	✔	✔	✔	✔				①	✔		✔	✔	✔	✔	✔	✔	✔	①	✔
High-speed peripheral/High-speed OTG host	✔	✔	✔	✔	✔	✔	✔	✔	✔	①	✔	✔	✔	✔	✔	✔	✔	✔	✔	①	✔
Low-speed peripheral or Low-speed only host (prohibited)																					

① performed if supported

② performed if multiple downstream ports exist