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## Test Procedure for the FUSB15201DUAL60WGEVB Evaluation Board

**Required Equipment:** 

- Programmed FUSB15201DUAL60WGEVB
- 14V DC power supply to power the FUSB15201DUAL60WGEVB
- Cables with tinned leads to connect DC supply to the FUSB15201DUAL60WGEVB
- FUSB302BGEVB and GUI
- USB Type-C<sup>TM</sup> to USB Type-C<sup>TM</sup> cable
- 1. Connect the tinned cables from the 14V DC power supply to J4 of the FUSB15201DUAL60WGEVB.



Figure 1 - Power the FUSB15201DUAL60WGEVB

2. Connect the FUSB302BGEVB to a PC using the USB Type-A to USB micro-B cable.



Figure 2 – FUSB302BGEVB connected to PC

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- 3. Start the FUSB302BGEVB GUI on the PC being used.
- 4. Attach the FUSB302BGEVB to one of the 2 USB Type-C ports on the FUSB15201DUAL60WGEVB using the USB Type-C to Type-C cable as shown.



Figure 3 – FUSB302BGEVB attached to FUSB15201DUAL60WGEVB

5. Verify that the PD Control tab of the FUSB302 GUI shows the Current Contract as a Sink and the Capabilities Advertised show 4 FPDOs supporting 60W.

USB 302 USB Type-C / PD		Port Controller		ON Semiconductor*	
neral USB PD Control State Lo	ogs Capa	abilities Register Map	Script VDM		
SB PD Message History			USB PD State		
				Send Har	d Reset
Attach					
> Receive Data Src Caps	Sop		USB PD Contract	_	
> Send GoodCRC	Sop		Current Contract	Sink	FPDO 5 V, 180 mA
Send Data Request	Sop				
> Receive GoodCRC	Sop		USB PD Control		
> Receive Accept	Sop		Ping	~	Send Control Message
Send GoodCRC	Sop		i ing		Schu conta on heasage
> Receive PS Rdy	Sop		- Canabilities Advertis	ed	
Send GoodCRC	Sop				
> Receive Get Sink Cap	Sop		FPDO 5 V, 3 A	Give	Back USB Com
Send GoodCRC	Sop		FPDO 9 V, 3 A	Mism	atch Allow Suspend
Send Data Sink Caps	Sop		FPDO 15 V, 3 A	Orenti	
> Receive GoodCRC	Sop		FPDO 20 V, 3 A	Operaur	ig current 0.100 V A
> Receive	Sop			Maximun	n Current 0.10 🗘 A
Send GoodCRC	Sop				
Send Not Supported	Sop				
> Receive GoodCRC	Sop				
> Receive Data Vendor Defined	Sop	Discover Identity			
Send GoodCRC	Sop				
Send Data Vendor Defined	Sop	Discover Identity			
> Receive GoodCRC	Sop				
				Request Sele	cted Object
C		>			
		Class History			

Figure 4 – FPDOs shown on the PD Control tab

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6. If the Current Contract indicates a Source contract and only a 5V FPDO is listed as shown below, the EVB needs to be flashed with a programming file. Please follow the procedure for flashing the EVB and then follow these steps again.

028305		USB 1	ype-C / PD	Port Controller	ON Semiconductor <sup>®</sup>		
ner	al USB PD Control	State Logs Capabilities	Register Map	Script VDM			
SB	PD Message History			USB PD State			
_					Cond Used Denot		
	A.S. 1				Sena Hara Reset		
	Attach	c .	_	USB PD Contract			
2	Send Data Src Caps	sop					
0	Send Data Src Caps	Sop	_	Current Contract	Source FPDO 5 V, 180 mA		
(	Send Data Src Caps	Sop		USB PD Control			
5	Send Data Src Caps	Sop	_				
5	Send Data Src Caps	Sop		Ping	<ul> <li>Send Control Message</li> </ul>		
Ś	Send Data Src Caps	Sop					
Ś	Send Data Src Caps	Sop		<ul> <li>Capabilities Advertis</li> </ul>	ed		
\$	Send Data Src Caps	Sop		EPDO 5 V 3 A	GiveBack USB Com		
>	Send Data Src Caps	Sop			Mismatch Allow Suspend		
>	Send Data Src Caps	Sop			Mismatchi Allow Suspend		
>	Send Data Src Caps	Sop			Operating Current 0.100 ≑	А	
>	Send Data Src Caps	Sop			Maximum Ourrent 0 10	Δ	
>	Send Data Src Caps	Sop				^	
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop			Request Selected Object		
>	Send Data Src Caps	Sop					
>	Send Data Src Caps	Sop	~				
è	C113 D141 C11 C111	C	>				
	Get History	Clear Histo	ry				

Figure 5 - PD Control tab for a blank device

- 7. If the FPDOs are listed properly, disconnect the Type-C cable from the FUSB15201DUAL60WGEVB port and re-connect to the other port of the FUSB15201DUAL60WGEVB and verify the FPDOs again.
- 8. If the FPDOs are listed properly for the 2<sup>nd</sup> port, the FUSB15201DUAL60WGEVB is functioning properly and you are finished.

If you encounter any problems, please contact onsemi support for the FUSB15201 product for further help.