



# Clause 169 Discovery Parameters

Michael Paul

[analog.com](http://analog.com)

# Updated Discover Parameters

Updated discovery parameters were presented at the January 2024 802.3da TF meeting

Referenced presentation: [Paul\\_da\\_01\\_20240124.pdf](#)

Updates to Draft 1.0 were not possible, comment cycle was closed.

Move to adopt tables on the following slides...

# Update “Table 169-3–MPSE Discovery Parameters”

Item	Parameter	Symbol	Min	Max	Units	Additional Information
1	Discovery high mark voltage	$V_{\text{Mark}}$	16.1	19.1	V	
2	Discovery low mark voltage	$V_{\text{Discovery}}$	7.4	11.9	V	
3	Discovery current limit	$I_{\text{Discovery\_LIM}}$	50	100	mA	
4	Discovery high event time	$T_{\text{Discovery\_high}}$	7	-	ms	
5	Discovery low event time	$T_{\text{Discovery\_low}}$	20	TBD	ms	MP_NOTE: 18ms for 100nF PD settling + 2ms for measurement stabilization
6	Discovery time	$T_{\text{Discovery}}$	-	TBD	ms	MP_NOTE: finalize after other timing parameters are solid
7	Discovery backoff time	$T_{\text{Backoff}}$	150	-	ms	
8	Mark short circuit threshold	$I_{\text{Mark\_short}}$	3	4	mA	
9	Discovery all MPD present range	$I_{\text{MPD\_present}}$	0.8	40	mA	$I_{\text{Discovery}}-I_{\text{Mark}}$
10	MPD type present	$I_{\text{Type\_present}}$	0.8	40	mA	$I_{\text{Discovery}}-I_{\text{Tare}}$
11	Mark Measurement Delay	$T_{\text{Mark\_measure}}$	5	-	ms	MP_NOTE: 1ms longer than MPD mark stability time
12	Discovery Measurement Delay	$T_{\text{Discover\_measure}}$	6.5	-	ms	Based on Mark-Discover Fall time (10nF Cpd)
13	Discovery Reset	$V_{\text{MPSE\_reset}}$	0	2.8	V	

- ▶ Green values are changes in the table
- ▶ Using LaTeX notation where  $_{\text{xx\_yy}}$  means xx\_yy is subscript

# Add New Table in Subsection "169.4.5 MPD Discovery"

Item	Parameter	Symbol	Min	Max	Units	Additional Information
1	Mark Event Voltage	$V_{\{MPD\_mark\}}$	16	19.1	V	
2	Discovery Event Voltage	$V_{\{MPD\_discover\}}$	6.9	11.9	V	
3	Mark Event Current	$I_{\{MPD\_mark\}}$	100	200	uA	
4	Discovery Event Current	$I_{\{MPD\_discover\}}$	1	2	mA	
5	Discovery reset threshold	$V_{\{MPD\_reset\}}$	2.8	6.9	V	
6	MPD discovery stability time	$T_{\{MPD\_discover\}}$	-	6	ms	MP_NOTE: Data Path and Power Path Settling
7	MPD mark stability time	$T_{\{MPD\_mark\}}$	-	3	ms	MP_NOTE: 6*tau Data Path Settling time

# Thank You