

4. Appendices

4.1 Reported parameters

[Table 3](#) lists the key parameters that are considered indicative of part performance. These parameters are plotted in [Figure 4](#) through [Figure 22](#). All limits are taken from the ISL73033SLHM datasheet.

Table 3. ISL73033SLHM Key Total Dose Parameters ($T_A = 25^\circ\text{C}$)

Figure	Parameter	Symbol	Conditions	Limit (Low)	Limit (High)	Unit
4	Quiescent Supply Current	I_{DDQ}	$V_{IN} = 4.5\text{V}, 13.2\text{V}$	-	2.5	mA
5	Operating Supply Current	I_{DDO}	$V_{IN} = 4.5\text{V}, f_{PWM} = 500\text{kHz}$	-	16	mA
			$V_{IN} = 13.2\text{V}, f_{PWM} = 500\text{kHz}$	-	18	
6	Output Voltage	V_{DRV}	$V_{IN} = 4.5\text{V}$	4.34	4.59	mA
			$V_{IN} = 13.2\text{V}$	4.39	4.71	
7	Current Limit of V_{DRV}	I_{LIM}	$V_{IN} = 4.5\text{V}$	100	185	mA
			$V_{IN} = 13.2\text{V}$	115	210	
8	UVLO Rising Threshold	V_{RDRV}	$V_{IN} = 4.5\text{V}$	3.79	4.12	V
9	UVLO Falling Threshold	V_{FDRV}	$V_{IN} = 4.5\text{V}$	3.50	3.90	V
10	UVLO Threshold Hysteresis	V_{HDRV}	$V_{IN} = 4.5\text{V}$	150	375	mV
11	High Level Threshold	V_{IH}		-	2	V
12	Low Level Threshold	V_{IL}		1	-	V
13	Input Threshold Hysteresis	V_{Ithys}	$V_{IN} = 4.5\text{V}, 13.2\text{V}$	150	400	mV
14	Input Pull-Up/Pull-Down Resistor	$R_{INU/D}$	IN to V_{SS} and INB to V_{DD}	125	275	k Ω
15	Input Leakage Current	I_{ININB}		-1	1	μA
16	Drain to Source Leakage Current	I_{DSS}	$V_{IN} = 0\text{V}, V_{INB} = 0\text{V}, V_{DS} = 8\text{V}, V_{GS} = 0\text{V}$	-	1.1	mA
17	Drain to Source On-Resistance	$r_{DS(ON)}$		-	17	m Ω
18	Source to Drain Forward Voltage	V_{SD}	$V_{IN} = 0\text{V}, I_S = 0.5\text{A}$	-3.2	-0.7	V
19	Turn-ON Propagation Delay	t_{ON}	$V_{IN} = 4.5\text{V}, 13.2\text{V}; I_D = 12.5\text{A}$	32	58	ns
20	Turn-OFF Propagation Delay	t_{OFF}	$V_{IN} = 4.5\text{V}, 13.2\text{V}; I_D = 12.5\text{A}$	32	58	ns
21	Propagation Delay Matching	t_{DM}	$V_{IN} = 4.5\text{V}, 13.2\text{V}$	-8	8	ns
22	Rise Time (10% to 90%)	t_{RISE}	$V_{IN} = 4.5\text{V}, 13.2\text{V}$	-	11.5	ns
	Fall Time (90% to 10%)	t_{FALL}				

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5. Revision History

Rev.	Date	Description
2.0	May 12, 2021	Updated File number to the Renesas formatting. Updated part number from ISL73033SLH to ISL73033SLHM throughout.
1.0	Dec 17, 2020	Initial release