



# GLF Integrated Power

## Integrated Power Load Switch

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	R <sub>ON</sub> Typ. @ V <sub>IN</sub> Max [mΩ]	I <sub>Q</sub> Typ. @ V <sub>IN</sub> Max [nA]	I <sub>SD</sub> Typ. @ V <sub>IN</sub> Max [nA]	Slew Rate Control	Rise Time t <sub>R</sub> Typ. [μs]	EN Active	Output Discharge [Ω]	Reverse Current Blocking	ESD [kV]	Operating Temperature [°C]	Package Type		
Nano-Current Consumed Power Switch	GLF71300	1.1	5.5	2	34	1	19	✓	430	H	NA	NA	HBM : 6 CDM : 2	-40 ~ 85	CSP 0.77 x 0.77 x 0.46		
	GLF71301					1				H	85			-40 ~ 105			
	GLF71301H					1				H	85						
	GLF71302					0.54 uA				L	NA						
	GLF71303					0.54 uA				L	85						
	GLF71306					1				H	NA						
	GLF71308					1				H	85						
	GLF71305	1.5	5.5	2	31	3	22	✓	340	H	85	NA	HBM : 6 CDM : 2	-40 ~ 85	CSP 0.97 x 0.97 x 0.55		
	GLF71307	1				19	9		H	85							
	GLF71310	7				28	335		H	NA							
	GLF71311	0.52 uA				28	335		H	85							
	GLF71313	7				28	335		L	85							
	GLF71315	7				28	335		H	85							
	GLF71511	2				25	7		28	✓	2.2 ms			H		85	
	GLF71320	4				15	3		50	✓	400			H		NA	
	GLF71321	4				15	3		50	✓	400			H		85	
	GLF71325	4				18 @ 3.3 V	1 @ 3.3 V		16 @ 3.3 V	✓	2.2 ms			H		85	
	GLF71301T	2	34	1	19	✓	430	H	85								
	GLF71311T	2	31	7	28	✓	335	H	85								
	GLF1100-T1G7	1.5	5.5	2	82	5	25	✓	2.2 ms	H	85	NA	HBM : 4 CDM : 2	-40 ~ 85	CSP 0.77 x 0.77 x 0.35		
	GLF1110-T1G7					2	54	2	13	✓	600					H	NA
	GLF1111-T1G7					2	54	2	13	✓	600					H	85
	GLF81311	2	6.5	3	41	10	20	✓	2.3 ms	H	560	NA	HBM : 6 CDM : 2	-40 ~ 105	CSP 0.97 x 0.97 x 0.35		
GLF1120H	1.1	5.5	1	52	1	10	✓	380	H	NA	NA	HBM : 3 CDM : 2	-40 ~ 85	CSP 0.67 x 0.67 x 0.425			
GLF1121H					1				H	85							
GLF1121HN					1				H	85							
GLF1121L					550				L	85							
GLF1123H					1				H	85							
GLF1411	1.5	5.5	1	180	12	32	✓	380 @ SR= High 60 @ SR= GND	H	95	NA	HBM : 5 CDM : 2	-40 ~ 85	1.5 x 1.5 DFN-8L			
True Reverse Current Blocking	GLF72100	1.5	5.5	2	37	0.45 uA	20	✓	570	H	NA	NA	HBM : 4 CDM : 2	-40 ~ 85	CSP 0.77 x 0.77 x 0.46		
	GLF72101					0.45 uA	20	✓	570	H	85						
	GLF72102*					0.45 uA	20	✓	570	L	NA						
	GLF72103					0.45 uA	20	✓	48	H	85						
	GLF72105					0.45 uA	20	✓	570	L	85						
	GLF72110					3	29	1.4 uA	24	✓	1.2 ms					H	NA
	GLF72111					3	29	1.4 uA	24	✓	1.2 ms					H	85
	GLF72112					3	29	1.4 uA	24	✓	18 us					H	NA
	GLF72120					4	14	1.3 uA	56	✓	730					H	NA
	GLF72122					4	14	1.3 uA	56	✓	2000					H	NA
	GLF1200	2	54	0.47 uA	13	✓	600	H	NA								
	GLF1201	2	54	0.47 uA	13	✓	600	H	85								
	GLF82321	2	6.5	2	40	1.6 uA	20	✓	2.6 ms	H	550	NA	HBM : 6 CDM : 2	-40 ~ 85	SOT23-5L		
	GLF1220H	1.5	5.5	1	52	500	10	✓	390	H	NA	NA	HBM : 3 CDM : 2	-40 ~ 85	CSP 0.67 x 0.67 x 0.425		
	GLF1221H	1.5				500	10	✓	390	H	85						
Prog. Long t <sub>R</sub> of V <sub>OUT</sub>	GLF71431	1.5	5.5	7	10	10	55	Prog.	up to 34 ms	H	83	NA	HBM : 8 CDM : 2	-40 ~ 85	CSP 1.27 x 1.67 x 0.55		

## Integrated Power Load Switch (Continued Table)

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	RON Typ. @ V <sub>IN</sub> Max [mΩ]	I <sub>Q</sub> Typ. @ V <sub>IN</sub> Max [nA]	ISD Typ. @ V <sub>IN</sub> Max [nA]	Slew Rate Control	Rise Time t <sub>R</sub> Typ. [μs]	EN Active	Output Discharge [Ω]	Reverse Current Blocking	ESD [kV]	Operating Temperature [°C]	Package Type		
3 Channels	GLF78131/T	1.1	5.5	1.5	60	6	23	✓	500	H	235	NA	HBM : 6 CDM : 2	- 40 ~ 85	CSP 1.27 x 1.67 x 0.55/T0.35		
Low V <sub>IN</sub> Range	GLF72510	0.8	3.6	3	27	80 nA @ 1.2 V 15 uA @ 3.6 V	6	✓	420	H	NA	✓**			HBM : 4 CDM : 2	- 40 ~ 105	CSP 0.97 x 0.97 x 0.55
	GLF72511			2	32	180 nA @ 1 V	630	✓	390	H	85						CSP 0.77 x 0.77 x 0.46
	GLF72501			4	10	60 nA @ 0.8 V 6.5 uA @ 3.6 V	6.5	✓	800	H	NA						CSP 0.97 x 1.47 x 0.55
	GLF72520			4	10	60 nA @ 0.8 V 6.5 uA @ 3.6 V	6.5	✓	280	H	85						CSP 0.97 x 1.47 x 0.55/T0.35
	GLF72524/T	0.85		3	52	50 nA @ 0.85 V 30 uA @ 3.6 V	6	✓	400	H	85	✓					SOT23-5L
	GLF1501-T1G7			4	9	5.6 uA @ 0.7 V 8.8 uA @ 3.6 V	14	✓	82	H	85						CSP 0.97 x 1.47 x 0.55
	GLF72525			0.7	4	9	5.6 uA @ 0.7 V 8.8 uA @ 3.6 V	14	✓	82	H						85
	GLF1511				0.7	5.5	4	13	2 uA @ 0.7 V 30 uA @ 5.5 V	30	✓		360	H			250

\*: On Request

\*\*: Reverse Current Blocking Protection When Disabled

## Power Mux : Two Input and Single Output

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	RON Typ. @ V <sub>IN</sub> Max [mΩ]	I <sub>Q</sub> Typ. @ V <sub>IN</sub> Max [uA]	ISD Typ. @ V <sub>IN</sub> Max [nA]	Slew Rate Control	Rise Time t <sub>R</sub> Typ. [us]	V <sub>IN</sub> Auto Select	V <sub>IN</sub> Manual Selection	Output Discharge [Ω]	Reverse Current Blocking	Operating Temperature [°C]	Package Type	
Power Mux	GLF74520	1.5	5.5	2.5	35	4	20	✓	350	✓	✓	NA	✓	- 40 ~ 85	CSP 0.97 x 1.47 x 0.55	
	GLF74130			4.5	20	4	50	✓	790	✓	✓	NA	✓		CSP 1.27 x 1.67 x 0.55	
	GLF4001-T2G7			2	68	4	20	✓	350	✓	✓	NA	✓		SOT23-6L	
	GLF74139	2.0		5.5	4.5	20	4	30	✓	1 ms	✓	✓	NA		✓	CSP 1.27 x 1.67 x 0.55
	GLF4020-T2G7	2.5		6.5	2	92	4	6	✓	448	✓	✓	NA		✓	SOT23-6L

## Battery Protection IC

Product Type	Product Name	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	RON Typ. @ 4.2 V [mΩ]	RON Typ. @ 3.6 V [mΩ]	I <sub>Q</sub> Typ. @ 4.2 V [uA]	I <sub>Q</sub> Typ. @ 3.6 V [uA]	ISD Typ. @ 2.5 V [nA]	Over Charge Protection V <sub>OC</sub> [V]	Over Discharge Protection, V <sub>OD</sub> [V]	Short Circuit Protection I <sub>SC</sub> [A]	ON Voltage to V <sub>OUT</sub> , V <sub>ON</sub> [V]	V <sub>BAT</sub> Min Charging [V]	Operating Temperature [°C]	Package Type	
Battery Protection	GLF73510	5.5	2	28	30	0.73	0.51	2	NA	3.05	NA	3.5	0.4	- 40 ~ 85	CSP 0.97 x 0.97 x 0.55	
	GLF73710		1.5	30	31	0.70	0.65	35	NA	2.88	0.55	3.6				
	GLF73910-AD01		1.5	34	36	0.79	0.72	70	4.35	2.8	0.6	3.6				
	GLF73910-AD01C		1.5	34	36	0.79	0.72	70	4.35	2.8	0.6	3.6				
	GLF73910-BD01		1.5	34	36	0.79	0.72	70	4.50	2.8	0.6	3.6				
	GLF73911-AD01		1.5	34	36	0.79	0.72	35	4.35**	2.8	0.6	3.6				
	GLF73912		1.5	53	57	57	1	0.9	7	4.35	2.8	0.5				3.6

Note) \*\*: Monitor V<sub>OUT</sub> to release V<sub>OC</sub>.

Product Type	Product Name	I <sub>OUT</sub> Rating [A]	RON Typ. @ 4.2 V [mΩ]	I <sub>Q</sub> Typ. @ 3.6 V [uA]	ISD Typ. @ 2.5 V [nA]	Over Charge Protection V <sub>OC</sub> [V]	Over Discharge Protection, V <sub>OD</sub> [V]	Over Charge Current I <sub>OC</sub> [mA]	Over Discharge Current I <sub>DC</sub> [mA]	Short Circuit Protection I <sub>SC</sub> [mA]	ON Voltage to V <sub>OUT</sub> , V <sub>ON</sub> [V]	Shipping Mode	V <sub>BAT</sub> Min Charging [V]	Operating Temperature [°C]	Package Type	
Battery Protection with Shipping Mode	GLF73915-AD12C	1.5	53	0.9	7	4.35	2.8	300	NA	500	3.6	✓	0	- 40 ~ 85	CSP 0.97 x 0.97 x 0.55	
Full Protection	GLF73610 -CE23C	1.5	62 @ 3.7 V	1.48 @ 3.7 V	8	4.45	2.8	330	76	250	3.6	✓	0	- 40 ~ 85		
	GLF73610 -DE23C															4.275
	GLF73610 -EE23C**															4.375
	GLF73610 -FE23C**															4.425
	GLF73610 -GE23C															4.475
	GLF73610 -HE23C															4.525

\*: In Dev.

\*\*: On Request

## Current Limit Power Switch

Product Type	Product Name	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	R <sub>ON</sub> Typ. @ V <sub>IN</sub> Max [mΩ]	I <sub>Q</sub> Typ. @ V <sub>IN</sub> Max [uA]	I <sub>SD</sub> Typ. @ V <sub>IN</sub> Max [nA]	I <sub>LIM</sub> Current Limit [A]	Short Circuit Protection I <sub>SC</sub> [A]	Reverse Current Blocking	EN Active	Output Discharge [Ω]	Thermal Shutdown [°C]	ESD [kV]	Operating Temperature [°C]	Package Type
Current Limit	GLF2310A-T1G7	5.5	2.1	56	20	50	40 mA ~2.1 A	7.6	Yes	H	NA	140	HBM : 8 CDM : 2	- 40 ~ 85	SOT23-5L
	GLF2311A-T1G7										85				SOT23-5L
	GLF2310A-T2G7										NA				SOT23-6L
	GLF2311A-T2G7										85				SOT23-6L
	GLF2311B-T1G7										85				SOT23-5L
	GLF2313B-T1G7										85				SOT23-5L
	GLF2321B-T1G7		1.8				Fixed 1.8 A	5.3	L	85	SOT23-5L				
										H	85			SOT23-5L	

## Power Deep Sleep Protection IC

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	R <sub>ON</sub> Typ. @ 3.6 V [mΩ]	I <sub>Q</sub> Typ. @ 3.6 V [nA]	I <sub>SD</sub> Typ. @ 3.6 V [nA]	Output Discharge [Ω]	Slew Rate Control	Rise Time t <sub>r</sub> Typ [ms]	On Delay Time by /SRO, t <sub>VON</sub> [s]	On Delay Time by WAKE, t <sub>dON</sub> [s]	Off Delay Time, t <sub>slly-Dly</sub> [s]	Operating Temperature [°C]	Package Type
Power Deep Sleep	GLF76311	2.5	5.5	2	34	6	7	85	✓	1	3	NA	6	- 40 ~ 85	CSP 0.97 x 0.97 x 0.55
	GLF76321 / T	1.5		2	31	3	7	85	✓	1	1.3	0.8	7		CSP 0.97 x 1.47 x 0.55/
	GLF76521 / T	1.8		2	31	3	7	85	✓	1	0.3	0.8	1.8		0.35

## Power Reset Protection IC

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	R <sub>ON</sub> Typ. @ 3.6 V [mΩ]	I <sub>Q</sub> Typ. @ 3.6 V [nA]	I <sub>SD</sub> Typ. @ 3.6 V [nA]	Output Discharge [Ω]	Rise Time t <sub>r</sub> Typ [ms]	On Delay Time by /SRO, t <sub>VON</sub> [s]	On Delay Time by WAKE, t <sub>dON</sub> [ms]	Off Delay Time, t <sub>slly-Dly</sub> [s]	Reset Duration, t <sub>Reset</sub> [ms]	Operating Temperature [°C]	Package Type
Power Reset	GLF76121	2.5	5.5	2	34	3	7	85	1	1.5	0.9	6	750	- 40 ~ 85	CSP 0.97 x 1.47 x 0.55
	GLF76121S			2	34	3	7	85	1	1.5	0.9	3.0	360		
	GLF76121L			2	34	3	7	85	1	1.5	0.9	12	750		
	GLF76431	1.8	5.5	6	19	0.42 uA	0.36 uA	90	1	0.8 ms	0.8	7.5	470	CSP 1.27 x 1.67 x 0.55	

## Automotive IC

Product Type	Product Name	V <sub>IN</sub> Min. Voltage [V]	V <sub>IN</sub> Max. Voltage [V]	I <sub>OUT</sub> Rating [A]	R <sub>ON</sub> Typ. @ V <sub>IN</sub> Max [mΩ]	I <sub>Q</sub> Typ. @ V <sub>IN</sub> Max [nA]	I <sub>SD</sub> Typ. @ V <sub>IN</sub> Max [nA]	Slew Rate Control	Rise Time t <sub>r</sub> Typ. [us]	EN Active	Output Discharge [Ω]	Reverse Current Blocking	ESD [kV]	Operating Temperature [°C]	Package Type
Nano-Current Consumed Power Switch	GLF1111Q-T1G7	1.5	5.5	2	60	2	13	✓	400	H	85	NA	HBM : 4 CDM : 2	- 40 ~ 125	SOT23-5L
	GLF1110Q-T1G7*	1.5	5.5	2	60	2	13	✓	400	H	NA	NA			
True Reverse Current Blocking	GLF1200Q-T1G7	1.5	5.5	2	60	480	25	✓	600	H	NA	✓	HBM : 4 CDM : 2	- 40 ~ 125	SOT23-5L
	GLF1201Q-T1G7*	1.5	5.5	2	60	480	25	✓	600	H	85	✓			

\*: In Dev.