



GLF INTEGRATED POWER

09/01

2026 GLF PRODUCTS SELECTION GUIDE

Integrated Power Load Switch
Automotive - Integrated Power Load Switch
Power Mux IC
Ideal Diode
Battery Protection IC
Current Limit Power Switch
Over Voltage Protection Switch

System Power Reset IC
System Power Deep Sleep IC
Linear Regulator
DC-DC Switching Regulator
Battery Charger IC
Battery Gauge
Power Storage PMIC



For more info
Please link

www.glfipower.com

GLF Integrated Power Inc. is a woman-owned, fabless semiconductor company founded in 2013 in the Silicon Valley. The GLF value proposition is focusing on Ultra Low Power Solutions on Power Protection and Saving.

GLF's pioneering core IP technology, $I_Q\text{Smart}^{\text{TM}}$, uses a super-efficient core design that significantly reduces R_{ON} , I_{Q} , and I_{SD} . GLF also designs and optimizes the wafer process for the industry's widest operating voltage, as well as the mask layer reduction of wafers which greatly lowers wafer costs.

GLF has been developing energy-efficient integrated circuits and components, including power load switches, that support the growing demand for energy-efficient devices, especially in IoT products, which require minimal power consumption and extended battery life.

KEY BENEFITS GLF PRODUCTS

Energy Efficiency

By offering ultra-low power solutions, GLF helps reduce energy consumption, which is especially critical for devices that operate 24/7 or in remote environments. This can lead to significant savings on electricity costs over time.

Extended Battery Life

Ultra-low power consumption extends the operational lifespan of batteries in portable devices, which is crucial for IoT devices, wearables, and other battery-powered applications. This can reduce maintenance costs and improve user experience by minimizing the frequency of battery replacements.

Power Protection

GLF Integrated Power focuses on protecting sensitive electronics from power fluctuations and failures, ensuring that power systems remain stable and operational without disruption.

Scalability

The focus on low power consumption makes these solutions ideal for a wide range of applications, from consumer electronics to industrial systems. Scalability can be an attractive aspect for the engineering community who are looking to integrate energy-efficient solutions across the entire portfolio.

Cost Savings

Lower power consumption, extended battery life, and smaller package sizes.

Sustainability

By reducing the power footprint, GLF's solutions contribute to environmental sustainability, making them an attractive option for businesses and consumers looking to reduce their ecological impact.

Integrated Power Load Switch (1)

The ideal load switch itself consumes zero current when the system is in standby mode. Our ultra-efficient and ultra-compact load switches not only provide ultra-low leakage current, which is up to 50 times lower than other load switches, but they also exhibit the lowest $R_{DS(ON)}$ in the same size.

Nano-Current Consumption

Applications

Wearables Data Storage
Mobile Devices SSD
Low Power Subsystems
Telecommunication Module
IoT Devices...

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _r Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF1120H	1.1-5.5	1	52	5	10	380	H	NA	WLCSP 0.67 x 0.67 x 0.425
GLF1121H	1.1-5.5	1	52	5	10	380	H	85	WLCSP 0.67 x 0.67 x 0.425
GLF1121HN	1.1-5.5	1	52	5	10	380	H	85	WLCSP 0.67 x 0.67 x 0.425
GLF1121L	1.1-5.5	1	52	550	10	380	L	85	WLCSP 0.67 x 0.67 x 0.425
GLF1123H	1.1-5.5	1	52	5	10	4	H	85	WLCSP 0.67 x 0.67 x 0.425
GLF1100	1.1-5.5	2	82	10	25	2.2 ms	H	85	SOT23-5L
GLF1131HT	1.1-5.5	2	34	2	19	450	H	85	WLCSP 0.77 x 0.77 x 0.35
GLF1133HT	1.1-5.5	2	34	2	19	2450	H	85	WLCSP 0.77 x 0.77 x 0.35
GLF1110	1.5-5.5	2	54	2	13	600	H	NA	SOT23-5L
GLF1111	1.5-5.5	2	54	2	13	600	H	85	SOT23-5L
GLF1110H	1.5-5.5	2	54	2	13	600	H	NA	SOT23-5L
GLF1111H	1.5-5.5	2	54	2	13	600	H	85	SOT23-5L
GLF71300	1.1-5.5	2	34	1	19	430	H	NA	WLCSP 0.77 x 0.77 x 0.46
GLF71300H	1.1-5.5	2	34	1	19	430	H	NA	WLCSP 0.77 x 0.77 x 0.46
GLF71301	1.1-5.5	2	34	1	19	430	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF71301H	1.1-5.5	2	34	1	19	430	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF71301T	1.1-5.5	2	34	1	19	430	H	85	WLCSP 0.77 x 0.77 x 0.35
GLF71302	1.1-5.5	2	34	0.54 uA	19	430	L	NA	WLCSP 0.77 x 0.77 x 0.46
GLF71303	1.1-5.5	2	34	0.54 uA	19	430	L	85	WLCSP 0.77 x 0.77 x 0.46
GLF71305	1.5-5.5	2	34	3	22	340	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF71306	1.1-5.5	2	34	1	19	42	H	NA	WLCSP 0.77 x 0.77 x 0.46
GLF71307	1.1-5.5	2	34	1	19	9	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF71308	1.1-5.5	2	34	1	19	42	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF71310	1.1-5.5	2	31	7	28	335	H	NA	WLCSP 0.97 x 0.97 x 0.55
GLF71311	1.1-5.5	3	31	7	28	335	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF71311H	1.1-5.5	3	31	7	28	335	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF71311T	1.1-5.5	2	31	7	28	335	H	85	WLCSP 0.97 x 0.97 x 0.35
GLF71313	1.1-5.5	2	31	0.52 uA	28	335	L	85	WLCSP 0.97 x 0.97 x 0.55
GLF71315	1.1-5.5	2	31	7	28	335	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF71511	1.1-5.5	2	30	5	30	2.2 ms	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF71320	1.1-5.5	4	15	3	50	400	H	NA	WLCSP 0.97 x 1.47 x 0.55
GLF71321	1.1-5.5	4	15	3	50	400	H	80	WLCSP 0.97 x 1.47 x 0.55
GLF71322	1.1-5.5	4	15	570	40	400	L	NA	WLCSP 0.97 x 1.47 x 0.55
GLF71323	1.1-5.5	4	15	570	40	400	L	80	WLCSP 0.97 x 1.47 x 0.55
GLF71325	1.1-5.5	4	18 @ 3.3 V	1 @ 3.3 V	16 @ 3.3 V	2.2 ms	H	80	WLCSP 0.97 x 1.47 x 0.55
GLF81311	2 -6.5	3	41	10	20	2.3 ms	H	560	SOT23-5L

Integrated Power Load Switch (2)

Prog. Long tR of V_{OUT}

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _r Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF71430	1.5-5.5	7	10	10	10	up to 34 ms	H	NA	WLCSP 1.27 x 1.67 x 0.55
GLF71431	1.5-5.5	7	10	10	55	up to 34 ms	H	85	WLCSP 1.27 x 1.67 x 0.55
GLF1561	0.6-5.5	12	4.5	7.6 uA	42	up to 10 ms	H	50	WLCSP 1.77 x 2.17 x 0.623

2-Channel

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _r Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF1411	1.5-5.5	1	180	10	32	390 @ SR= High 45 @ SR= GND	H	95	DFN 1.5 x 1.5 -8L
GLF1421	1.5-5.5	1	175	440	20	465 @ SR= High 50 @ SR= GND	H	95	DFN 1.5 x 1.5 -8L

3-Channel

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _r Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF78131	1.1-5.5	1.5	60	6	23	500	H	235	WLCSP 1.27 x 1.67 x 0.55
GLF78131T	1.1-5.5	1.5	60	6	23	500	H	235	WLCSP 1.27 x 1.67 x 0.35

Reverse Current Blocking

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _r Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF1220H	1.5-5.5	1	52	500	10	390	H	NA	WLCSP 0.67 x 0.67 x 0.425
GLF1221H	1.5-5.5	1	52	500	10	390	H	85	WLCSP 0.67 x 0.67 x 0.425
GLF1231HT	1.1-5.5	2	34	1.2 uA	19	410	H	85	WLCSP 0.77 x 0.77 x 0.35
GLF1232HT	1.1-5.5	2	34	1.2 uA	19	6	H	NA	WLCSP 0.77 x 0.77 x 0.35
GLF72100	1.5-5.5	2	37	0.45 uA	20	570	H	NA	WLCSP 0.77 x 0.77 x 0.46
GLF72101	1.5-5.5	2	37	0.45 uA	20	570	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF72102*	1.5-5.5	2	37	0.45 uA	20	570	L	NA	WLCSP 0.77 x 0.77 x 0.46
GLF72103	1.5-5.5	2	37	0.45 uA	20	48	H	85	WLCSP 0.77 x 0.77 x 0.46
GLF72105	1.5-5.5	2	37	0.45 uA	20	890	L	85	WLCSP 0.77 x 0.77 x 0.46
GLF72106	1.5-5.5	2	37	0.45 uA	20	890	L	NA	WLCSP 0.77 x 0.77 x 0.46
GLF1200	1.5-5.5	2	54	0.47 uA	26	600	H	NA	SOT23-5L
GLF1201	1.5-5.5	2	54	0.47 uA	26	600	H	85	SOT23-5L
GLF1200H	1.5-5.5	2	54	0.47 uA	13	600	H	NA	SOT23-5L
GLF1201H	1.5-5.5	2	54	0.47 uA	13	600	H	85	SOT23-5L
GLF72110	1.5-5.5	3	29	1.3 uA	24	1.2 ms	H	NA	WLCSP 0.97 x 0.97 x 0.55
GLF72111	1.5-5.5	3	29	1.3 uA	24	1.2 ms	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF72112	1.5-5.5	3	29	1.3 uA	24	18 us	H	NA	WLCSP 0.97 x 0.97 x 0.55
GLF72120	1.5-5.5	4	14	1.3 uA	56	730	H	NA	WLCSP 0.97 x 1.47 x 0.55
GLF72122	1.5-5.5	4	14	1.3 uA	56	2000	H	NA	WLCSP 0.97 x 1.47 x 0.55
GLF82321	2-6.5	2	40	1.6 uA	20	2.6 ms	H	550	SOT23-5L

Integrated Power Load Switch (3)

Ultra-Low V_{IN}

Product Name	V_{IN} Voltage [V]	I_{OUT} Rating [A]	R_{ON} Typ. @ V_{IN} Max [mΩ]	I_Q Typ. @ V_{IN} Max [nA]	I_{SD} Typ. @ V_{IN} Max [nA]	Rise Time t_R Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF72501	0.8-3.6	2	32	180 nA @ 1 V	630	390	H	80	WLCSP 0.77 x 0.77 x 0.46
GLF72510	0.8-3.6	3	27	80 nA @ 1.2 V 15 uA @ 3.6 V	6	420	H	NA	WLCSP 0.97 x 0.97 x 0.55
GLF72510H	0.8-3.6	3	27	80 nA @ 1.2 V 13 uA @ 3.6 V	6	420	H	NA	WLCSP 0.97 x 0.97 x 0.55
GLF72511	0.8-3.6	3	27	80 nA @ 1.2 V 15 uA @ 3.6 V	6	420	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF72511H	0.8-3.6	3	27	80 nA @ 1.2 V 13 uA @ 3.6 V	6	420	H	85	WLCSP 0.97 x 0.97 x 0.55
GLF72520	0.8-3.6	4	10	60 nA @ 0.8 V 6.5 uA @ 3.6 V	6.5	800	H	NA	WLCSP 0.97 x 1.47 x 0.55
GLF72524	0.8-3.6	4	10	60 nA @ 0.8 V 6.5 uA @ 3.6 V	6.5	280	H	85	WLCSP 0.97 x 1.47 x 0.55
GLF72525	0.7-3.6	4	9	5.6 μA @ 0.7 V 8.8 μA @ 3.6 V	14	82	H	85	WLCSP 0.97 x 1.47 x 0.55
GLF72525T	0.7-3.6	4	9	5.6 μA @ 0.7 V 8.8 μA @ 3.6 V	14	82	H	85	WLCSP 0.97 x 1.47 x 0.35
GLF1501	0.85-3.6	3	52	50 nA @ 0.85V 30 uA @ 3.6 V	6	400	H	85	SOT23-5L
GLF1511	0.7-5.5	4	13	2 μA @ 0.7 V 30 μA @ 5.5 V	30	360	H	250	WLCSP 0.97 x 1.47 x 0.55
GLF1521	0.6-3.6	5	22	15.2 uA	48	up to 10 ms	H	200	DFN 2 x 2 -8L
GLF1531	0.8-5.5	2	33	14 uA	13	2.83 ms	H	21	SOT23-6L
GLF1591T	0.3-5.5	1	33	18 uA	6	109	H	150	WLCSP 0.67 x 1.02 x 0.35
GLF1591LT	0.3-5.5	1	33	18 uA	6	109	L	150	WLCSP 0.67 x 1.02 x 0.35
GLF1592T	0.6-5.5	2	26	39 uA	15	295	H	NA	WLCSP 0.67 x 1.02 x 0.35
GLF1593T	0.6-5.5	2	26	39 uA	15	295	H	150	WLCSP 0.67 x 1.02 x 0.35
GLF1593LT	0.6-5.5	2	26	39 uA	15	295	L	150	WLCSP 0.67 x 1.02 x 0.35
GLF1595T	0.1-3.3	1	68	7	4	210 @ $V_{in}=0.6V$ 450 @ $V_{in}=1.2V$ 960 @ $V_{in}=3.3V$	H	150	WLCSP 0.67 x 1.02 x 0.35
GLF1595LT	0.1-3.3	1	68	7	4	210 @ $V_{in}=0.6V$ 450 @ $V_{in}=1.2V$ 960 @ $V_{in}=3.3V$	L	150	WLCSP 0.67 x 1.02 x 0.35

Ultra-Low V_{IN} (2-channel)

Product Name	V_{IN} Voltage [V]	I_{OUT} Rating [A]	R_{ON} Typ. @ V_{IN} Max [mΩ]	I_Q Typ. @ V_{IN} Max [nA]	I_{SD} Typ. @ V_{IN} Max [nA]	Rise Time t_R Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF1401	0.6-5.5	6	19	18 uA @ Dual-Ch 15 uA @ Single-Ch	8	1.97ms	H	200	DFN 2 x 3 -14L
GLF1403	0.6-5.5	6	19	18 uA @ Dual-Ch 15 uA @ Single-Ch	8	1.00ms	H	200	DFN 2 x 3 -14L

Integrated Power Switches with Extended Temperature Range

Extended-temperature load switch ICs with operating support up to +105°C for improved reliability in thermally demanding environments. Ideal for systems requiring robust power-path protection and stable operation under high ambient temperature and ruggedized electronic systems beyond standard commercial-grade devices.

Applications

Rugged portable devices
Outdoor equipment
High-temperature embedded systems

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _R Typ. [us]	Output Discharge [Ω]	Operating Temperature [°C]	Package Type
GLF1110H	1.5-5.5	2	54	2	13	600	NA	- 40 to 105	SOT23-5L
GLF1111H	1.5-5.5	2	54	2	13	600	85	- 40 to 105	SOT23-5L
GLF71300H	1.1-5.5	2	34	1	19	430	NA	- 40 to 105	WLCSP 0.77 x 0.77 x 0.46
GLF71301H	1.1-5.5	2	34	1	19	430	85	- 40 to 105	WLCSP 0.77 x 0.77 x 0.46
GLF71315	1.1-5.5	2	31	7	28	335	85	- 40 to 105	WLCSP 0.97 x 0.97 x 0.55
GLF71511	1.1-5.5	2	30	5	30	2.2 ms	85	- 40 to 105	WLCSP 0.97 x 0.97 x 0.55
GLF71325	1.1-5.5	4	18 @ 3.3 V	1 @ 3.3 V	16 @ 3.3 V	2.2 ms	80	- 40 to 105	WLCSP 0.97 x 1.47 x 0.55
GLF1200H	1.5-5.5	2	54	0.47 uA	13	600	NA	- 40 to 105	SOT23-5L
GLF1201H	1.5-5.5	2	54	0.47 uA	13	600	85	- 40 to 105	SOT23-5L
GLF72111	1.5-5.5	3	29	1.3 uA	24	1.2 ms	85	- 40 to 105	WLCSP 0.97 x 0.97 x 0.55
GLF72112	1.5-5.5	3	29	1.3 uA	24	18 us	NA	- 40 to 125	WLCSP 0.97 x 0.97 x 0.55
GLF72510H	0.8-3.6	3	27	80 nA @ 1.2 V 13 uA @ 3.6 V	6	420	NA	- 40 to 125	WLCSP 0.97 x 0.97 x 0.55
GLF72511H	0.8-3.6	3	27	80 nA @ 1.2 V 13 uA @ 3.6 V	6	420	85	- 40 to 125	WLCSP 0.97 x 0.97 x 0.55
GLF72525	0.7-3.6	4	9	5.6 uA @ 0.7 V 8.8 uA @ 3.6 V	14	82	85	- 40 to 105	WLCSP 0.97 x 1.47 x 0.55
GLF72525T	0.7-3.6	4	9	5.6 uA @ 0.7 V 8.8 uA @ 3.6 V	14	82	85	- 40 to 105	WLCSP 0.97 x 1.47 x 0.35
GLF1511	0.7-5.5	4	13	2 uA @ 0.7 V 30 uA @ 5.5 V	30	360	250	- 40 to 105	WLCSP 0.97 x 1.47 x 0.55
GLF1531	0.8-5.5	2	33	14 uA	13	2.83 ms	21	- 40 to 105	SOT23-6L

Automotive - Integrated Power Load Switch

GLF Automotive Load Switch support an industry leading wide input voltage range and helps to improve operating life and system robustness.

Applications

In-Vehicle Infotainment
Communication System(CPE/Gateway)
ADAS Intelligent cockpit
Car door facial recognition...

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [nA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _R Typ. [us]	EN Active	Output Discharge [Ω]	Package Type
GLF1111Q	1.5-5.5	2	60	2	13	400	H	85	SOT23-5L
GLF1110Q	1.5-5.5	2	60	2	13	400	H	NA	SOT23-5L
GLF1200Q	1.5-5.5	2	60	480	25	600	H	NA	SOT23-5L
GLF1201Q	1.5-5.5	2	60	480	25	600	H	85	SOT23-5L
GLF1531Q	0.8-5.5	2	44	14 uA	13	2.83 ms	H	21	SOT23-6L

Power Mux IC

The GLF low-power Power Multiplexer chip is mainly aimed at the circuit structure with two power inputs and one output (typically one USB and one lithium battery input), to provide the circuit switching function of automatic mode or manual mode.

Applications

Wearables / Hearables
Smart IoT Devices
Portable Devices
Backup Power System...

Product Name	V _{IN} Min. Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [uA]	I _{SD} Typ. @ V _{IN} Max [nA]	Rise Time t _R Typ. [us]	Reverse Current Blocking*	Reverse Current Blocking When Disabled*	Package Type
GLF74520	1.5-5.5	2.5	35	4	20	350	NA	✓	WLCSP 0.97 x 1.47 x 0.55
GLF74521	1.5-5.5	2.5	35	4	20	350	NA	✓	WLCSP 0.97 x 1.47 x 0.55
GLF74130	1.5-5.5	4.5	20	4	50	790	NA	✓	WLCSP 1.27 x 1.67 x 0.55
GLF74138	2.0-5.5	4.5	20	4	30	573	NA	✓	WLCSP 1.27 x 1.67 x 0.55
GLF74139	2.0-5.5	4.5	20	4	30	1 ms	✓	✓	WLCSP 1.27 x 1.67 x 0.55
GLF4000	1.5-5.5	2	68	4	20	350	NA	✓	SOT23-6L
GLF4001	1.5-5.5	2	68	4	20	350	NA	✓	SOT23-6L
GLF4002	1.5-5.5	Ch1: 2 Ch2:1.5	Ch1: 21 Ch2: 38	1.1	500	Ch1: 1350 @5Vin Ch2: 800 @5Vin	✓	✓	WLCSP 1.27 x 1.27 x 0.55
GLF4003	1.5-4.8	Ch1: 2 Ch2:1.5	Ch1: 45 Ch2: 77	1.1	400	Ch1: 1480@4.2Vin Ch2: 872 @4.2Vin	✓	✓	DFN 2 x 3 -8L
GLF4007	1.5-5.5	Ch1: 3.5 @1.5-2.0Vin 4 @2-5.5Vin Ch2: 3 @1.5-5.5Vin	Ch1: 20 Ch2: 30	1.1	550	Ch1: 1716 @5Vin Ch2: 985 @5Vin	✓	✓	WLCSP 1.27 x 1.27 x 0.55
GLF4010	1.5-5.5	Ch1/2: 6 @2.5-5.5Vin Ch1/2 4 @1.5-2.5Vin	Ch1:15 Ch2:15	1.4	1000	Ch1:290@5Vin Ch2:290@5Vin	NA	NA	WLCSP 1.17 x 1.97 x 0.55
GLF4012	1.5-5.5	Ch1/2: 6 @2.5-5.5Vin Ch1/2 4 @1.5-2.5Vin	Ch1:15 Ch2:15	1.4	1000	Ch1:290@5Vin Ch2:290@5Vin	✓	✓	WLCSP 1.17 x 1.97 x 0.55
GLF4013	1.5-5.5	Ch1/2: 6 @2.5-5.5Vin Ch1/2 4 @1.5-2.5Vin	Ch1:16 Ch2:16	1.4	1000	Ch1:430@5Vin Ch2:430@5Vin	✓	✓	WLCSP 1.17 x 1.97 x 0.55
GLF4020	2.5-6.5	2	92 @ 6.5 V 105 @ 4.5 V	4	6	448	NA	✓	SOT23-6L
GLF4028	2.5-5.5	2	97 @ 5.5 V 105 @ 4.5 V	3	5	340	NA	✓	SOT23-6L
GLF4031	Ch1: 2.8-13 Ch2: 2.8-6	4	24	Ch1: 72 Ch2: 53	Ch1: 17uA Ch2: 13uA	622@5Vin	NA	NA	FC QFN 2 x 3 - 13L
GLF4033	Ch1: 3-13 Ch2: 3-13	Ch1: 4 Ch2: 4	27	Ch1: 76 Ch2: 75	Ch1: 17uA Ch2: 17uA	430@3Vin 340@5Vin 310@12Vin	NA	NA	FC QFN 2 x 3 - 13L

Note: (1) Reverse Current Blocking*: When the switch is in the ON state, it can block the reverse current from VOUT flowing to the selected input power supply (VIN1 or VIN2).

(2) Reverse Current Blocking When Disabled*: When the switch is in the OFF state, it can block the reverse current from VOUT to the input power(VIN1 or VIN2).

Battery Protection IC

GLF lithium battery protection chips have the characteristics of high adaptability and low power consumption. In addition to the above basic functions, it can also add 0V rechargeable, current overcharge, shipping mode, over-temperature protection, trickle monitoring functions according to user needs, and has the advantages of high-precision overcharge protection and low discharge short-circuit current protection.

Applications

Wearables / IoT Devices
BLE Wireless Earphone
Battery Protection
Mobile Devices / Mobile Medical
Hearing Aid...

Product Name	V _{IN} Max. Voltage [V]	R _{ON} Typ. @ 3.6 V [mΩ]	I _Q Typ. @ 3.6 V [uA]	I _{SD} Typ. @ 2.5 V [nA]	Over Charge Protection V _{OC} [V]	Over Discharge Protection V _{OD} [V]	Short Circuit Protection I _{SC} [A]	V _{BAT} Min Charging [V]	Package Type
GLF73510	5.5	30	0.51	2	NA	3.05	NA	0.4	WLCSP 0.97 x 0.97 x 0.55
GLF73511	5.5	145	0.51	6 @3.6V	NA	1.95	NA	0.4	WLCSP 0.67 x 0.67 x 0.425
GLF73710	5.5	31	0.65	35	NA	2.88	0.55	0.4	WLCSP 0.97 x 0.97 x 0.55
GLF73910-AD01	5.5	36	0.72	70	4.35	2.8	0.6	0.4	WLCSP 0.97 x 0.97 x 0.55
GLF73910-AD01C	5.5	36	0.72	70	4.35	2.8	0.6	0	WLCSP 0.97 x 0.97 x 0.55
GLF73910-BD01	5.5	36	0.72	70	4.50	2.8	0.6	0.4	WLCSP 0.97 x 0.97 x 0.55
GLF73911-AD01*	5.5	36	0.72	35	4.35	2.8	0.6	0.4	WLCSP 0.97 x 0.97 x 0.55
GLF73912	5.5	57	0.9	7	4.35	2.8	0.5	0.4	WLCSP 0.97 x 0.97 x 0.55

Note)*: Monitor V_{OUT} to release V_{OC}

Product Name	R _{ON} Typ. @ 4.2 V [mΩ]	I _Q Typ. @ 3.6 V [uA]	I _{SD} Typ. @ 2.5 V [nA]	Over Charge Protection V _{OC} [V]	Over Discharge Protection V _{OD} [V]	Over Discharge Current I _{OD} [mA]	Short Circuit Protection I _{SC} [mA]	V _{BAT} Min Charging [V]	Package Type
GLF73915-AD12C	53	0.9	7	4.35	2.8	NA	500	0	WLCSP 0.97 x 0.97 x 0.55
GLF73915-AF12C	53	0.9	7	4.35	2.95	NA	500	0	WLCSP 0.97 x 0.97 x 0.55
GLF73610-CE23C	58	1.48 @ 3.7 V	6	4.450	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.55
GLF73610-DE23C	58	1.48 @ 3.7 V	6	4.275	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.55
GLF73610-GE23C	58	1.48 @ 3.7 V	6	4.475	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.55
GLF73610-HE23C	58	1.48 @ 3.7 V	6	4.525	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.55
GLF73611A*	56	1.6	15	4.475	2.9	215	500	1.32	WLCSP 0.97 x 0.97 x 0.55
GLF73611B	56	1.6	15	4.475	2.8	215	500	1.32	WLCSP 0.97 x 0.97 x 0.55
GLF73612T	56	1.6	15	4.575	2.9	465	1250	1.32	WLCSP 0.97 x 0.97 x 0.35T
GLF73614-DE23C	58	1.48	6	4.275	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.35
GLF73614-CE23C	58	1.48	6	4.45	2.8	76	250	0	WLCSP 0.97 x 0.97 x 0.35
GLF73927A	29	1.6	4	4.3	2.8	NA	3000	0	WLCSP 0.97 x 1.47 x 0.55
GLF73927B	29	1.6	4	4.45	2.8	NA	3000	0	WLCSP 0.97 x 1.47 x 0.55
GLF3002	5.5	27	2.6	900@2V	4.3	2.39	15A	1.5	SOT23-5L
GLF3006A	5.5	25	2.1	800@1.75V	4.22	NA	8.4A	1.5	SOT23-5L
GLF3006B	5.5	25	2.6	800@1.75V	4.22	1.85	8.4A	1.5	SOT23-5L
GLF3006C	5.5	25	2.1	800@1.75V	4.27	NA	8.4A	1.5	SOT23-5L

Note)*: Monitor V_{OUT} to release V_{OC}

Current Limit Power Switch

It is an advanced technology fully integrated power switch for various USB applications demanding precision output current limit. It features several protection functions such as under voltage lockout, reverse current blocking (RCB), short circuit protection, and thermal shutdown.

Applications

USB ports Notebooks and Tablets
Set-Top Boxes
Telecom Systems
Wireless LAN and Broadband
Access Devices...

Product Name	V _{IN} Voltage [V]	R _{ON} Typ. @ V _{IN} Max [mΩ]	I _Q Typ. @ V _{IN} Max [μA]	I _{SD} Typ. @ V _{IN} Max [nA]	I _{LIM} Current Limit [A]	Short Circuit Protection I _{SC} [A]	EN Active	Output Discharge [Ω]	Package Type
GLF2310A-T1G7	2.5-5.5	56	20	50	40 mA ~2.1 A	6.6	H	NA	SOT23-5L
GLF2310A-T2G7	2.5-5.5	56	20	50	40 mA ~2.1 A	6.6	H	NA	SOT23-6L
GLF2311A-T1G7	2.5-5.5	56	20	50	40 mA ~2.1 A	6.6	H	300	SOT23-5L
GLF2311A-T2G7	2.5-5.5	56	20	50	40 mA ~2.1 A	6.6	H	300	SOT23-6L
GLF2311B	2.5-5.5	56	20	50	Fixed 2 A	6.6	H	300	SOT23-5L
GLF2313B	2.5-5.5	56	20	50	Fixed 2 A	6.6	L	300	SOT23-5L
GLF2321B	2.5-5.5	56	20	50	Fixed 1.5 A	5.3	H	300	SOT23-5L
GLF2331B	2.5-5.5	53	18	35	Fixed 1.3 A	√	H	300	SOT23-5L
GLF2351B	2.5-5.5	40	17	60	Fixed 2.55 A	4.6	H	300	SOT23-5L
GLF2351A	2.5-5.5	32	19	63	40 mA~2.8 A	√	H	300	WLCSP 0.97 x 1.47 x 0.55
GLF2353B	2.5-5.5	53	17	60	Fixed 2.55 A	4.6	H	97	SOT23-5L
GLF2363A	2.5-5.5	24	26	50	100 mA~4 A	√	H	98	SOT23-6L
GLF2365A	2.5-5.5	56	16	62	100mA~3A	√	H	93	SOT23-6L

Ideal Diode

This ideal diode switch provides an exceptionally low forward voltage drop, low quiescent current (I_Q), and ultra-low shutdown current (I_{SD}). It serves as an efficient alternative to conventional or Schottky diodes, reducing power loss and improving overall system efficiency.

Applications

VR/AR Portable Applications
Wearable Medical Devices
Smart Meters
AIoT Smart Devices
Smart Glasses

Product Name	V _{IN} Voltage [V]	I _{OUT} Rating [A]	V _{drop} Typ. @ I _{OUT} Max [mV]	I _Q Typ. @ V _{IN} Max [μA] @ 5.5V	Short Circuit Current Detection I _{SC} [A]	Reverse Current @ ON & OFF [nA]	Reverse Bias Turn-off Delay time T _{RB} [us]	ESD [kV]	Package Type
GLF1800	1.8-5.5	1	117	1.2	2.6	2	12	HBM : 4 CDM : 2	SOT23-5L
GLF1800T	1.8-5.5	1.5	111	1.2	2.6	2	12	HBM : 4 CDM : 2	WLCSP 0.77 x 0.77 x 0.35
GLF1800AT	1.8-5.5	1.5	111	1.2	2.6	2	12	HBM : 4 CDM : 2	WLCSP 0.77 x 0.77 x 0.35
GLF1800A	1.8-5.5	1	117	1.2	2.6	2	12	HBM : 4 CDM : 2	SOT23-5L

System Power Deep Sleep IC

The deep sleep switch enables the system to enter an ultra-low-power sleep mode by disconnecting the battery, and only consumes ultra-low 7nA standby current.

Applications

Wearables
IoT Devices
Medical Devices...

Product Name	V _{IN} Min. Voltage [V]	V _{IN} Max. Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ 3.6 V [mΩ]	I _Q Typ. @ 3.6 V [nA]	I _{SD} Typ. @ 3.6 V [nA]	Off Delay Time, t _{Sly-Dly} [s]	Slew Rate Control	Package Type
GLF76311	2.5	5.5	2	34	4	7	6	✓	WLCSP 0.97 x 0.97 x 0.55
GLF76321	1.5	5.5	2	31	3	7	7	✓	WLCSP 0.97 x 1.47 x 0.55
GLF76321T	1.5	5.5	2	31	3	7	7	✓	WLCSP 0.97 x 1.47 x 0.35T
GLF76521	1.8	5.5	2	31	3	7	1.8	✓	WLCSP 0.97 x 1.47 x 0.55
GLF76521T	1.8	5.5	2	31	3	7	1.8	✓	WLCSP 0.97 x 1.47 x 0.35T

System Power Reset IC

The Power Reset Switch provides a true power reset function by disconnecting the battery after a reasonable delay time. After the reset period, the main switch reconnects the output load to the input battery to resume system operation.

Applications

Wearables
IoT Devices
Medical Devices...

Product Name	V _{IN} Min. Voltage [V]	V _{IN} Max. Voltage [V]	I _{OUT} Rating [A]	R _{ON} Typ. @ 3.6 V [mΩ]	I _Q Typ. @ 3.6 V [nA]	I _{SD} Typ. @ 3.6 V [nA]	Off Delay Time, t _{Sly-Dly} [s]	Reset Duration, t _{Reset} [ms]	Package Type
GLF76121	2.5	5.5	2	34	3	7	6	750	WLCSP 0.97 x 1.47 x 0.55
GLF76121S	2.5	5.5	2	34	3	7	2.95	360	WLCSP 0.97 x 1.47 x 0.55
GLF76121L	2.5	5.5	2	34	3	7	12	750	WLCSP 0.97 x 1.47 x 0.55
GLF76431	1.8	5.5	6	19	0.42 uA	0.36 uA	7.5	470	WLCSP 1.27 x 1.67 x 0.55

Linear Regulator

GLF's LDO has an ultra-efficient I_QSmart™ low dropout regulator, designed for wearable devices and IoT devices that require ultra-low quiescent current. It is designed to provide excellent performance with low power for portable and battery powered applications.

Applications

Battery Powered Smart Devices
Medical Devices
Mobiles / Wearables / IoT Devices
Computing / Communication Devices...

Product Name	V _{IN} Max. Voltage [V]	V _{OUT} Voltage [V]	V _{OUT} Accuracy [%]	Line Regulation [%/V]	Load Regulation [%/mA]	I _{OUT} Rating [mA]	Dropout [mV]	EN Pin	Package Type
GLF9900-33T1	5.5	3.3	2.5	0.16	0.01	300	600 @300mA	H	SOT23-5L
GLF9900-33T3	5.5	3.3	2.5	0.09	0.01	200	334 @200mA	NA	SOT23-3L

Battery Gauge

The Gauge integrates a flash-programmable 32-bit CPU, enabling both battery parameters and firmware to be upgraded online via I2C.

It provides precision measurements of current, voltage, and temperature, and can accurately predict the battery capacity. It supports both high-side and low-side current sensing. The temperature of the battery pack is measured using an internal temperature sensor or an external thermistor.

Applications

Mobile phone, tablet
Smart watch
Portable devices and accessory...

Product Name	Coulometer	ADC (bit)	MCU (bit)	Power Consumption [uA]	Sampling Resistor [mΩ]	Anti-counterfeiting [mΩ]	NTC	Package Type
GLF70301	✓	16	32	16	1	✓	✓	DFN 2 x 3 - 8 WLCSP 1.43 x 1.43 -9B
GLF70302		16	32	5	1	✓	✓	DFN 2 x 3 - 8 WLCSP 1.43 x 1.43 -9B

Power Storage PMIC

GLF PMIC designed for notebook, desktop, and embedded computing platforms. There are DCDC converters and linear regulators integrated into the GLF PMIC, which can minimize the need for external components so that it can ease the layout in a constrained PCB area. The DCDC converters are of high accuracy, high efficiency, and high flexibility. The LDOs provide power rails for peripherals and pull-up resistors.

Applications

Solid-state drive
Video system...

Product Name	V _{IN} Range [V]	BUCK	Buck Output Current [A]	Switching Frequency [Mhz]	LDO	LDO Output Current [A]	Static Current [uA]	GPIO	I2C interface	Package Type
GLF70581	2.7-5.5	4	4	1/1.5/2/2.5/3	2	0.4	15	8	1	WLCSP 2.4 x 2.4 -36B
GLF70582	2.7-5.5	4	3	1.5/2/2.5	2	0.4	15	3	1	QFN 3 x 3 -20
GLF70583	2.7-5.5	4	4	1/1.5/2/2.5/3	2	0.4	15	8	1	WLCSP 2.4 x 2.4 -36B

Please look forward to more GLF products.

Over Voltage Protection Switch

Over voltage protection is a power supply feature which shuts down the supply or clamps the output when the voltage exceeds a preset level. Most power supplies use an over-voltage protection circuit to prevent damage to the electronic components.

Applications

Smart Portable Devices
Low Power Sub-systems
Smartphones and Tablets
USB Power System / IP Camera...

Product Name	V _{IN} Max. Voltage [V]	I _{OUT} Rating [A]	UVLO [V]	V _{OVP} Internal [V]	V _{OVP} Prg. Range [V]	R _{ON} Typ. @ 5 V _{IN} [mΩ]	I _Q Typ. @ 5 V _{IN} [uA]	Short Circuit V _{OUT} Detection [V]	Package Type
GLF2201	9	3	2.3	6.8	4 ~ 7	42	77	2	DFN 2 x 2 -6L
GLF2204	9	2	2.8	6.85	6.7 ~ 7	188	80	NA	DFN 2 x 2 -8L

DC-DC Switching Regulator

Switching regulators are the most efficient way to convert one DC voltage to another DC voltage. GLF DC-DC parts have a lots of protection functions, such as OTP/OCP/OVP/UVLP/SCP, which can improve the switching regulator's function performance and reliability.

Applications

Solid State Drives
Core Chipset Power Supplier
Embedded / Portable Computing...

Product Name	V _{IN} Min./Max. Voltage [V]	V _{OUT} Min./Max. Voltage [V]	I _{OUT} [A]	Switching Frequency [Mhz]	R _{ON} Typ. High Side [mΩ]	R _{ON} Typ. Low Side [mΩ]	Control Mode	Features	Package Type
GLF8114	2.5-5.5	0.6-5.5	4	1.3	75	57	PWM/PFM	TSD, Cycle by cycle current protection	QFN 3 x 3 - 16L
GLF70501	2.9-5.5	0.3-1.39	3	2.4	39	19	PWM/PFM	UVLO, OVP, OCP, SCP, OTP, I2C Control	WLCSP 2.01 x 1.21 - 16B
GLF70512	2.15-6	1.2-3.3	0.6	1.2	300	150	PWM/PFM	Power Save Mode Operation	CSP 0.8 x 1.5 -8B DFN 2 x 2 - 8L
GLF70513	2.5-5.5	0.4-3.3	0.6	1.5	330	210	PWM/PFM	Excellent transient response	WLCSP 1.01 x 0.66 -6B DFN 2 x 2 -6L
GLF70551	0.7-5.5	1.8-5.5	0.3	1.5	210	250	PWM/PFM	Boost, UVLO, OVP	WLCSP 1.28 x 0.9 -6B DFN 2 x 2 -6L

Battery Charger IC

GLF charger products with high power, low quiescent current and fast protection response effectively solve the life and safety problems of single-cell lithium-ion rechargeable batteries.

Applications

Mobile phone
Camera
Door lock
Smart wearables...

Product Name	V _{IN} Min. Voltage [V]	Absolute MAX V _{IN} Voltage [V]	Charging currentmax. [A]	Battery charge voltage. [V]	Voltage Accuracy.	Control topology.	Control interface.	Package Type
GLF70205	3.5	28	1	4-4.59	±0.5%	Linear	I2C	WLCSP 1.42 x 1.42 -9B
GLF70206	3.5	28	1	4-4.59	±0.5%	Linear	I2C	DFN 2 x 3 -8L
GLF70602	4.4	16	0.5	4-4.55	±0.5%	Linear/Switch	I2C	WLCSP 2 x 2 -16B

GLF's mission is to provide Ultra-low power design solutions on power saving and protection, and greatly improve power efficiency in the applications of IoT, Wearable, Wellness, Smart Home and Medical vertical markets.



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