

Product Overview

LC05511XA: Battery Protection IC, OTP Function, Sense Resistor type, 1-Cell Lithium-Ion Battery

For complete documentation, see the data sheet.

LC05511XA is a protection IC for 1 cell lithium-ion or lithium-polymer battery with built-in OTP. It provides highly accurate adjustable over-charge, over-discharge, over-current protection with adjustable detection delay by OTP. Current is detected by high precision external chip resistor. Which realizes accurate current detection over temperature.

Features

- Highly accurate detection voltage/current
- Built in OTP function
- Small package
- Over charge detection voltage 4.1 V to 4.55 V (2.5 mV steps)
- Over discharge detection voltage 2.0 V to 3.3 V (50 mV step)
- Over charge release hysteresis 0 V, 0.1 V, 0.15 V, 0.2 V
- Over discharge release hysteresis 0 V to 0.075 V (25 mV step)
- Over discharge release hysteresis 0 V, 0.2 V, 0.3 V, 0.4 V
- Discharge Over current detection voltage 13 mV to 30 mV (0.3 mV step)
- Discharge Over current detection voltage 23 mV to 30 mV (0.6 mV step)

For more features, see the data sheet

Benefits

- Prevention of fire, over heating
Follow UL standard of 8A limit.
- Short term for providing samples
- Reduce the space of PCB

Applications

- 1-cell Lithium-ion Batteries Protection

End Products

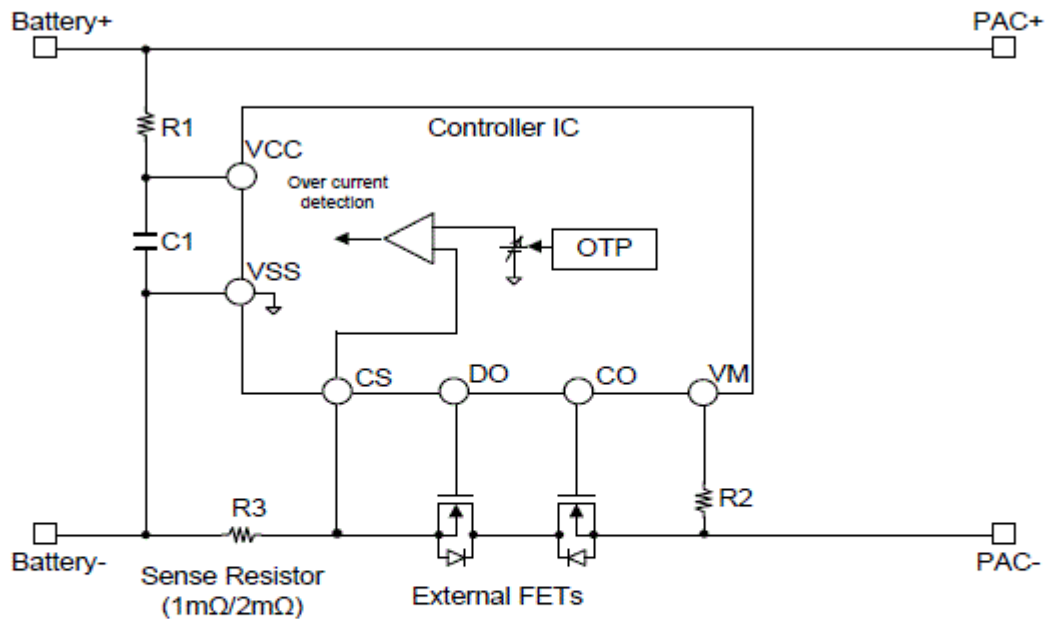
- Smart phone
- Tablet
- Wearable device

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V _{ov} Typ. (mV)	V _{uv} Typ. (mV)	I _{oc} Typ. (A)	V _{oc} Typ. (mV)	I _{och} Typ. (A)	V _{och} Typ. (mV)	I _{oc2} Typ. (A)	V _{oc2} Typ. (mV)	R _{ss(on)} typ @ V _{gs} =4.5V (mΩ)	Auto Wake Up Enable (Yes/No)	0 V Battery Charge Enable (Yes/No)	Package Type
LC05511Z04XATBG	0.2667	Pb-free Halide free	Active	4530	2350	-	7.5	-	-12.5	-	25	-	Yes	Yes	WLCS P-6
LC05512Z01XATBG	0.2667	Pb-free Halide free	Active	4475	2300	-	15	-	-13	-	30	-	No	No	WLCS P-6

Application Diagram

Example of application circuit



Components	MIN	Recommended value	MAX	unit	Description
R1	680	1	1.2	k Ω	Battery+ is filtered to VCC by R1 and C1
R2	100	1	2	k Ω	Protection from reverse connection of charger
C1	0.01	0.1	1.0	μ F	Battery+ is filtered to VCC by R1 and C1
R3	1		20	m Ω	Sense resistor for over-current detection

For more information please contact your local sales support at www.onsemi.com.

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