

## 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 0.2 V, 0.3 V, 0.4 V
- Discharge Over current detection voltage 1.3 mV to 30 mV (0.3 mV step)
- Discharge Over current detection voltage 2.3 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

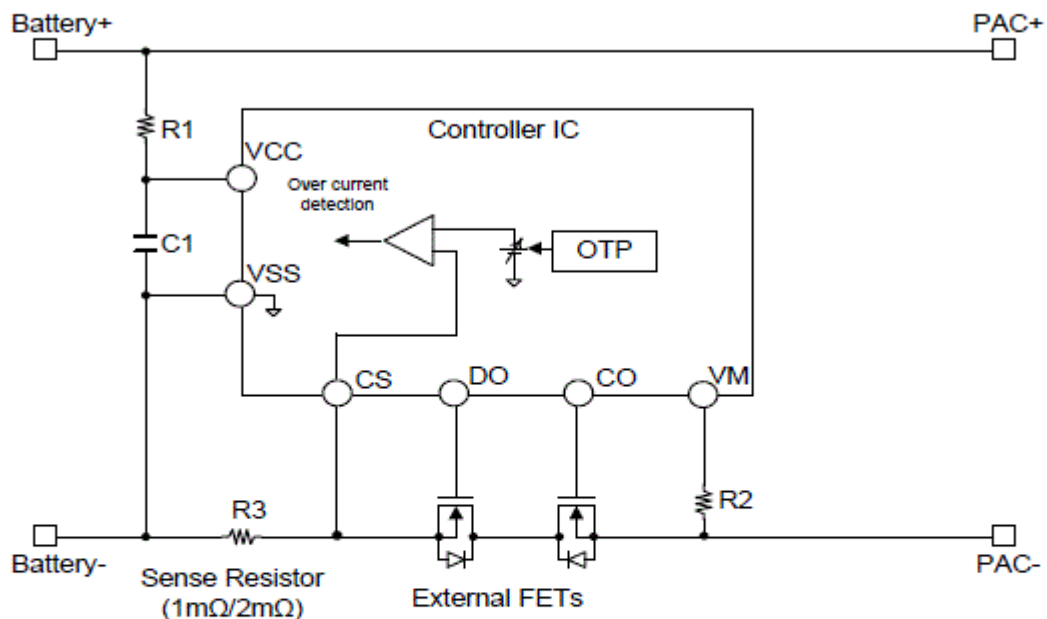
- Smart phone
- Tablet
- Wearable device

### Part Electrical Specifications

Product	Compliance	Status	$V_{ov}$ Typ. (V)	$V_{uv}$ Typ. (V)	$I_{oc}$ 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 @ $V_{gs}=4.5$ V (mΩ)	Auto Wake Up Enable (Yes/No)	0 V Battery Charge Enable (Yes/No)	Package Type
LC05511Z04XATBG	Pb-free Halide free	NEW	4530	2350	-	7.5	-	-12.5	-	25	-	Yes	Yes	WLCS P-6

## Application Diagram

### Example of application circuit



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

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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