

## Product Overview

### LC05111CMT: Battery Protection Controller with Integrated MOSFET, 1-Cell Lithium-Ion

For complete documentation, see the data sheet.



The LC05111CMT is a battery protection circuit for 1-cell lithium-ion secondary batteries with integrated power MOSFET. Also, it integrates highly accurate detection circuits and detection delay circuits to prevent batteries from over-charging, over-discharging, over-current discharging and over-current charging. A battery protection system can be made by only LC05111CMT and few external parts.

#### Features

- Integrated power MOSFET
- Low R<sub>son</sub> 11 mΩ
- PKG fuse trimming
- Reducing the dispersion of over-current detection

#### Applications

- Lithium ion battery protection

#### Benefits

- Easy design
- Low power dissipation
- Short TAT for preparing samples
- Highly accurate detection

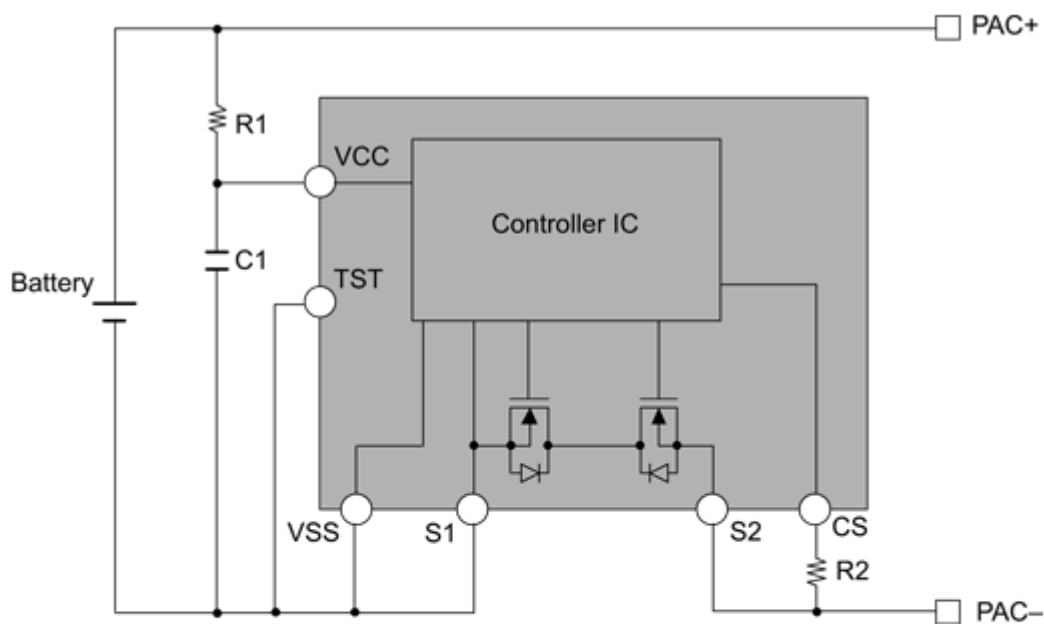
#### End Products

- Smart phone
- Tablet

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V <sub>ov</sub> Typ. (mV)	V <sub>uv</sub> Typ. (mV)	I <sub>gc</sub> Typ. (A)	V <sub>oc</sub> Typ. (mV)	I <sub>och</sub> Typ. (A)	V <sub>och</sub> Typ. (mV)	I <sub>gc2</sub> Typ. (A)	V <sub>oc2</sub> Typ. (mV)	Rss(on) typ @ V <sub>gs</sub> =4.5V (mΩ)	Auto Wake Up Enable (Yes/No)	0 V Battery Charge Enable (Yes/No)	Package Type
LC05111C01MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4425	2500	6	-	4	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C02MTTGG	0.4667	Pb-free Halide free non AEC-Q and PPAP	Active	4280	2700	6	-	3.5	-	21.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C05MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4425	2300	4	-	4	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C13MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4240	2700	3	-	2.5	-	15	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C14MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4445	2600	4	-	4	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C16MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4470	2500	7	-	5.7	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C18MTTGG		Pb-free Halide free non AEC-Q and PPAP	Active	4200	2700	6	-	2.5	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C20MTTGG		Pb-free Halide free non AEC-Q and PPAP	Product Preview	4310	2500	3	-	2	-	15	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C21MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4240	2700	6	-	5	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C23MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4425	2600	5.2	-	4	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag
LC05111C25MTTGG	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	4225	2600	4.2	-	4.2	-	17.5	-	11.2	Yes	Yes	WDFN -6 Dual Flag

## Application Diagram



Components	Recommended value	MAX	unit
R1	680	1k	$\Omega$
R2	1k	2k	$\Omega$
C1	0.1 $\mu$	1.0 $\mu$	F

\* We don't guarantee the characteristics of the circuit shown above.

\* TST pin would be better to be connected to VSS pin, though it is connected to VSS with internal resistor (100k $\Omega$  typ).

\* Battery voltage drop occurs, a current of about 60 $\mu$ A flow period of 1.5V-1.3V.

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

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