



Dual Output AMOLED Bias

■ General Description

The OCP2135 is a highly integrated Boost, LDO and inverting charge-pump to generate positive and negative output voltage. The negative output voltages can be adjusted from -0.6V to -2.4V with 100mV steps by SWIRE interface protocol. The part maintains the highest efficiency by utilizing a -0.33x/-0.5x mode fractional charge-pump with automatic mode transition.

With its input voltage range of 2.5V to 4.6V, the OCP2135 is optimized for products powered by single-cell battery and the output current up to 100mA.

The OCP2135 is available in WLCSP-15B 1.17x1.97 package to achieve optimized solution for PCB space.

■ Features

- 2.5V to 4.6V Supply Voltage Range
- Single Wire Protocol
- Fixed 4.6V Positive Voltage Output
- Negative Voltage Output from -0.6V to -2.4V per 100mV by SWIRE Pin
- Auto-Mode Transition of -0.33x/-0.5x Charge Pump
- Built-in Soft-Start
- VOP:100mA Maximum Output Current
- VON:100mA Maximum Output Current
- Programmable Output Fast Discharge Function
- High Impedance Output when IC Shutdown
- UVLO, OCP, SCP, OTP Protection
- Shutdown Current < 1 μ A
- Small Solution Size
- RoHS and Green Compliant
- Available in 15-Ball WLCSP Package
- -40°C to +85°C Temperature Range

■ Applications

- 2-4' AMOLED Bias in Portable Device



■ Pin Configuration
WLCSP-15 (Top View)

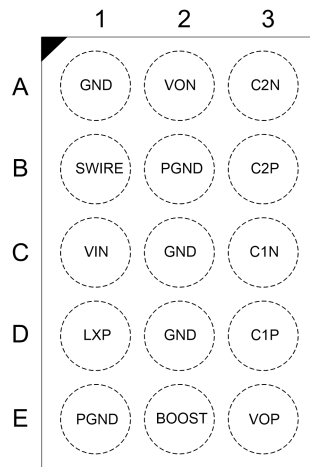


Figure 1, Pin Assignments of OCP2135

Pin Name	Pin No.	I/O	Pin Function
	WLCSP-15		
A1,C2,D2	GND	O	Ground
A2	VON	O	Negative terminal output
A3	C2N	O	Flying capacitor 2 negative connection
B1	SWIRE	I	Enable and VON voltage setting
B2,E1	PGND	O	Power ground
B3	C2P	O	Flying capacitor 2 positive connection
C1	VIN	I	Power input
C3	C1N	O	Flying capacitor 1 negative connection
D1	LXP	O	Switching node of boost converter
D3	C1P	O	Flying capacitor 1 positive connection
E2	BOOST	O	Output voltage of boost converter
E3	VOP	O	Positive terminal output

