



# ACE7C1855R

## Low Noise, Regulated Charge Pump DC-DC Converter

### Description

The ACE7C1855R is a low noise, constant frequency (650kHz) switched capacitor voltage Charge Pump DC-DC Converter. It produces a 3.3V or 5V output voltage, from a 1.8V to 5.5V input with up to 300mA of output current. Low external parts count (one flying capacitor and two small bypass capacitors at VIN and VOUT) make the ACE7C1855R ideally suited for small, battery -powered applications. The ACE7C1855R can survive a continuous short circuit from VOUT to GND. Built-in soft-start circuitry prevents excessive inrush current during start-up. High switching frequency enables the use of small ceramic capacitors. A low current shutdown feature disconnects the load from VIN and reduces

### Features

- Output voltage accuracy:  $\pm 3\%$
- VIN Range:
  - 1.8V-5.5V (VO=3.3V)
  - 2.7V-5.5V (VO=5.0V)
- Output Current:
  - Up to 250mA (VIN=3.0V, VO=3.3V)
  - Up to 300mA (VIN=3.6V, VO=5.0V)
- Low Noise Constant Frequency (650kHz) Operation
- Shutdown Current <0.1uA
- No Inductors

### Application

- White LED Backlighting
- Li-Ion Battery Backup Supplies
- Local 3V to 5V Conversion
- Smart Card Readers
- PCMCIA Local 5V Supplies



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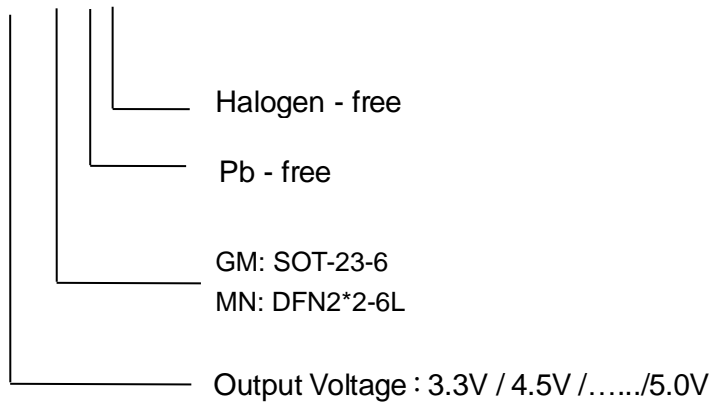
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### Absolute Maximum Rating

Parameter	Ratings	Units	
Input Voltage VIN	-0.3~6	V	
Output Voltage VOUT	-0.3~6	V	
Enable Voltage EN	-0.3~6	V	
Output Current IOUT	300	mA	
Operating Ambient Temperature Ta	-40~85	°C	
Storage Temperature Tstg	-55~150	°C	
Junction temperature TJ	-40~150	°C	
Soldering Temperature	260 (10sec)	°C	
Internal Power Dissipation Pd	SOT23-6	0.63	W
	DFN2*2-6	1.32	
Thermal resistance (Junction to air) $\theta_{JA}$	SOT23-6	200	°C/W
	DFN2*2-6	95	

### Ordering information

ACE7C1855R XX XX+ H





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### Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.