



ACE7133Z

1 μ A Ultra low Iq, 0.8V Startup, 1A Synchronous Boost

Description

ACE7133Z is a high efficiency synchronous step-up converter with ultra-low quiescent current down to 1 μ A. It is capable of delivering at least 2W of power from a low voltage source, i.e. 0.4A at 5V output. It also features a true-shutoff function that disconnects the input from output, during shutdown and output short-circuit conditions. This eliminates the need for an external MOSFET and its control circuitry to disconnect the input from output and provides robust output overload protection.

A switching frequency of 1.4MHz minimizes solution footprint by allowing the use of tiny and low profile inductors and ceramic capacitors. An internal synchronous MOSFET provides highest efficiency and with a current mode control that is internally compensated, external parts count is reduced to minimal. With the ultra-low Iq feature, ACE7133Z is ideal for solution that requires low standby power and compact board size such as IoT applications. ACE7133Z is housed in a SOT-23-6 and DFN2*2-6L package.

Features

- Ultra low IQ when No Switching :
1 μ A for adjustable version and 1.2 μ A for fixed voltage version
- 0.8V Startup
- 5V/0.4A Output Capability at Vin=3V
- Output to Input Reversed Current Protection
- Up to 94% Efficiency
- Internal Synchronous Rectifier and Output Disconnect
- Short-circuit Protection
- Adjustable version and Fixed voltage version
- SOT-23-6 & DFN2*2-6L Package

Application

- Tablet, MID
- Smart Phone
- Power Bank



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Absolute Maximum Ratings

Parameter		Value	
IN OUT, SW, FB, EN Voltage		-0.3V to 6.5V	
SW to ground current		Internally limited	
Operating Temperature Range		-40°C to 85°C	
Storage Temperature Range		-55°C to 150°C	
Thermal Resistance	SOT-23-6	θ_{JA}	180 °C/W
		θ_{JC}	90 °C/W
	DFN2*2-6L	θ_{JA}	80 °C/W
		θ_{JC}	30 °C/W
Lead Temperature (Soldering 10sec)		260°C	
ESD HBM (Human Body Mode)		2 KV	
ESD CDM (Charged Device Mode)		1 KV	

Note:

Exceeding these limits may damage the device. Exposure to absolute maximum rating conditions for long periods may affect device reliability.

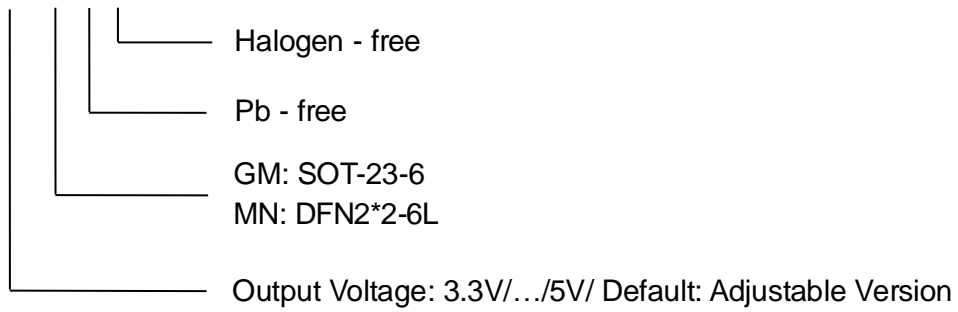


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Ordering Information

ACE7133Z 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 sued 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.