



ACE53042Z

42V Input Voltage, 2.5uA Ultra-low Iq, High PSRR, 300mA LDO

Description

ACE53042Z is a low-dropout (LDO) linear voltage regulator that features ultra-low standby current as low as 2.5uA. It can withstand input voltage up to 42V and deliver 300mA output current.

ACE53042Z can provide fixed output voltages with wide input voltage range from 3V to 42V. The device also includes short circuit protection, UVLO and thermal shutdown.

Therefore, ACE53042Z is an ideal power supply for low power applications such as IoT, portable and multi-cell battery-powered system, etc.

ACE53042Z is housed in a tiny SOT23-5 and SOT89-3 package.

Features

- Wide Input Voltage Range: from 3V to 42V
- Ultra-Low Quiescent Current: 2.5uA
- 300mA Output Current
- Stable with a Wide Range of Ceramic Capacitor, Larger than 1μF
- High PSRR, 70dB at 1KHz
- Integrated Thermal and Current Limit
- Pb Free, RoHS and REACH Compliant
- Halogen Free and “Green” Device

Applications

- Portable Equipment
- Multi-cell Battery-Powered System
- NB-IoT Module

Absolute Maximum Ratings

Parameter		Value	
IN, EN to GND Voltage		-0.3V to 43V	
OUT to GND Voltage		-0.3V to 38V	
Junction Temperature		150°C	
Storage Temperature Range		-55°C to 150°C	
Thermal Resistance	θ_{JA}	SOT-23-5	220 °C/W
		SOT-89-3	52 °C/W
	θ_{JC}	SOT-23-5	110 °C/W
		SOT-89-3	9 °C/W
Lead Temperature (Soldering 10sec)		260 °C	

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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Recommended Operating Conditions

Parameter	Value
Ambient Temperature Range	-40°C to 85°C
Junction Temperature Range	-40°C to 125°C

Note: The device is not guaranteed to function outside its operating conditions.

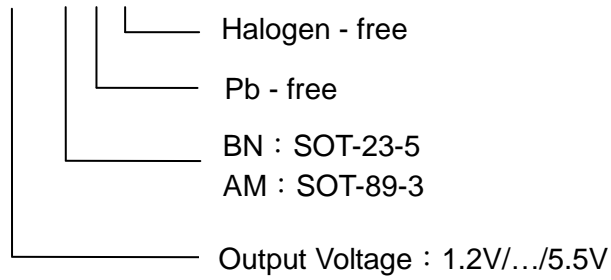


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Ordering information

ACE53042Z 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.

ACE Technology Co., LTD.
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