ACE7800X

5uA Low Iq, 35V 150mA LDO

Description

ACE7800X series is a group of positive voltage output 3-terminal linear regulator, capable of delivering 150mA current and working under 35V input voltage. It also features extremely low standby current which is only 5uA, while still keeps very fast load transient response capability. With the extremely low 5uA standby current, ACE7800X can greatly improve natural life of batteries.

ACE7800X includes high accuracy voltage reference, error amplifier, and current limit circuit and output driver module. ACE7800X has well load transient response and good temperature characteristic. And it uses trimming technique to guarantee output voltage accuracy within ±2%. ACE7800X can provide 3.0V/3.3V/3.6V/5.0V/9.0V/12V output value. It also can be customized on command. ACE7800X is housed in 2 different types of packages, which are TSOT-23-3 and SOT-89-3.

Features

- Input Voltage Range: 3V~35V
- Output Voltage Range: 3.0V/3.3V/3.6V/5.0V/9.0V/12V
- Low Power Consumption: 5.0uA (Typ.)
- Maximum Output Current: 150mA
- Small Dropout Voltage
- 740mV@100mA (V_{OUT}=3.3V)
- 1300mV@150mA (V_{OUT}=3.3V)
- Highly Accurate: ±2%
- Current Limit and Short Protection
- Over Temperature Protection

Application

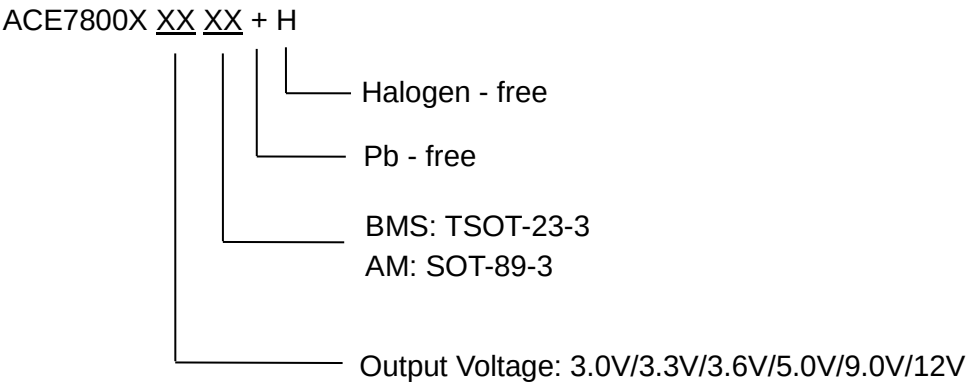
- Wearables
- Smart Home Application
- Battery Powered equipment

Absolute Maximum Ratings

Parameter	Value
V_{IN} (1)	38V
Out Voltage	-0.3V to 12V
Operating Junction Temperature (Tj)	125 °C
Operating Temperature Range	-40 °C to 85°C
Storage Temperature Range	-55 °C to 125 °C
ESD Human body mode	2KV
Lead Temperature & Time	260°C, 10 Sec

Note: (1) Exceeding these ratings may damage the device.

Ordering information



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 shoes 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.